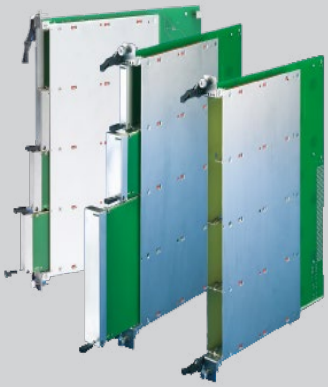
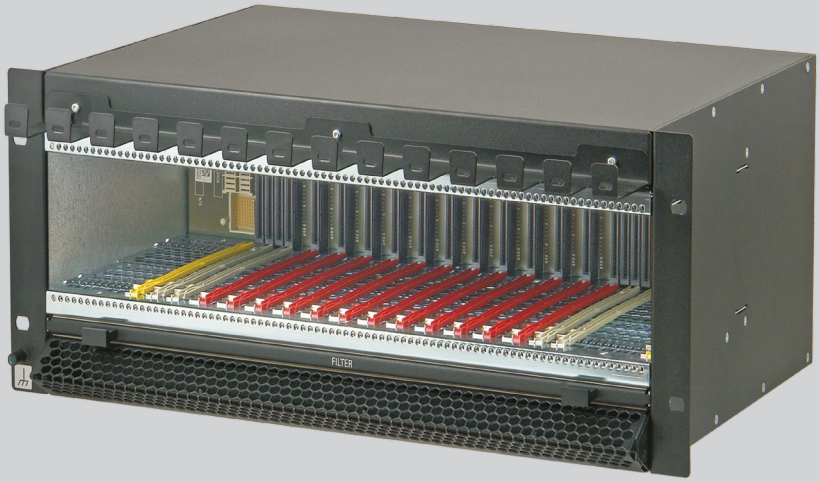




CONNECT AND PROTECT

Systems

nVent
SCHROFF

nVent SCHROFF

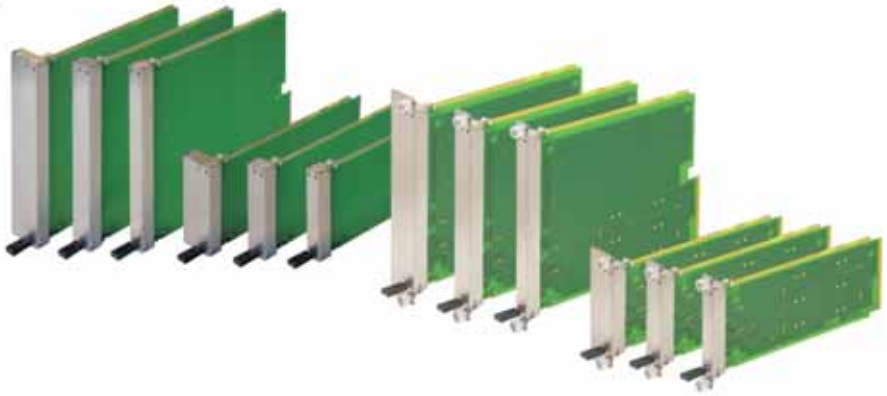
OVERVIEW

MAIN CATALOG

AdvancedTCA

AdvancedMC™

PICMG®
Open Modular Computing Specifications



µTCA™

36106007 (12711001 12708009 12710001 12808017 12911003 12911006 12912005)

nVent SCHROFF

CompactPCI

CompactPCI Serial, CompactPCI PlusIO, PSB

PICMG®
Open Modular Computing Specifications

VME, VME64x, VXS, VPX

MEMBER VITA
Open Standards, Open Markets

36106008 (12310002 12312001 123006003 10006002 10002010 100112001 30402059)

12707010

EVERYTHING A SYSTEM NEEDS

Schroff's AdvancedTCA systems make the development of new, forward-looking tele-communications installations with high data-processing rates as simple for you as possible.

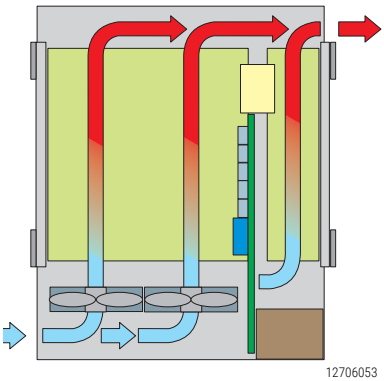
We offer everything on the basis of the AdvancedTCA specification that you have come to expect from a Schroff complete system

Excellent mechanics, optimised cooling, reliable pow8er supply, efficient data distribution and secure system management.

But that is not all:
As a matter of course, our complete systems are also available in shock and vibration-resistant versions with UL certification.

With Schroff, AdvancedTCA means matured products and wide ranges of options:

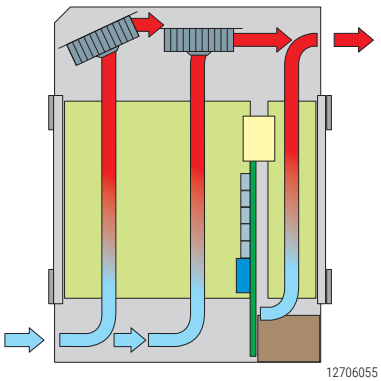
- Dimensions from 2 to 14 U
- 2 to 16 slot installations
- Cooling concepts (push, pull, push-pull)
- Backplane topologies (dual star, full mesh)
- Shelf manager based on Pigeon Point technology



12706053

PUSH COOLING

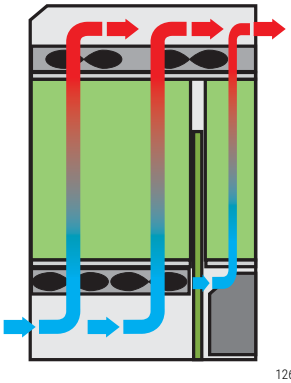
The fans are situated near the air inlet and push the air through the system.



12706055

PULL COOLING

The fans are situated near the air outlet and suck the air through the system.



12606007

PUSH-PULL

The fans are situated below and above the board cage for maximum airflow and optimal redundancy.

Systems – AdvancedTCA

OVERVIEW

SYSTEMS AND COMPONENTS AVAILABLE WORLD-WIDE

- **Very wide product range with regard to dimensions, number of slots, cooling designs, backplane topologies and shelf managers; all completely assembled and tested**
- **NEBS ready, UL recognized**
- **For mounting in ETSI, 19" or 23" cabinets**
- **Cooling up to 400 W per board**

PICMG®
Open Modular Computing Specifications

12705006 12705005

ADVANCEDTCA SYSTEMS

- 2 ... 14 U; 2 ... 16 slot
- Backplane with dual star, full mesh topology, 15-fold connected fabric interface with hub/hub or node/node configuration; bussed or radial IPMB
- Push, pull or push-pull cooling
- Shelf manager based on Pigeon Point technology

12708006 127070173

ADVANCEDTCA ACCESSORIES

- Front panels and handles
- Shelf manager based on Pigeon Point technology
- Backplane

e.g. individual configuration and assembly
e.g. modifications (integration)
e.g. downloads (CAD drawings, user manuals, test reports)
e.g. custom solutions

ADVANCEDTCA 300/40 SERIES, 6 SLOT, DC

12710001

Front view

12708006

Accessories: optional shelf manager

PICMG®
Open Modular Computing Specifications

- 40 G backplane with 6 slots, triple replicated mesh topology; 2 versions:
  - Bussed IPMB
  - Radial IPMB
- 300 W cooling capacity per slot at an ambient temperature of 55 °C
- -48 V_{DC}/ -60 V_{DC} input voltage, two redundant power entry modules (PEM)
- Two hot swap fan trays, airflow from right to left (push/pull cooling), air filter exchangeable from front
- 2 shelf managers and 1 SAP (shelf alarm panel) can be installed
- Conforms to AdvancedTCA Standard PICMG 3.0 rev.3.0
- UL recognized, E229721 type T06

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" subrack system, St, zinc-plated, 5 U, 84 HP, 464 mm deep, front with overlays, black, RAL 9005, with 6 horizontal slots for 8 U, 6 HP, 280 mm depth AdvancedTCA boards; 6 horizontal slots at rear, 8 U, 6 HP, 70 mm deep
2	1	Backplane, 6 slot, triple replicated mesh, 2 hub slots, 4 node slots
3	2	Redundant -48 V_{DC}/-60 V_{DC} power entry module (PEM) with circuit breaker
4	2	Hot-swap fan tray with 6 fans each for cooling the boards (> 350 W/ board); Filter mat
5	2	Front panel; Space to accommodate shelf manager
6	1	Front panel; Space for fitting shelf alarm panel (SAP)

ORDER INFORMATION

AdvancedTCA system	Backplane type	Part no.
AdvancedTCA 300/40 series, 6 slot, DC	Triple replicated mesh, 40 Gbps, bussed IPMB	11596-160
	Triple replicated mesh, 40 Gbps, radial IPMB	11596-161
Accessories		
Shelf manager (bussed) 1 piece - page 8.19		**21596-300**
Shelf manager (radial) 1 piece - page 8.19		**21596-301**
Cable RJ 45 Cat 5 plug - D-Sub plug, 9-pin, length 2 m, 1 piece; page 8.19		**23204-187**
Front panels and handles		Page 8.11
AdvancedMC carriers		**Page 8.26**
Replacement parts (FRUs)		
Power entry module (PEM) - page 8.19		21990-058
Fuse 30 A/80 V for power entry module, PU 10 pieces		21191-207
Shelf alarm panel (SAP)		**21596-077**
Fan tray - page 8.20		21990-057
Air filter - page 8.22		21990-059

NOTE

- Modified systems available on request

ADVANCEDTCA 300/40 SERIES, 14 SLOT, DC

12707005

Front view

- 40 G backplane with 14 slots, dual star topology; 2 versions:
- 300 W cooling capacity per slot at an ambient temperature of 55 °C
- -48 V_{DC}/ -60 V_{DC} input voltage, two redundant power entry modules (PEM)
- Redundant hot-swap fan trays, airflow from bottom front to top rear; air filter exchangeable from front
- Shelf alarm panel (SAP) and shelf alarm display (SAD)
- Prepared for two Schroff shelf managers with Pigeon Point ShMM 700 for bussed IPMB
- Conforms to AdvancedTCA standard PICMG 3.0 rev. 3.0
- UL recognized, E229721 type T07

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" subrack system, St, 13 U, 84 HP, 383 mm deep; powder-coated, black, RAL 9005; front 14 slot, 8 U, vertical board mounting, boards 6 HP, 280 mm deep, rear 6 HP, 70 mm deep; cable channel at front and rear
2	1	Backplane, 14 slot
3	2	Redundant power entry module (PEM), -48 V_{DC}/-60 V_{DC}, plugged in at rear, with 4 pairs of lines each per input (8 fuses, 30 A)
4	1	Fan unit at top; 3 redundant fan trays with 400 m^3/h (230 cfm) each, with 2 fans each to cool the front and rear I/O boards; filter mat
5	1	Shelf alarm panel (SAP)
6	1	Shelf alarm display (SAD)
7	2	Mounting bracket, for assembly in 19" cabinets

ORDER INFORMATION

AdvancedTCA system	Backplane type	Part no.
AdvancedTCA 300/40 series, 14 slot, DC	Dual star, 40 Gbps, bussed IPMB	11990-600
	Dual star, 40 Gbps, bussed IPMB	11990-601
	Full mesh, 25 Gbps, radial IPMB	11990-603
Accessories		
Shelf manager (bussed) 1 piece - page 8.19		**21596-300**
Shelf manager (radial) 1 piece - page 8.19		**21596-301**
Cable RJ 45 Cat 5 plug - D-Sub plug, 9-pin, length 2 m, 1 piece; page 8.19		**23204-187**
Mounting bracket 13 U RAL 9005, from 19" to 23", PU 1 kit		21596-278
Front panels and handles		Page 8.11
AdvancedMC carriers		**Page 8.26**
Replacement parts (FRUs)		
Chassis Data Module - page 8.24		21596-023
Power entry module (PEM) - page 8.20		21596-020
Fuse 30 A/80 V for power entry module, PU 10 pieces		21191-207
Shelf alarm panel (SAP) - page 8.23		21596-140
Shelf alarm display (SAD) - page 8.24		21596-026
Fan tray - page 8.21		21990-184
Air filter - page 8.22		21596-138

NOTE

- Modified systems available on request

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

ADVANCEDTCA 450/40 SERIES, 2 SLOT, DC, COOLING FROM FRONT TO REAR

12715001

Front view

12715002

Rear view

12715003

Power connection

- Conforms to AdvancedTCA Standard PICMG 3.0 rev. 3.0
- 40 G backplane with 2 slots, 15x connected fabric interface
- 450 W cooling capacity per slot at an ambient temperature of 55°C
- Input voltage -48 V_{DC}/-60 V_{DC}, two redundant power connections with fuse and switch
- Two hot-swap fan modules on rear of case, airflow from front to rear; air filter replaceable from front
- Prepared for one shelf alarm panel and two Schroff shelf managers with Pigeon Point ShMM 700 for bussed or radial IPMB
- FRU file to support the shelf manager with Pigeon Point ShMM 700 are available for download
- UL recognized, E229721 type T15

DELIVERY INCLUDES (completely assembled, cabled and tested)

Item	Qty	Description
1	1	Shielded 19" subrack, St, 3 U, 84 HP, 464 mm deep, powder coated, black, RAL 9005; with 2 horizontal slots at front for 8 U, 6 HP, 280 mm deep boards and 2 horizontal slots at rear, 8 U, 6 HP, 70 mm deep
2	1	Backplane, 2 slots
3	2	Redundant power connection, -48 V DC/-60 V DC, at the rear, with 1 pair of power terminals (1 fuse, 30 A) each
4	2	Redundant fan unit, rear, with 2x2 fans each
5	1	Air filter replaceable from front
6	2	Mounting bracket, for installation in 19" cabinets

ORDER INFORMATION

Cooling capacity	Airflow	Transmission rate	Voltage	Number of slots	Height U	Description	Part no.
450 W/slot	from front to rear	40 Gbps	- 48/-60 V_{DC}	2	3	15x connected fabric interface with node/node configuration, bussed IPMB	**11990-800**
450 W/slot	from front to rear	40 Gbps	- 48/-60 V_{DC}	2	3	15x connected fabric interface with hub/hub configuration, bussed IPMB	11990-801
450 W/slot	from front to rear	40 Gbps	- 48/-60 V_{DC}	2	3	15x connected fabric interface with node/node configuration, radial IPMB	11990-802
450 W/slot	from front to rear	40 Gbps	- 48/-60 V_{DC}	2	3	15x connected fabric interface with hub/hub configuration, radial IPMB	11990-803
Accessories							
Shelf manager, ACB-V, bussed 1 piece							**21596-300**
Shelf manager ACB-V, radial 1 piece							**21596-301**
Shelf manager, ACB-VI, bussed 1 piece							**21990-404**
Shelf manager ACB-VI, radial 1 piece							**21990-405**
Shelf alarm panel 1 piece							**21596-077**
Front panels and handles							**Seite 8.11**
AdvancedMC carriers							**Seite 8.26**
Replacement parts (FRUs)							
Fan tray - page 8.21							21990-526
Air filter - page 8.22							21990-527

NOTE

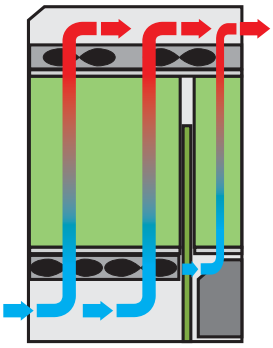
- Modified systems available on request

ADVANCEDTCA 450/40 SERIES CHASSIS, 14 SLOT, DC

12711001

Front view

12708006



12712050

Accessories: optional shelf manager Push-pull cooling

PICMG®
Open Modular Computing Specifications

- 40 G backplane with 14 slots, dual star topology, 2 versions: bussed and radial IPMB
- 450 W cooling capacity per slot at an ambient temperature of 55 °C
- -48 V_{DC}/-60 V_{DC} input voltage, two redundant power entry modules (PEM)
- 2 redundant hot-swap fan trays in push-pull configuration, airflow from bottom front to top rear; air filter exchangeable from front
- Prepared for 2 x Schroff shelf managers with Pigeon Point ShMM 700 for bussed or radial IPMB topology
- Conforms to AdvancedTCA standard PICMG 3.0 Rev.3.0
- UL recognized, E229721 type T08

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" plug-in units, St, 14 U, 84 HP, 383 mm deep, powder coated, black, RAL 9005; with 14 vertical slots at front for 8 U, 6 HP, 280 mm deep AdvancedTCA boards; 14 vertical slots at rear, 8 U, 6 HP, 70 mm deep; cable channel on front and rear
2	1	Backplane, 14 slots
3	2	Redundant power entry module (PEM) -40 ... -72 V_{DC}, inserted at rear, with 2 pairs of lines per input
4	1	Fan tray at top with 6 fans, each 565 m^3/h (336 cfm)
5	1	Fan tray at bottom with 6 fans, each 565 m^3/h (336 cfm)
6	1	Telco alarm panel integrated in the bottom fan drawer
7	1	Air filter, can be changed from the front
8	2	Mounting bracket, for assembly in 19" cabinets

ORDER INFORMATION

AdvancedTCA system	Backplane type	Part no.
AdvancedTCA 450/40 series chassis, 14 slot, DC	Dual star, 40 Gbps, bussed IPMB	**11990-100**
	Dual star, 40 Gbps, radial IPMB	11990-101
Accessories		
Shelf manager (bussed) 1 piece - page 8.19		**21596-300**
Shelf manager (radial) 1 piece - page 8.19		**21596-301**
Cable RJ 45 Cat 5 plug - D-Sub plug, 9-pin, length 2 m, 1 piece; page 8.19		**23204-187**
Front panels and handles		**Page 8.11**
AdvancedMC carriers		**Page 8.26**
Replacement parts (FRUs)		
Chassis Data Module - page 8.24		21990-226
Power entry module (PEM) - page 8.20		21990-224
Fuse 30 A/80 V for power entry module, PU 10 pieces		21990-225
Fan tray - page 8.22		21990-227 21990-228
Air filter - page 8.22		21990-229

NOTE

- Modified systems available on request

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

ADVANCEDTCA ECO MODULAR SYSTEM, 14 SLOTS, DC

12715004

12708006

Accessories: optional shelf manager

PICMG®
Open Modular Computing Specifications

- Thanks to their reduced hot-swap features in the fan module, PEM, and CDM areas, Schroff ECO modular systems are optimized for cost-sensitive applications
- A sophisticated modular concept opens up the option of obtaining the ECO modular system in several versions with a range of performance classes
- 14 U, 14-slot system, airflow from bottom front to top rear, 2 slots for Schroff shelf manager ACB-VI
- Support for on-blade shelf management
- A fan module under the board cage featuring an integrated, replaceable air filter, RJ45 sockets for connecting serial interfaces of Schroff shelf managers, plus LEDs for displaying Telco alarms
- Fan control via Schroff shelf managers, on-blade shelf managers, or – in autonomous mode – a temperature sensor in the air inlet area
- Option of additional temperature sensor in air exit area
- Non-hot-swap PEM at the rear, redundant in 450 W/slot version, non-redundant in 250 W/slot version
- Shelf FRU data SEEPROMs directly on the backplane rear, UL recognized, E229721 type T16/T19

DELIVERY INCLUDES (completely assembled, cabled and tested)

Item	Qty	Description
1	1	Shielded 19" subrack, St, 14 U, 84 HP, 383 mm deep, powder-coated, black, RAL 9005, with 14 vertical slots at front for 8 U, 6 HP, 280 mm deep boards and 14 slots at rear, 8 U, 6 HP, 70 mm deep
2	1	Backplane, 14 slots
3a	1	250 W/slot: Non-redundant power connection, -48 V_{DC}/-60 V_{DC}, at the rear, with 1 pair of power terminals (2 fuses, 50 A each)
3b	1	450 W/slot: Redundant power connection, -48 V_{DC}/-60 V_{DC}, at the rear, with 4 pairs of power terminals (8 fuses, 50 A each)
4	1	Fan unit with 8 fans, exchangeable air filter, Telco alarm display, and interfaces for shelf managers
5	2	Mounting bracket, for installation in 19" cabinets

ORDER INFORMATION

Cooling capacity	Power	Airflow	Transmission rate	Voltage	Number of slots	Height U	Backplane type	Part no.
250 W/slot	250 W/slot, non-redundant	from front to rear	40 Gbps	-48/-60 V_{DC}	14	14	Dual star, bussed IPMB	**11990-900**
450 W/slot	450 W/slot, redundant	from front to rear	40 Gbps	-48/-60 V_{DC}	14	14	Dual-dual star, bussed IPMB	**11990-903**
Accessories								
Shelf manager, ACB-VI, bussed 1 piece								**21990-404**

NOTE

- Modified systems available on request

ADVANCEDTCA 450/40 FC SERIES, 14 SLOT, DC

12718001

Picture shows 11990-190

12708006

Accessories: optional shelf manager

PICMG®
Open Modular Computing Specifications

- 40 G backplane with 14 slots, dual star topology, bussed IPMB
- 450 W cooling capacity per slot at an ambient temperature of 55 °C
- -48 V_{DC}/-60 V_{DC} input voltage, two redundant power entry modules (PEM)
- 2 redundant hot-swap fan trays in push-pull configuration
- Prepared for 2 x Schroff shelf managers with Pigeon Point ShMM 700 for bussed IPMI topology
- Shelf Manager slots on the right hand side in the ATCA card cage
- Shelf Manager consoles and Telco alarm interface in lower fan tray
- Rear I/O on all slots
- Air filter exchangeable from front
- Air flow either from bottom to top or from front to rear

DELIVERY INCLUDES (completely assembled, cabled and tested)

Item	Qty	Description
1	1	Shielded 19" plug-in units, St, 14 U, 84 HP, 383 mm deep, powder coated, black, RAL 9005; with 14 vertical slots at front for 8 U, 6 HP, 280 mm deep AdvancedTCA boards; 14 vertical slots at rear, 8 U, 6 HP, 70 mm deep; cable channel on front and rear
2	1	Backplane, 14 slots
3	2	Redundant power entry module (PEM) -40 ... -72 V_{DC}, inserted at rear, with 2 pairs of lines per input
4	1	Fan tray at top with 6 fans, each 565 m^3/h (336 cfm)
5	1	Fan tray at bottom with 6 fans, each 565 m^3/h (336 cfm)
6	1	Telco alarm panel integrated in the bottom fan drawer
7	1	Air filter, can be changed from the front
8	2	Mounting bracket, for assembly in 19" cabinets

ORDER INFORMATION

Airflow	Depth mm	Number of slots	Backplane type	Transmission rate	Cooling capacity	Voltage	Height U	Width HP	Part no.
From buttom to top	383	14	Dual star, 40 Gbps, bussed IPMB	40 Gbps	450 W / slot	- 48/-60 V_{DC}	14	84	**11990-190**
From front to rear	383	14	Dual star, 40 Gbps, bussed IPMB	40 Gbps	450 W / slot	- 48/-60 V_{DC}	14	84	**11990-192**
Accessories									
Shelf manager, ACB-VI, bussed 1 piece									**21990-404**
AdvancedTCA air deflector Front panel, 8 U, 6 HP, stainless steel, for rear I/O section incl. air baffle (65 mm deep) with mesh gasketing, 1 piece									**21591-099**
AdvancedTCA air deflector Front panel, 8 U, 6 HP, stainless steel, incl. air baffle (280 mm deep) with mesh gasketing, 1 piece									**21591-079**
AdvancedTCA air deflector Front panel, 8 U, 6 HP, Al extrusion, incl. air baffle (280 mm deep) with mesh gasketing, 1 piece									**21596-008**
AdvancedTCA air deflector Front panel, 8 U, 6 HP, Al profile for rear I/O section incl. air baffle (65 mm deep) with mesh gasketing, 1 piece									**21591-107**
Front panel, stainless steel to cover an unused shelf manager slot, width 15.22 mm, height 99.33 mm, incl. EMC gasket, 1 piece									21596-012
Cable for the serial console of the shelf manager via the SAP RJ 45 Cat 5 plug - D-Sub plug, 9-pin, length 2 m, 1 piece									**23204-187**

NOTE

- Modified systems available on request

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

ACCESSORIES OVERVIEW

- Front panel **reinforced** with die-cast end piece and IEA handle **with** spring loading, see from page 8.11
  - Kit
  - Individual configuration
- Front panel and IEA handle **without** spring loading, see from page 8.13
  - Kit
  - Individual configuration (Al or stainless steel) with/without spring loading
- AdvancedTCA front panels with integrated side two cover, see page 8.15
- AdvancedTCA air deflectors, filler panels, see page 8.16
- Shelf managers, see page 8.19
- Backplanes, see page 8.18
- Replacement parts - field replacement units (FRUs), see from page 8.19

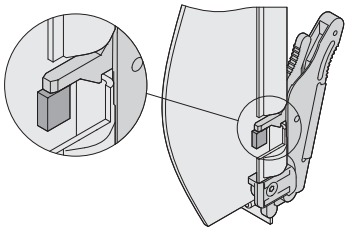
FRONT PANEL REINFORCED WITH DIE-CAST END PIECE AND IEA HANDLE WITH SPRING LOADING

12708004

Delivery excludes board

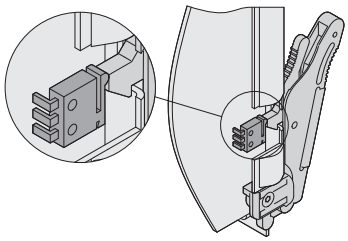
12707017

AdvancedTCA spring-loaded IEA handle



12707051

Handle with plunger contact (plunger style)



12707052

Handle with lever contact (lever style)

- Schroff hot-swap handle (when open, the spring loading aids the complete opening of the handle and thus facilitates the insertion of the board)
- Front panel: aluminum or stainless steel, reinforced by the die-cast end piece (increases robustness of front panel)
- Versions for 2 microswitch types (plunger or lever contact)
- EMC textile gasket

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Front panel
3	2	Die-cast endpiece, alignment pin, knurled screws M3
2	1	Lower IEA handle incl. bearing, spring assisted, (pre-fitted as transport securing device)
4	1	Upper IEA handle incl. bearing, spring-assisted, (pre-fitted as transport securing device)
5	1	EMC gasket, length 299 mm
6	1	Fixing material kit and user manual

ORDER INFORMATION

Height U	Width HP	Front panel reinforced with die-cast end piece and IEA handle with spring loading	Part no.
8	6	Stainless steel, with AdvancedTCA IEA handle (plunger type)	**20818-160**
8	6	Stainless steel, with AdvancedTCA IEA handle (lever type)	**20818-161**
8	6	Al extrusion, 1 mm, with AdvancedTCA IEA handle (plunger style)	**20818-169**
8	6	Al extrusion, 1 mm, with AdvancedTCA IEA handle (lever style)	**20818-170**
Accessories			
AdvancedTCA handle (IEA) design element Plastic, transparent, to clip on, for customers' logos, UL 94 V-0, PU 10 pcs			20818-140

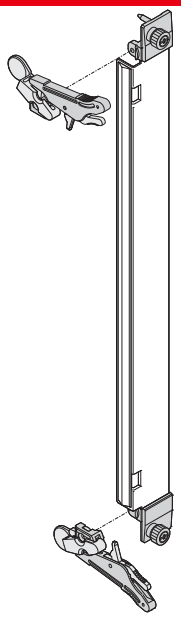
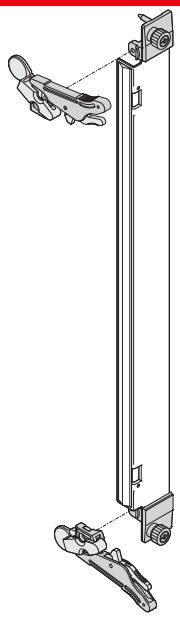
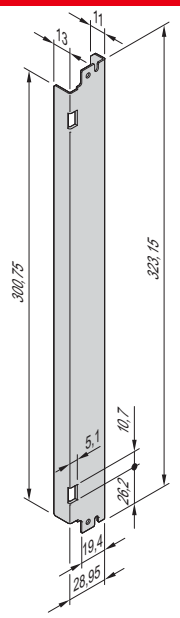
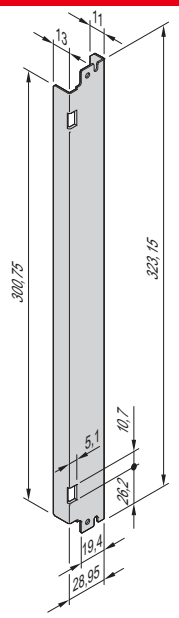
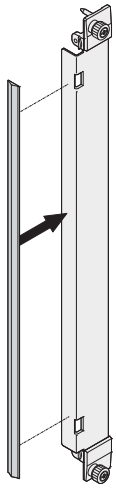
NOTE

- Front panels with copper-beryllium gasket (CuBe) available on request
- Front panels with board cover on request
- With its front panel service Schroff offers extensive modification options, including custom cut-outs, foils and screen printing
- Intuitive Ergonomic Aesthetic = IEA handle

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

CONFIGURATION: FRONT PANEL REINFORCED WITH DIE-CAST END PIECE AND IEA HANDLE WITH SPRING LOADING

ORDER INFORMATION

		Handle with spring loading and die-cast end piece		Front panel		EMC textile gasket	Design element for handle
		Plunger style	Lever style	Stainless steel	Al extrusion		
 12708004		 12708051	 12708052	 12708050	 12708050	 12712051	 12706024
		2 x handle with spring loading; 2 x die-cast end pieces, PIN, M3 screw; with the IEA handle, when open, the spring loading holds the handle open and thus facilitates insertion of the board		8 U, 6 HP, stainless steel, 1 mm	8 U, 6 HP, Al extrusion, 1 mm	PET triangular gasket, height 2.3 mm, conductive coating CuNi, UL 94 V0, self-adhesive	Plastic, transparent, clips in, UL 94 V-0
		PU 1 kit		1 piece	1 piece	PU 10 pieces	PU 10 pieces
Plunger style		**20818-163**	–	**31596-791**	**31596-899**	21596-376	20818-140
Lever style		–	**20818-164**	**31596-792**	**31596-900**	21596-376	20818-140

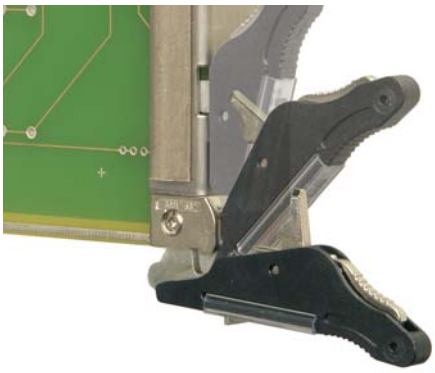
NOTE

- **I**ntuitive **E**rgonomic **A**esthetic = IEA handle

FRONT PANELS AND IEA HANDLE (WITHOUT SPRING LOADING)

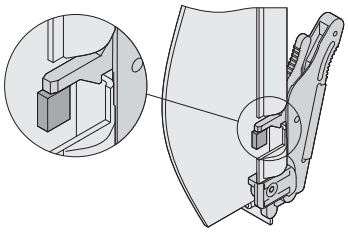
12709002

Left: application example; right: scope of delivery without board



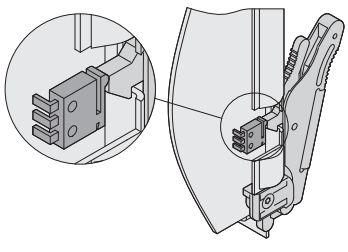
12707017

AdvancedTCA IEA handle



12707051

Handle with plunger contact (plunger style)



12707052

Handle with lever contact (lever style)

- Schroff hot-swap handle (when open, the handle must be held in the open position)
- Stainless steel front panel
- Versions for 2 microswitch types (plunger or lever contact)
- EMC textile gasket

DELIVERY COMPRISES ((kit))

Item	Qty	Description
1	1	Stainless steel or Al extrusion front panel incl. alignment pin and M3 knurled screws
2	1	Lower handle incl. bearing
3	1	Upper handle incl. bearing
4	1	EMC mesh gasket
5	1	Fixing material kit (M2.5 screws incl. thread locking compound)

ORDER INFORMATION

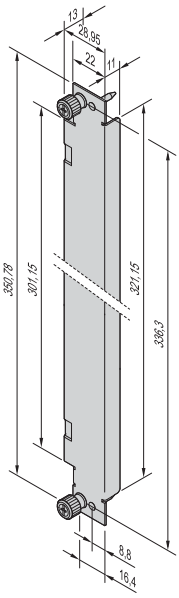
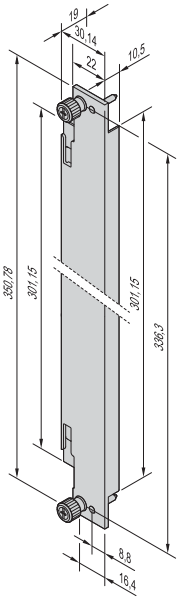
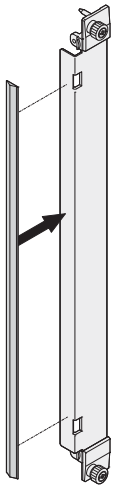
Height U	Width HP	Front panels and IEA handle (without spring loading)	Part no.
8	6	Stainless steel, with AdvancedTCA IEA handle (plunger type)	**21596-324**
8	6	Stainless steel, with AdvancedTCA IEA handle (lever type)	**21596-325**
Accessories			
AdvancedTCA handle (IEA) design element Plastic, transparent, to clip on, for customers' logos, UL 94 V-0, PU 10 pcs			20818-140

NOTE

- Al front panel available through individual configuration service
- Front panels with copper-beryllium gasket (CuBe) available on request
- Front panels with board cover on request
- With its front panel service Schroff offers extensive modification options, including custom cut-outs, foils and screen printing
- Intuitive Ergonomic Aesthetic = IEA handle

FRONT PANELS AND IEA HANDLE (WITH/WITHOUT SPRING LOADING)

ORDER INFORMATION

	IEA handle (with spring loading)	IEA handle (without spring loading)	Front panel		EMC textile gasket	Design element for handle
			Stainless steel	Al extrusion		
 12909002	 12707017	 12707017	 12705059	 12708050	 12712051	 12706024
	Pre-fitted handle with microswitch activation; when open, the spring loading of the IEA handle holds the handle open and thus facilitates insertion of the board	Pre-fitted handle with microswitch activation; when open, the handle must be held in open position	Stainless steel, 1 mm, 8 U, 6 HP	Al extrusion, 2.5 mm, 8 U, 6 HP	PET triangular gasket, height 2.3 mm, conductive coating CuNi, UL 94 V-0, self-adhesive	Plastic, transparent, clips in, UL 94 V-0
	PU 10 pieces	PU 10 pieces	1 piece	1 piece	PU 10 pieces	PU 10 pieces
Plunger style, upper	**20818-145**	**20818-121**	**31591-422**	**31596-575**	21596-376	20818-140
Plunger style, lower	**20818-146**	**20818-122**	**31591-422**	**31596-575**	21596-376	20818-140
Lever style, upper	**20818-147**	**20818-123**	**31596-423**	**31596-576**	21596-376	20818-140
Lever style, lower	**20818-148**	**20818-124**	**31596-423**	**31596-576**	21596-376	20818-140

NOTE

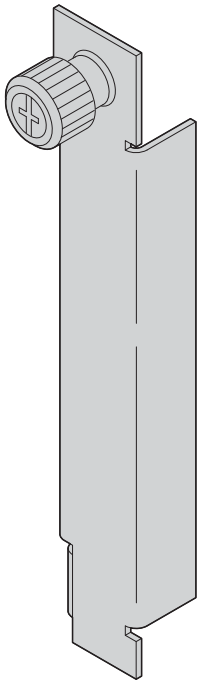
- **I**ntuitive **E**rgonomic **A**esthetic = IEA handle

FRONT PANEL WITH INTEGRATED SIDE TWO COVER

12706022

- For protection of components on solder side of backplane
- Customised version available on request
- Schroff offers extensive modification options with the Front Panel Service, including customised cut-outs, foils and silk-screen printing

FRONT PANEL TO COVER OPEN SHELF MANAGER SLOTS



12706052

DELIVERY INCLUDES

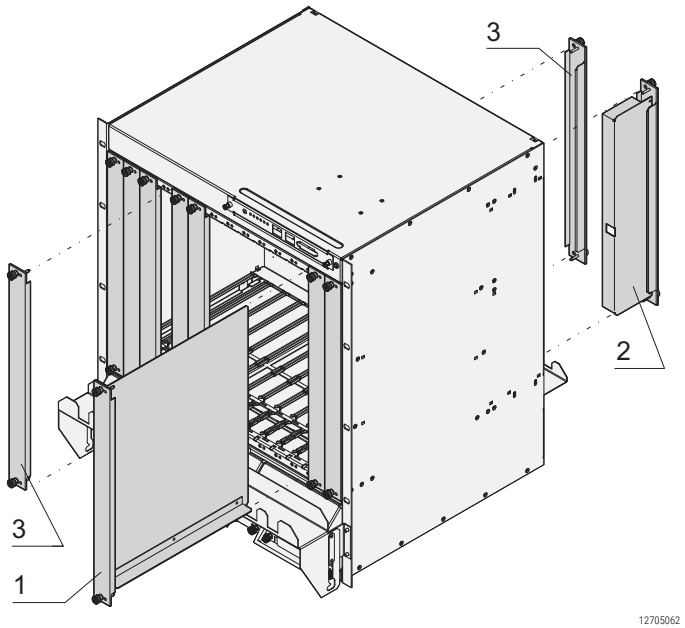
Item	Qty	Description
1	1	Front panel, St, stainless, height 99.32 mm, width 15.22 mm, including EMC sealing
2	1	Knurled screw

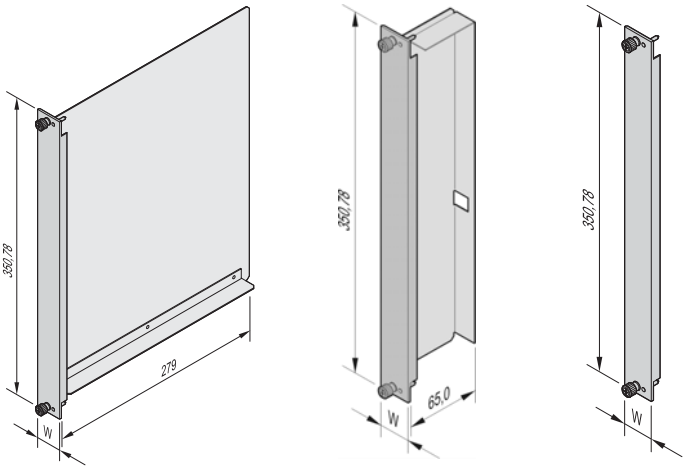
ORDER INFORMATION

Description	Qty/PU piece	Part no.
Front panel to cover open shelf manager slots	1	21596-012

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

ADVANCEDTCA AIR DEFLECTORS, FILLER PANELS





- Front panels, stainless steel or Al extrusion
- 6 HP front panels in three versions
  - Front: Front panel with air baffle (item 1, air baffle blocks the air from unused slots)
  - Rear: Front panel with air baffle (item 2, air baffle blocks the air from unused slots)
  - Only front panel (item 3)

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Front panel
2	1	Air baffle (front or rear)

ORDER INFORMATION

AdvancedTCA air deflector

Item	Height U	Width HP	Depth mm	W mm	Description	Part no.
1	8	6	280	30.14	Front panel, Al extrusion, incl. air baffle, with mesh gasket	**21596-008**
1	8	6	280	28.95	Front panel, stainless steel, incl. air baffle with mesh gasket	**21591-079**
2	8	6	70	30.14	Front panel, Al extrusion, for rear I/O area, incl. air baffle, with mesh gasket	**21591-107**
2	8	6	70	28.95	Front panel, stainless steel, for rear I/O area, incl. air baffle with mesh gasket	**21591-099**

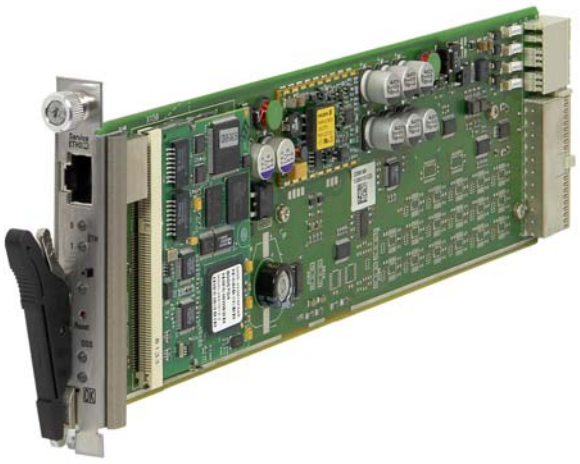
AdvancedTCA filler panel

Item	Height U	Width HP	Depth mm	W mm	Description	Part no.
3	8	6	–	30.14	Al extrusion, front panel with mesh gasket	**21591-104**
3	8	6	–	28.95	Front panel, stainless steel, with mesh gasket	**21591-097**

NOTE

- Version with CuBe gasket available on request
- AdvancedMC carriers see page 8.26

SHELF MANAGER, ACB-V/VI, BUSSED/RADIAL



12708006

12706021

Cable for the serial console of the shelf manager via the SAP

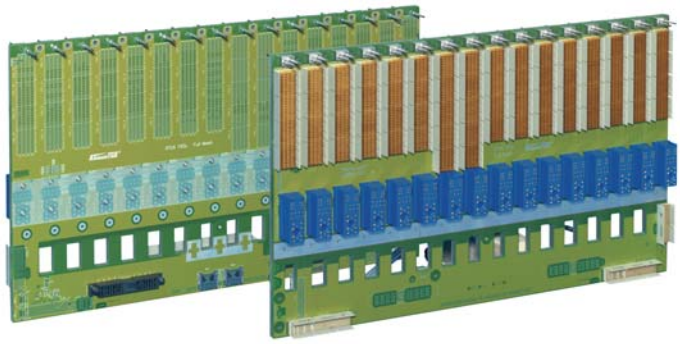
- Shelf manager for Schroff AdvancedTCA systems
- Based on Pigeon Point shelf management technology ShMM 500 (ACB-V) and ShMM 700 (ACB-VI) respectively
- Versions for bussed or radial IPMB
- Ethernet service interface on the front panel
- Serial console for the shelf manager is available via SAP
- ACB-V and ACB-VI shelf managers are plug compatible but require different shelf FRU files
- Shelf FRU files and firmware versions are available for download

ORDER INFORMATION

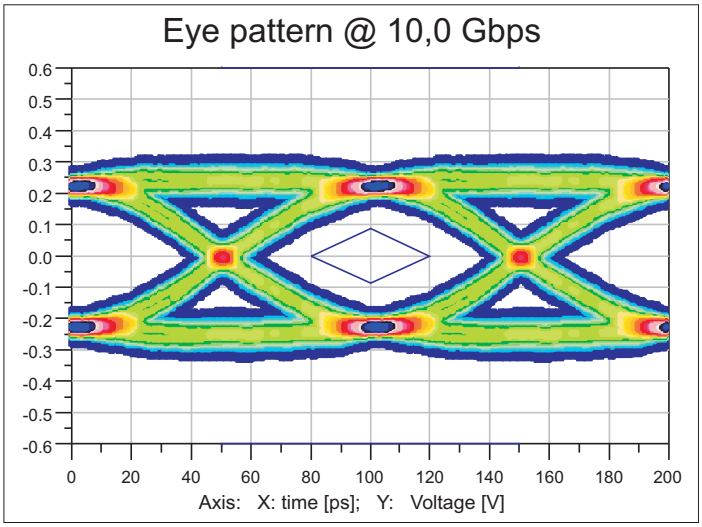
Version	ShMM	IPMB	Part no.
ACB-V	500	bussed	**21596-300**
ACB-V	500	radial	**21596-301**
ACB-VI	700	bussed	**21990-404**
ACB-VI	700	radial	**21990-405**
Accessories			
Cable for the serial console of the shelf manager via the SAP RJ 45 Cat 5 plug - D-Sub plug, 9-pin, length 2 m, 1 piece			**23204-187**

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

BACKPLANE



12606003



12707058

All Schroff AdvancedTCA systems are equipped with a high-performance Schroff backplane. Thanks to our years of experience in high-speed data transfer we have now built 40G backplanes to the XAUI specification into our systems, which are constructed with the low-cost FR 4 material. Additionally, the number of layers has been reduced to less than half of the first backplanes.

- The Schroff AdvancedTCA systems are equipped and available with:
  - Backplane with dual star, full mesh and replicated mesh topology; dual dual star topology on request
  - Bussed or radial intelligent platform management interface (IPMB)
  - Redundant power supply, divided into up to four independent segments
  - Point-to-point connection structure independent of protocol
  - Data transfer rates of up to 40 Gbps
  - I^2C bus for internal monitoring
  - Outstanding eye pattern of up to 10 Gbps per differential pair (40G backplane)

FIELD REPLACEABLE UNITS (FRUS)

Field replaceable unit (FRU) designates system components that can be replaced on site. This reduces system downtime to a minimum. Schroff offers various FRU components for AdvancedTCA systems:

- Power entry modules, see from page 8.19
- Fan trays, see from page 8.20
- Air filters see page 8.22
- Shelf alarm panels, see from page 8.23
- Shelf alarm display, see page 8.24
- Chassis data module, see page 8.24

POWER ENTRY MODULE FOR 5 U, 6 SLOT ADVANCEDTCA SYSTEM

12710002

- Input 48 V_{DC}/60 V_{DC}
- Plugged-in at rear of chassis
- For 2 pairs of lines each (RTN and -48 V_{DC}/-60 V_{DC}) per input
- Delivers up to 350 W/slot
- Hot-swap push-button and LED display (hot-swap, alarms, etc.)
- 2 circuit breakers and 2 double lugs (power terminals)

ORDER INFORMATION

Description	Qty/PU	Part no.
Power entry module 6-slot system (11596-160, 11596-161)	1	21990-058

NOTE

- AdvancedTCA systems see from page 8.6

POWER ENTRY MODULE FOR 12 U, 14 SLOT ADVANCEDTCA SYSTEM

12706006

- Input 48 V_{DC}/60 V_{DC}
- Plugged-in at rear of chassis
- For 4 pairs of lines each (RTN and -48 V_{DC}/-60 V_{DC}) per input
- 8 fuses 30 A/80 V each

ORDER INFORMATION

Description	Qty/PU	Part no.
Power entry module for 12 U, 14 slot AdvancedTCA system (11596-300, -303)	1	21596-003
Fuse 30 A/80 V for power entry module, PU 10 pieces		21191-207

NOTE

- AdvancedTCA systems see page 8.9

POWER ENTRY MODULE FOR 13 U, 14/16 SLOT ADVANCEDTCA SYSTEM

12706006

- Input 48 V_{DC}/60 V_{DC}
- Plugged-in at rear of chassis
- For 4 pairs of lines each (RTN and -48 V_{DC}/-60 V_{DC}) per input
- 8 fuses 30 A/80 V each

ORDER INFORMATION

Description	Qty/PU	Part no.
Power entry module for 13 U, 14/16 slot AdvancedTCA system (11990-600, -601, -603)	1	21596-020
Fuse 30 A/80 V for power entry module, PU 10 pieces		21191-207

NOTE

- AdvancedTCA systems see from page 8.9

POWER ENTRY MODULE FOR 14 U, 14-SLOT ADVANCEDTCA SYSTEM

12712003

- Input 48 V_{DC}/60 V_{DC}
- Plugged-in at rear of chassis
- For 2 pairs of lines each (RTN and -48 V_{DC}/60 V_{DC}) per input
- 8 fuses 50 A/80 V each

ORDER INFORMATION

Description	Qty/PU	Part no.
Power entry module for 14 U, 14-slot AdvancedTCA system (11990-10x)	1	21990-224
Accessories		
Fuse50 A/80 V for power entry module, PU 10 pieces		21990-225

- AdvancedTCA systems see page 8.7

FAN TRAY FOR 5 U, 6 SLOT ADVANCEDTCA SYSTEM

12710003

- Fan tray with 6 axial fans to cool front and rear boards in system
- Cooling capacity up to 350 W per board
- Extractor handle, hot-swap push-button and LED display (hot-swap, alarms, etc.)

ORDER INFORMATION

Description	Qty/PU	Part no.
Fan tray for 5 U, 6-slot system (11596-160, 11596-161)	1	21990-057

NOTE

- AdvancedTCA systems see from page 8.6

FAN TRAY FOR 12 U, 14 SLOT ADVANCEDTCA SYSTEM

12706007

- Fan tray with 2 fans (330 m^3/h = 195 cfm each) to cool front and rear boards in system
- Extractor handle and LED display (hot-swap, alarms, etc.)

ORDER INFORMATION

Description	Qty/PU	Part no.
Fan tray 12 U, 14 slot system (11596-3xx)	1	21596-236

NOTE

- AdvancedTCA systems see from page 8.5

FAN TRAY FOR 13 U, 14 SLOT ADVANCEDTCA SYSTEM

12706009

- Fan tray with 3 radial fans (300 m^3/h = 175 cfm) to cool front and rear boards in the system
- Extractor handle and LED display (hot-swap, alarms, etc.)

ORDER INFORMATION

Description	Qty/PU	Part no.
Fan tray for 14-slot systems (11990-60x)	1	21990-184

- AdvancedTCA systems see page 8.5

FAN TRAY FOR 3 U, 2 SLOT-ADVANCEDTCA SYSTEM

12715005

- Fan tray with 2 * 2 axial fans (108 m^3/h = 64,4 cfm) to cool front and rear boards in the system
- Extractor handle and LED display (Operation and Error)

ORDER INFORMATION

Description	Qty/PU	Part no.
Fan tray for 2-slot systems (11990-800, -801, -802, -803)	1	21990-526

- AdvancedTCA systems see page 8.10

UPPER FAN TRAY FOR 14 U, 14-SLOT ADVANCEDTCA SYSTEM

12712001

- Fan tray with 6 axial fans (570 m^3/h = 336 cfm) to cool front and rear boards in the system
- Extractor handle and LED display (hot-swap, alarms, etc.)
- Telco alarm interface on front

ORDER INFORMATION

Description	Qty/PU	Part no.
Upper fan tray for 14 U, 14-slot systems (11990-10x)	1	21990-227

- AdvancedTCA systems see page 8.7

LOWER FAN TRAY FOR 14 U, 14-SLOT (11990-10X)

12712002

- Fan tray with 6 axial fans (570 m^3/h = 336 cfm) to cool front and rear boards in the system
- Extractor handle and LED display (hot-swap, alarms, etc.)
- Telco alarm interface on front

ORDER INFORMATION

Description	Qty/PU	Part no.
Lower fan tray for 14 U, 14-slot systems (11990-10x)	1	21990-228

- AdvancedTCA systems see page 8.7

AIR FILTERS FOR ADVANCEDTCA SYSTEMS

12706005

Photo shows air filter of 14 slot system

- 45 PPE, 80 % dust collection to NEBS GR-78 Core standard
- Material Polyurethan UL 94 HF1

ORDER INFORMATION

Air filter	Qty/PU	Part no.
for 3 U, 2 slot systeme (11990-800, -801, -802, -803)	1	21990-527
for 5 U, 6 slot systems (11596-16x)	1	21990-059
for 13 U, 16 slot systems (11592-50x)	1	21594-144
for 14 U, 14 slot system (11990-10x)	1	21990-229

NOTE

- AdvancedTCA systems see from page 8.4

SHELF ALARM PANEL FOR 12 U, 14 SLOT ADVANCEDTCA SYSTEM

12706008

- Displays all alarm signals in accordance with AdvancedTCA specification
- With alarm cut-off push button
- Two RJ 45 sockets to connect one serial console (serial interface of the two shelf managers)
- D-Sub plug for Telco alarm

ORDER INFORMATION

Description	Qty/PU	Part no.
Shelf alarm panel for 12 U, 14 slot systems (11592-40x, 11596-30x)	1	21596-022

- AdvancedTCA systems see page 8.5

SHELF ALARM PANEL FOR 13 U, 14 SLOT ADVANCEDTCA SYSTEM

12707004

- For output of all Telco alarm signals in accordance with AdvancedTCA Specification
- D-Sub socket for Telco alarm

ORDER INFORMATION

Description	Qty/PU	Part no.
Shelf alarm panel for 13 U, 14 slot systems (11596-10x)	1	21596-140

NOTE

- AdvancedTCA systems see page 8.5

SHELF ALARM PANEL FOR 13 U, 16 SLOT ADVANCEDTCA SYSTEM

12706010

- For output of all Telco alarm signals in accordance with AdvancedTCA specification
- D-Sub socket for Telco alarm

ORDER INFORMATION

Description	Qty/PU	Part no.
Shelf alarm panel for 13 U, 16 slot systems (11592-50x)	1	21596-025

NOTE

- AdvancedTCA systems see page 8.9

SHELF ALARM DISPLAY FOR 13 U, 14 AND 16 SLOT ADVANCEDTCA SYSTEM

12706015

- Display the Telco and fan tray alarm signals in accordance with AdvancedTCA Specification
- With alarm cut-off push button
- Two RJ 45 sockets to connect one serial console (serial interface of the two shelf managers)

ORDER INFORMATION

Description	Qty/PU	Part no.
Shelf alarm display for 13 U, 14 and 16 slot systems (11592-5xx, 11596-1xx)	1	21596-026

NOTE

- AdvancedTCA systems see page 8.9

CHASSIS DATA MODULE FOR 12, 13 AND 14 U ADVANCEDTCA SYSTEMS

12706014

Illustration shows chassis data module 21596-023

- SEEPROM for chassis FRU data (user must specifically programm it for the chassis)
- Temperature sensors for input temperature of chassis
- Hall sensor for filter mat ("air filter present")

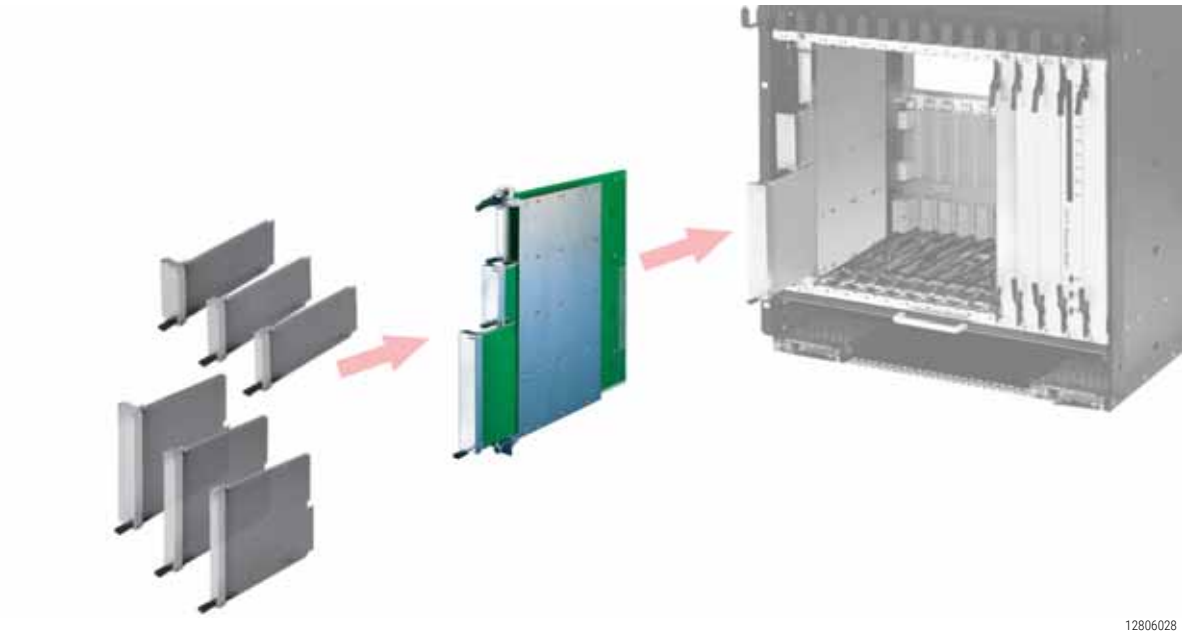
ORDER INFORMATION

Chassis data module	Qty/PU	Part no.
for systems 11592-50x, 11596-30x, 11596-60x	1	21596-023
for systems 11990-10x	1	21990-226

NOTE

- AdvancedTCA systems see from page 8.9

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days



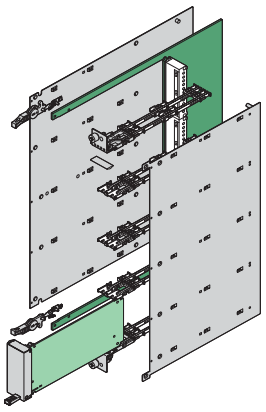
12806028

ADVANCEDMC CARRIERS

AdvancedMC carriers are plug-in units that are slotted into an AdvancedTCA system. They contain the carrier board that accepts AdvancedMC modules.

Electrical connection to the AdvancedTCA backplane is via connectors. With the fully-assembled AdvancedMC carrier in place, cost-effective additional functions may be integrated into the system.

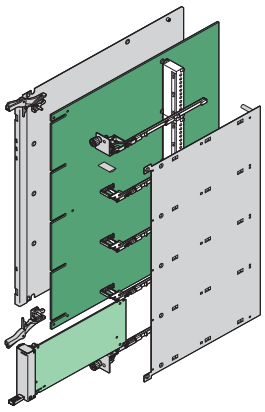
The standard, in accordance with PICMG specification AMC.0 R2.0, defines three different mechanical versions:



12805082

Cutaway carrier

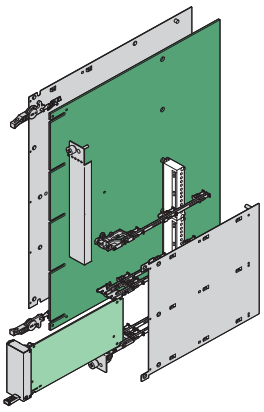
- Carrier board is cut out in the area of the AdvancedMC modules
- Max. placement:
  8 single compact or 4 single full-size AdvancedMC modules
- Combinations of full-size and compact modules are possible



12805083

Conventional carrier

- Carrier board runs continuously from front to rear
- Max. placement:
  4 single compact or 4 single mid-size AdvancedMC modules



12805081

Hybrid carrier

- Carrier board is a combination of conventional and cutaway carrier
- The maximum placement depends on the carrier board design
- Combinations of all AdvancedMC modules are possible

OVERVIEW

ADVANCEDMC CARRIERS FOR ADVANCEDTCA SYSTEMS

- **Cutaway, conventional and hybrid carrier mechanics for**
  - **compact AdvancedMC carrier boards**
  - **Mid-size AdvancedMC carrier boards**
  - **Full-size AdvancedMC carrier boards**
- **Standard versions from stock**
- **Individual carrier/module combination of your choice**

PICMG
Open Modular Computing Specifications

12807020

ADVANCEDMC CARRIERS

- 1 slot chassis, 8 U, 6 HP for AdvancedTCA systems
- Inserter/extractor handle for microswitch activation
- Versions
  - **Cutaway carrier** for compact and full-size modules
  - **Conventional carrier** for mid-size and compact modules

INDIVIDUAL SOLUTIONS ON REQUEST

- AdvancedMC hybrid carrier
- AdvancedMC hybrid mechanics for rugged AdvancedMC modules (MicroTCA.1)

12812005 12806016

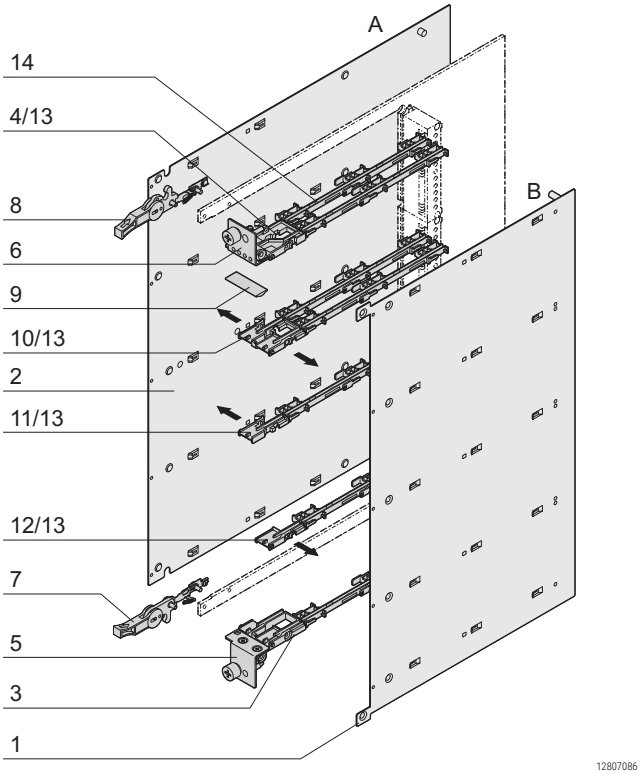
SERVICEPLUS

e.g. individual configuration and fitting of hybrid carriers)
e.g. modifications (cut-outs, special colours)
e.g. custom solutions (special sizes)

Systems – AdvancedMC cutaway carrier

CARRIER MECHANICS FOR COMPACT AND FULL-SIZE ADVANCEDMC MODULES

12805002



12807086

- Mechanics for cutaway carrier board (carrier **with** 3 different struts, guide rails, ESD clips)
- Stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG® AMC.0 R2.0
- Inserter/extractor handle, designed for microswitch activation hot-swap)

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs
7	1	Standard inserter/extractor handle, with microswitch operation, plastic lever, black
8	1	Standard inserter/extractor handle, plastic lever, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	3	Support member between cover A and B
11	3	Support member for cover A (on the left)
12	3	Support member for cover B (on the right)
13	8	ESD clip
14	10	AdvancedMC guide rail, PBT, UL 94 V-0, red
15	1	Assembly kit

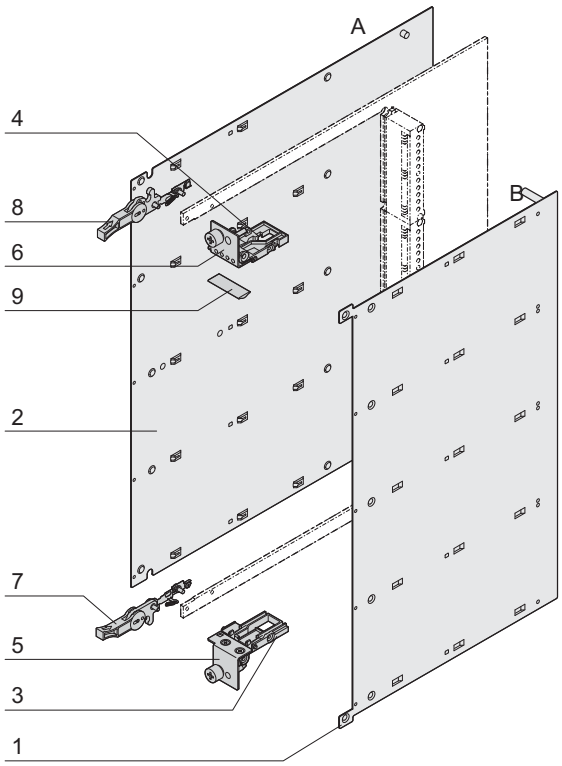
ORDER INFORMATION

Description	Part no.
Carrier mechanics for AdvancedMC compact and full-size modules **with** struts, ESD clips and guide rails	**10849-001**
Accessories	
Microswitch, **normally closed**, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	**20849-236**
Microswitch, **normally open**, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	**20849-235**
Description inserter/extractor handle	**Page 8.31**
Microswitch description	**Page 8.31**
AdvancedMC module mechanics	**Page 8.56**

Systems – AdvancedMC cutaway carrier

CARRIER MECHANICS FOR COMPACT AND FULL-SIZE ADVANCEDMC MODULES

12807021



12805053

- Mechanics for cutaway carrier board (carrier **without** struts, guide rails, ESD clips, for individual placement)
- Stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG® AMC.0 R2.0
- Inserter/extractor handle, designed for microswitch activation (hot-swap)

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs
7	1	Standard inserter/extractor handle, with microswitch operation, plastic lever, black
8	1	Standard inserter/extractor handle, plastic lever, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	1	Assembly kit

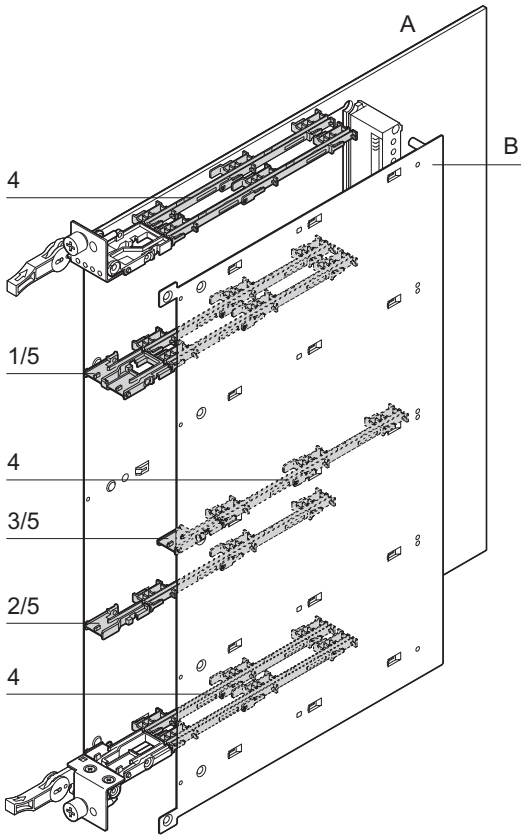
ORDER INFORMATION

Description	Part no.
Carrier mechanics for AdvancedMC compact and full-size modules without struts, ESD clips and guide rails	**10849-002**
Accessories	
Microswitch, **normally closed**, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	**20849-236**
Microswitch, **normally open**, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	**20849-235**
Further struts, ESD clips and guide rails	**Page 8.30**
Description inserter/extractor handle	**Page 8.31**
Microswitch description	**Page 8.31**
AdvancedMC module mechanics	**Page 8.56**

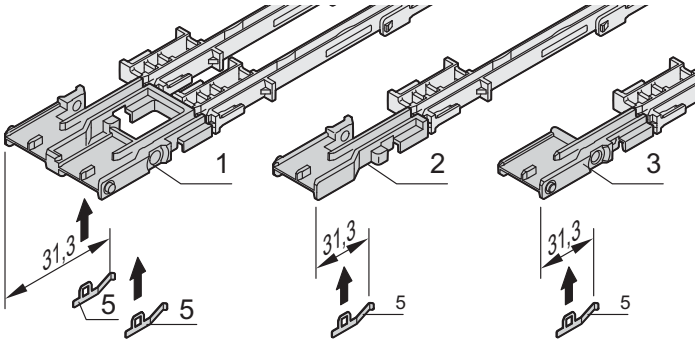
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Systems – AdvancedMC cutaway carrier

BOARD GUIDES/STRUTS FOR ADVANCEDMC COMPACT AND FULL-SIZE MODULES



12805070



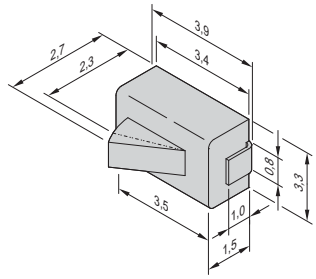
12805071

- Struts and guide rails are always required to guide boards
- 3 different struts
  - The strut is assembled between the cover plates A and B
  - The strut is assembled on the left of cover plate A
  - The strut is assembled on the right of cover plate B
- The ESD clip pushes into the strut (one per board guide)
- The guide rails clip into the cover plate

ORDER INFORMATION

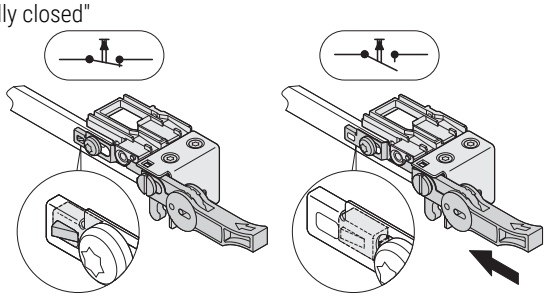
Item	Description	Qty/PU	Part no.
1	Strut between cover A (left) and B (right), Zn die-cast, nickel-plated	10	**20849-009**
2	Splitting extrusion (strut) for cover A (left), Zn die-cast, nickel-plated	10	**20849-010**
3	Splitting extrusion (strut) for cover B (on the right), Zn die-cast, nickel-plated	10	**20849-011**
4	AdvancedMC guide rail, PBT, UL 94 V-0, red	10	**20849-008**
5	ESD clip, stainless spring steel, for deflection of electrostatic charges	50	**20849-021**
Accessories			
Microswitch, **normally closed**, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces, page 8.31			**20849-236**
Microswitch, **normally open**, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces - page 8.31			**20849-235**

MICROSWITCH FOR CARRIER (COMPACT AND FULL-SIZE ADVANCEDMC MODULES)



12807066

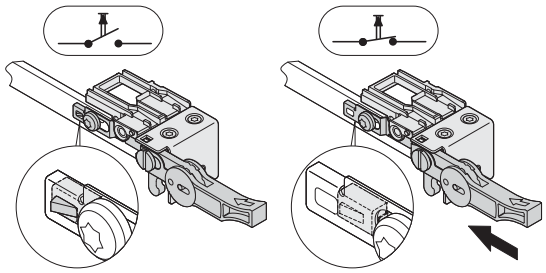
"Normally closed"



12807081

Handle in inoperative position Handle activated

Closer



12807082

Handle in inoperative position Handle activated

- Microswitch for soldering (SMD)

ORDER INFORMATION

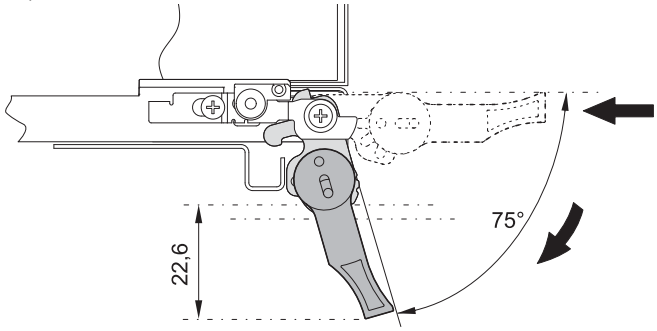
Description	Qty/PU	Part no.
Microswitch, **normally closed**, for AdvancedMC carrier (compact and full-size modules)	10	**20849-236**
Microswitch, **normally open**, for AdvancedMC carrier (compact and full-size modules)	10	**20849-235**

Technical data

Max. switch current	1 mA, 5 V_{DC}
Operating temperature	-15 °C ... +70 °C
Electrical lifespan	10^5 switching cycles

DIFFERENCES BETWEEN STANDARD AND MF HANDLE FOR ADVANCEDMC CARRIER (COMPACT AND FULL-SIZE MODULES)

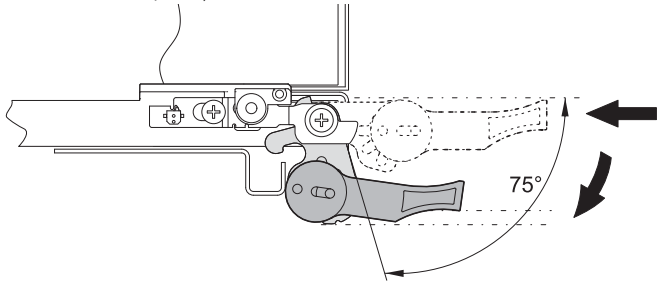
Standard front handle - is included in delivery of carriers for compact and full-size modules



12806063

- Extractor handle 75° opening angle
- Insertion/extraction in one step
- Swing range: 23 mm below and above the pitch line
- Included in delivery of carrier

MF handle - can be exchanged by standard handle if needed (available on request)

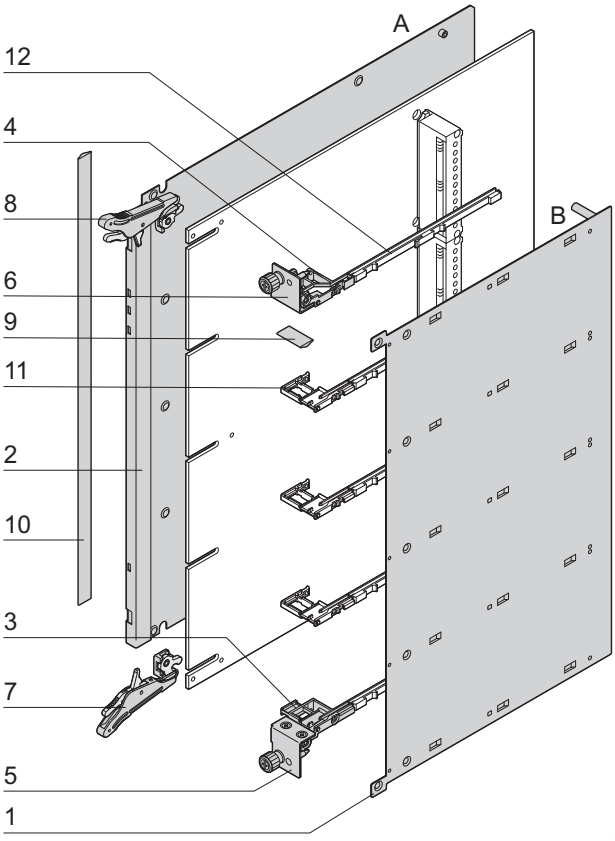


12805072

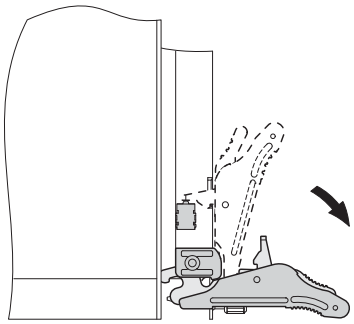
- Extractor handle 75° opening angle
- Insertion/extraction in three steps (2 operations)
- Small swing range (0 mm) below and above the pitch line.
  The lower respectively upper limit of the carrier is not exceeded during extraction.

CARRIER MECHANISM FOR MID-SIZE ADVANCEDMC MODULES WITH ADVANCEDTCA IEA HANDLE, COMPLETE KIT

12808001 12808002



12808050



12808051

- Mechanics for conventional carrier, stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG® AMC.0 R2.0
- AdvancedTCA **IEA** inserter/extractor handle, designed for microswitch activation (hot-swap)
- Carrier mechanics with struts and guide rails for four modules

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
7	1	Lower AdvancedTCA IEA inserter/extractor handle, with microswitch activation, plastic lever, black
8	1	AdvancedTCA IEA inserter/extractor handle, top, with microswitch activation, lever plastic, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
11	3	Splitting extrusion between covers A and B (4 ESD clips)
12	5	AdvancedMC guide rail, PBT, UL 94 V-0, green
13	1	Fixing material kit

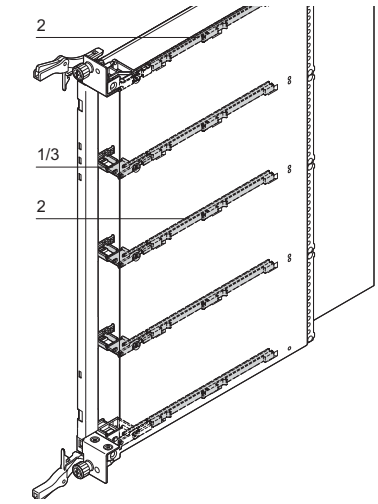
ORDER INFORMATION

Description	Part no.
AdvancedMC carrier mechanism for mid-size AdvancedMC modules with AdvancedTCA IEA handle with struts, ESD clips and guide rails	**10849-011**
Accessories	
Microswitch for carriers (mid-size AdvancedMC modules) normally closed, for soldering (SMD), PU 10 pieces	**20817-853**
Microswitch for carriers (mid-size AdvancedMC modules) normally open, for soldering (SMD), PU 10 pieces	**20817-909**
AdvancedMC module mechanics	**Page 8.56**

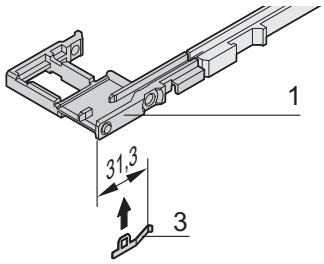
NOTE

- Carrier with stronger cover plate A (1 mm) on request
- Carrier for compact AdvancedMC modules on request
- Southco type handle kit on request

BOARD GUIDES/STRUTS FOR ADVANCEDMC MID-SIZE MODULES



12806061



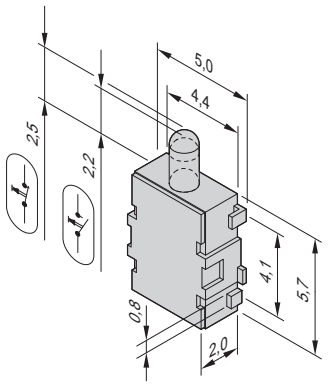
12806062

- Struts and guide rails are always required to guide boards
- Strut is assembled between cover plates A and B
- The ESD clip pushes into the strut (one per board guide)
- The guide rails clip into the cover plate

ORDER INFORMATION

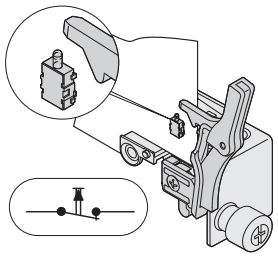
Item	Description	Qty/PU	Part no.
1	Strut between cover A (left) and B (right), Zn die-cast, nickel-plated	10	**20849-242**
2	AdvancedMC guide rail for mid-size carrier, PBT, UL 94 V-0, green	10	**20849-166**
3	ESD clip, stainless spring steel, for deflection of electrostatic charges	50	**20849-021**

MICROSWITCH FOR CARRIERS (MID-SIZE ADVANCEDMC MODULES)



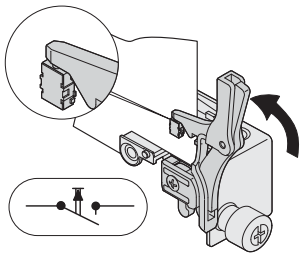
12807071

Opener



12807079

Closer



12807087

- Microswitch for soldering (SMD)
- Can be used for all conventional carrier handles

ORDER INFORMATION

Description	Qty/PU	Part no.
Microswitch (**normally closed**) for carrier (mid-size AdvancedMC modules)	10	**20817-853**
Microswitch (**normally open**) for carrier (mid-size AdvancedMC modules)	10	**20817-909**

Technical data

Max. switch current	100 mA, 12 V_{DC}
Operating temperature	-20 °C ... +60 °C
Electrical lifespan	5 x 10^5 switching cycles

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Systems – AdvancedMC carrier Ser-

SERVICEPLUS: SOLUTION

12812004

ADVANCEDMC CARRIER MECHANICS

- The carrier board is a combination of conventional and cutaway carriers
- Max. placement depends on the design of the carrier board
- Custom versions on request
  - Single/double combinations
  - Handles
    - AdvancedTCA IEA
    - AdvancedTCA Southco

Systems – AdvancedMC conventional

Systems – MicroTCA

12907003

MICROTCA (MICRO TELECOMMUNICATIONS COMPUTING ARCHITECTURE)

MicroTCA.0 R1.0 is a modular standard that utilises AdvancedMC modules. These are plugged directly onto the backplane.

In addition to standard systems, modifications and customised solutions, SCHROFF also offers all components for building systems.

The central unit of a MicroTCA system is the MicroTCA carrier hub (MCH), which performs the carrier and often also shelf management. It also acts as the data switch in the system.

Carrier and shelf management include, among other things, temperature, voltage and air monitoring.

Remote monitoring can be set up via an external Ethernet connection. This allows early detection and remedying of temperature problems. Downtimes are thus reduced.

APPLICATIONS

Reduced development costs and shorter time-to-market are the advantages of the MicroTCA standard compared to proprietary system solutions, as they can be found increasingly often in telecommunications today.

Among others the advantages over the previous bus systems (VME, CompactPCI busses) are the higher speed, smaller designs and larger flexibility.

MicroTCA is used in areas where faster data transfer rates are required and large data volumes must be processed in the shortest time, e.g. in telecommunications, automation, image processing, medical systems, defence systems etc.

HEAT DISSIPATION

MicroTCA defines very high heat dissipation for the AdvancedMC modules.

The maximum heat dissipation for the largest module (double full-size) is determined as 80 W. Cooling is thus a challenge.

MicroTCA systems from SCHROFF can reliably dissipate this volume of thermal power loss. Special fans have been purpose-developed and create a particularly high static pressure.

In addition, thermal simulations and measurements are performed on SCHROFF MicroTCA systems to optimise the airflow.

OVERVIEW

MODULAR MICROTCA HIGH SPEED SYSTEMS

- **Very wide product range in terms of dimensions, number of slots, cooling principles, backplane topologies**
- **Modifications to your requests**
- **Systems for MicroTCA.0, MicroTCA.1 and MicroTCA.4**

PICMG® Open Modular Computing Specifications

12911003

MICROTCA.4 SYSTEMS FOR TEST AND MEASUREMENT APPLICATIONS

- Cube and 19" systems
- For double mid-size AMC modules
- With rear board cage for rear transition modules
- Cooling units with management controller

12912005

MICROTCA.1 SYSTEMS FOR INDUSTRIAL APPLICATIONS

- Cube systems
- For double mid-size AdvancedMC modules
- For harsh environmental conditions
- Cooling units with management controller

12908003

MICROTCA.0 SYSTEMS FOR COMMUNICATIONS APPLICATIONS

- Cube and 19" systems
- For single and double AdvancedMC modules
- Cooling units with management controller

12908004

MICROTCA.0 SYSTEMS FOR LABORATORY APPLICATIONS

- Desk-top enclosures with tip-up feet
- Cube and 19" systems
- Cooling units without management controller

SERVICEPLUS

e.g. individual configuration and assembly
e.g. modifications (backplanes, power supply)
e.g. ventilation concepts
e.g. custom solutions

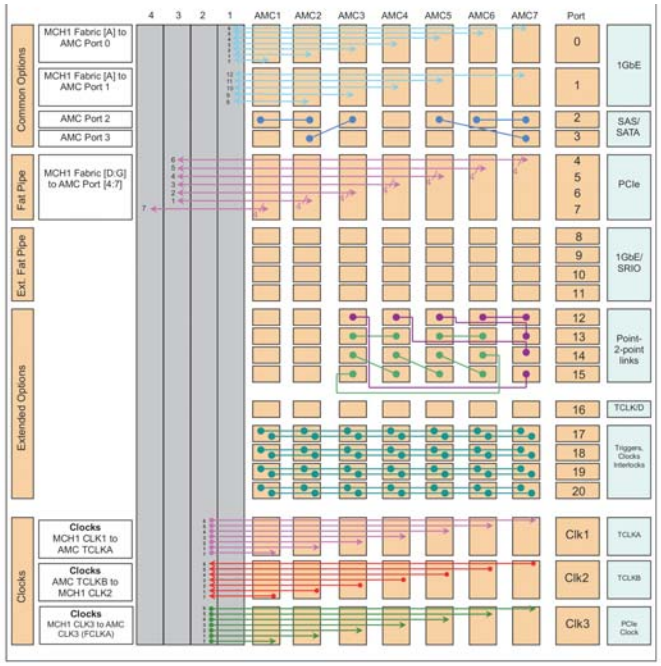
MICROTCA.4 SYSTEM, CUBE, 5 U, 42 HP, FOR 7 DOUBLE ADVANCEDMC MODULES

12912001

Front view

12912004

Rear view



12912052

Backplane topology

- In accordance with PICMG MTCA.4 R1.0 specification
- 5 U, 42 HP cube system for 6 double mid-size and 1 double full-size AdvancedMC modules, 1 double full-size MCH and 1 double full-size power module
- 6 rear transition module slots for double mid-size modules and one slot for double full-size
- Backplane with star topology, direct connections for S-ATA/SAS, clock and trigger lines as per PICMG MTCA.4
- Clock topology to PICMG AMC.0 R2.0
- Hot-swap fan module with cooling unit manager (CU EMMC), airflow from bottom to top, fan speed for front and rear sections can be separately adjusted via MCH
- Air filter, exchangeable from front

DELIVERY COMPRISES

Item	Qty	Description
1	1	MicroTCA system, 5 U, 42 HP, 373 mm deep, zinc-plated
2	7	AdvancedMC module slot, with guide rail, for vertical board mounting
3	1	Backplane with star topology for 7 AdvancedMC modules, 1 MCH and 1 power module
4	1	Hot-swap fan module with cooling unit manager (CU EMMC) and 6 fans
5	1	Air filter, exchangeable from front

ORDER INFORMATION

Height mm	Height U	Width HP	Depth mm	Number of slots	Part no.
222.25	5	42	373	7	11850-021
Accessories					
AC/DC, double full-size, with power management (PM EMMC) 550 W, 1 piece					**11098-547**
Splitting kit PU 5 pieces					**20849-115**
PFM, single full-size 12 V_{DC} input, 40 A, with PM EMMC, non-redundant, with reverse polarity and overvoltage protection, 1 piece					21596-571
PFM, single full-size 12 V_{DC} input, 80 A, with PM EMMC, non-redundant, without reverse polarity and overvoltage protection, 1 piece					21596-572
Replacement parts (FRUs)					
Fan tray (21850-113)					**Page 8.52**
Air filter (21850-116)					**Page 8.53**

NOTE

- Modified systems available on request

MICROTCA.4 SYSTEM, 3 U, 84 HP, FOR 6 AMC'S, 4 RTM'S, JSM-SLOT

12919001

Front view

12919002

Rear view

- Conforms to PICMG MTCA.4 R1.0 specification
- 3 U, 84 HP system for 5 Double Mid-size-AMC, 1 Double Full-size AMC, 1 Double Full-size MCH and 2 Double Full-size-Power-Modules
- 4 rear transition module pin positions for double mid-size RTMs
- Backplane with star topologie, direct connection for S-ATA / SAS, clock- and trigger lines as per PICMG MTCA.4
- Telecom and fabric clock topology as per PICMG AMC.0 R2.0
- Hot-swap fan units at the rear, air flow from front to rear; air filter exchangeable from front
- Fan speeds can be separately adjusted via the MCH
- Installation space for optimum JSM module on the back of the housing
- Different Backplane topologies: PCIe x16 from MCH to AMC1 and AMC2 or x8 connection from MCH to all 6 AMC slots

The system is designed for high-performance high availability applications. The hot-swap fan modules with EMMC in pull configuration ensure that the front and rear slots are cooled perfectly. The fan speed is adjustable via the MCH. The separate JSM installation space prevents an AMC slot from being occupied by a JTAG module. The system can take up to two power modules to ensure a sufficient power supply for the application. The backplane features clock and trigger lines as per PICMG MTCA.4, as well as interlocks. It also provides direct connections for SAS/SATA between the AMCs.

DELIVERY INCLUDES (completely assembled, wired and tested)

Item	Qty	Description
1	1	MicroTCA system, 3 U, 84 HP, 373 mm deep, zinc-plated
2	6	AdvancedMC module slots, with guide rail, for horizontal board mounting
3	4	RTM module slots, with guide rail, for horizontal board mounting
4	1	Backplane with star topology for 6 AdvancedMC modules, 1 MCHs and 2 power modules
5	1	Hot-swap fan module with cooling unit manager (CU EMMC) and 2 fans
6	1	Air filter, swappable from front

ORDER INFORMATION

Depth mm	Number of slots	Transmission rate	Height U	Width HP	Airflow	Backplane type	Part no.
373	6	40 Gbps	3	84	Front to rear	X16 connections from MCH to AMC 1 & AMC 2	**11890-164**

NOTE

- Modified systems available on request
- Optionally available with 3 fans and 2 EMMC's

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

MICROTCA.4 SYSTEM, 9 U, 84 HP, FOR 12 DOUBLE MID-SIZE ADVANCEDMC MODULES

12915003

Front view

12917002

Rear view 11850-026

- In accordance with PICMG MTCA.4 R1.0 specification
- 84 HP system for
  12 double full-size AdvancedMC modules,
  2 single full-size MCHs, and 4 / 2 single full-size-power modules
- 12 rear transition module slots for double mid-size RTMs
- 2 hot-swap fan modules with cooling unit manager (CU EMMC) in push/pull configuration, airflow from bottom front to top rear
- Fan speeds for front and rear sections can be separately adjusted via the MCH
- Prepared to install an LLRF backplane in the RTM area

DELIVERY INCLUDES (completely assembled, wired and tested)

Item	Qty	Description
1	1	MicroTCA system, 9 U, 84 HP, 373 mm deep, zinc-plated
2	12	AdvancedMC module slots, with guide rail, for vertical board mounting
3	12	RTM module slots, with guide rail, for vertical board mounting
4	1	Backplane with dual star topology for 12 AdvancedMC modules, 2 MCHs and 4 power modules
5	2	Hot-swap fan module with cooling unit manager (CU EMMC) and 6 fans
6	1	Air filter, swappable from front

The system is designed for high-performance applications with a high level of availability, where redundancy of all components is required. The two redundant hot-swap fan modules with EMMC in push-pull configuration ensure that the front and rear slots are cooled perfectly.
The fan speed is controlled independently for front and rear and is set via the MCH.
Cable trays on the front and rear of the enclosure simplify cable management.
The system can take up to four power modules to ensure a sufficient power supply for the application.
The backplane features clock and trigger lines as per PICMG MTCA.4, as well as interlocks. It also provides direct connections for SAS/SATA and lines between the AMCs.

PICMG®
Open Modular Computing Specifications

ORDER INFORMATION

JSM Slot	White Rabbit Support	Number of slots	Transmission rate	Height U	Width HP	Depth mm	Airflow	Topology GbE	Part no.
No	No	12	40 Gbps	9	84	373	From front to rear	MicroTCA.4 Backplane Topologie	**11850-026**
Yes	Yes	12	40 Gbps	9	84	373	From front to rear	MicroTCA.4 Backplane Topologie	11850-027
Yes	No	12	40 Gbps	9	84	373	From front to rear	MicroTCA.4 Backplane Topologie	**11850-028**
Accessories									
19" AC/DC switched-mode PSU for MicroTCA, double full-size, with power management (EMMC) 600 W, 1 piece									**11098-547**
Splitting kit PU 5 pieces									**20849-115**
PFM, single full-size 12 V_{DC} input, 40 A, with PM EMMC, non-redundant, with reverse polarity and overvoltage protection, 1 piece									21596-571
PFM, single full-size 12 V_{DC} input, 80 A, with PM EMMC, non-redundant, without reverse polarity and overvoltage protection, 1 piece									21596-572
Replacement parts (FRUs)									
Fan tray (21890-142)									**Page 8.57**
Air filter (21890-143)									**Page 8.53**

NOTE

- Modified systems available on request

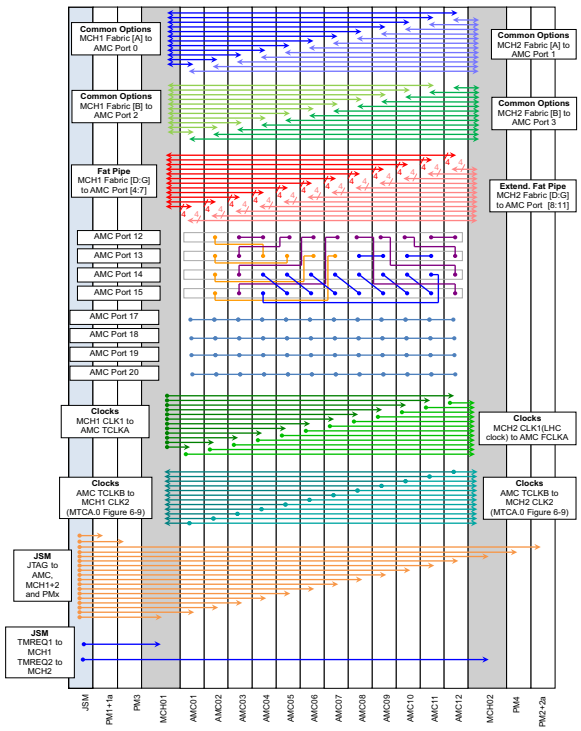
MICROTCA.4 SYSTEM, 7 / 9 U, 84 HP, FOR 12 DOUBLE FULL-SIZE ADVANCEDMC MODULES

12916001

Front view 9 U

12916005

Front view 7 U



12916050

CMS backplane topology

PICMG®
Open Modular Computing Specifications

- Conforms to PICMG MTCA.4 R1.0 specification
- 84 HP system for 12 double full-size AdvancedMC modules, 2 single full-size MCHs, and 4 / 2 single full-size-power modules
- 6 rear transition module slos for double full-size RTMs
- 1 single full-size slot for a JTAG switch module (JSM)
- Backplane with dual-star topology
- 2 hot-swap fan modules with cooling unit manager (CU EMMC)
- Optional fan speeds for front and rear sections can be separately adjusted via the MCH
- Air filter that can be changed on the front
- CMS and/or MTCA.4 backplane topology
- 7 U system with airflow from bottom to top, 9 U system with airflow from front to rear

DELIVERY INCLUDES (completely assembled, wired and tested)

Item	Qty	Description
1	1	MicroTCA system, 7 and/or 9 U, 84 HP, 373.3 mm deep, zinc-plated
2	12	AdvancedMC module slots, double full-size, with guide rail, for vertical board mounting
3	6	RTM module slots, double full-size, with guide rail, for vertical board mounting
4	4/2	Power module slots, single full-size
5	2	MCH slots, single full-size
6	1	JSM module slots, single full-size
7	1	Backplane with dual star topology for 12 AdvancedMC modules, 2 MCHs, 4/2 power modules, 1 JSM
8	2	Hot-swap fan module with cooling unit manager (CU EMMC) and 6 fans
9	1	Air filter, replaceable from front

ORDER INFORMATION

Height U	Width HP	Depth mm	Number of slots	Backplane type	Airflow	Part no.
7	84	373	12	CMS backplane topology	Bottom to top	**11890-119**
7	84	373	12	MTCA.4 backplane topology	Bottom to top	11890-152
9	84	373	12	CMS backplane topology	From front to rear	11890-156
9	84	373	12	MTCA.4 backplane topology	Bottom to top	11890-170

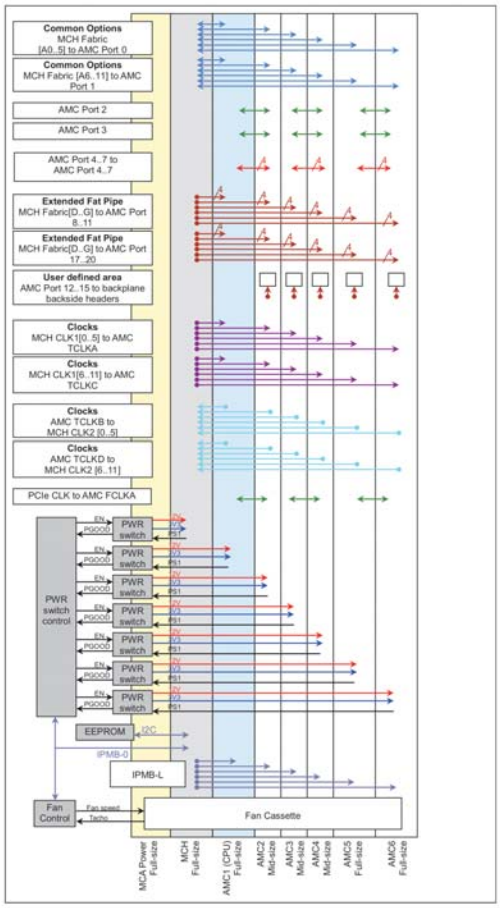
NOTE

- Modified systems available on request

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

MICROTCA.1 SYSTEMS, CUBE, 5 U, 42 HP, FOR 6 DOUBLE ADVANCEDMC MODULES

12912005



12912051

Backplane topology

- In accordance with PICMG MTCA.1 R1.0 specification
- 5 U, 42 HP cube system for
  3 double mid-size, 3 double full-size AdvancedMC modules,
  1 double full-size MCH and 1 double full-size PSU slot
- Backplane with star topology, direct connections for
  S-ATA/SAS
- Clock topology to PICMG AMC.0 R2.0
- Hot-swap fan module with cooling unit manager (CU EMMC), airflow from bottom to top
- Air filter, exchangeable from front
- Pluggable 300 W PSU with AC mains input in double full-size format, MicroTCA power management (PM EMMC) on backplane

DELIVERY COMPRISES

Item	Qty	Description
1	1	MicroTCA cube, 5 U, 42 HP, 216.5 mm deep, zinc-plated
2	6	AdvancedMC module slot, with guide rail, for vertical board mounting
3	1	Backplane with star topology for 6 AdvancedMC modules, 1 MCH and 1 PSU
4	1	Hot-swap fan module with cooling unit manager (CU EMMC) and 4 fans
5	1	Air filter, exchangeable from front
6	1	Pluggable PSU, 300 W, double full-size format

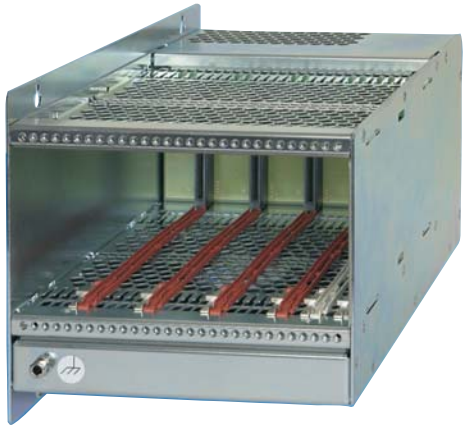
ORDER INFORMATION

Height mm	Height U	Width HP	Depth mm	Number of slots	Part no.
222.35	5	42	373	6	11850-020
Accessories					
Power module MicroTCA, AC/DC, double full-size, without management 300 W, 1 piece - page 8.51					**11098-392**
Splitting kit PU 5 pieces					**20849-115**
AdvancedMC front panels					**Page 8.60**
AdvancedMC filler panels					**Page 8.64**
Equipment cables					**Page 3.38**
Replacement parts (FRUs)					
Fan tray (21850-114)					**Page 8.57**
Air filter (21850-120)					**Page 8.53**

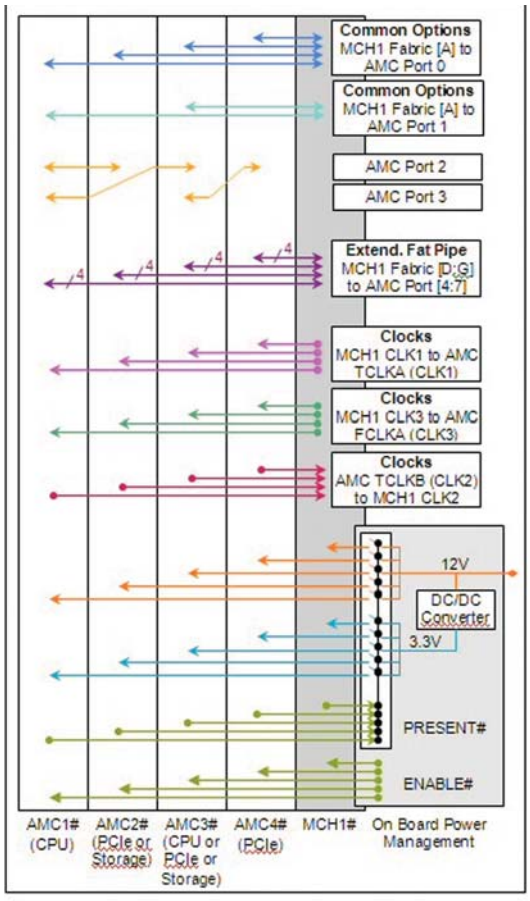
NOTE

- Modified systems available on request

MICROTCA.0 SYSTEM, CUBE, 3 U, 30 HP, FOR 4 SINGLE FULL-SIZE ADVANCEDMC MODULES



12907009



12907053

Backplane topology

- In accordance with PICMG MTCA.0 R1.0 specification
- Cube systems for wall mounting
  4 single full-size AdvancedMC modules and 1 single full-size MCH
- Backplane with star topology, direct connections for S-ATA/SAS
- Clock topology to PICMG AMC.0 R2.0
- Power supply via 250 W open-frame PSU, mains supply via IEC plug on rear, switching logic for individual slots on backplane

DELIVERY COMPRISES

Item	Qty	Description
1	1	MicroTCA system, cube, 3 U, 30 HP, 250 mm deep
2	4	AdvancedMC module slots, with guide rail, for vertical board mounting
3	1	Backplane with star topology for 4 AdvancedMC modules and 1 MCH
4	2	Fan for forced ventilation of slots
5	1	250 W open-frame PSU and IEC mains inlet with switch and fuse; power switching to slots via power management board
6	1	Power management board for 21850-046 and 21850-081

ORDER INFORMATION

Height U	Width HP	Depth mm	Number of slots	Part no.
3	30	250	4	21850-046
Accessories				
AdvancedMC front panels				**Page 8.60**
AdvancedMC filler panels				**Page 8.64**

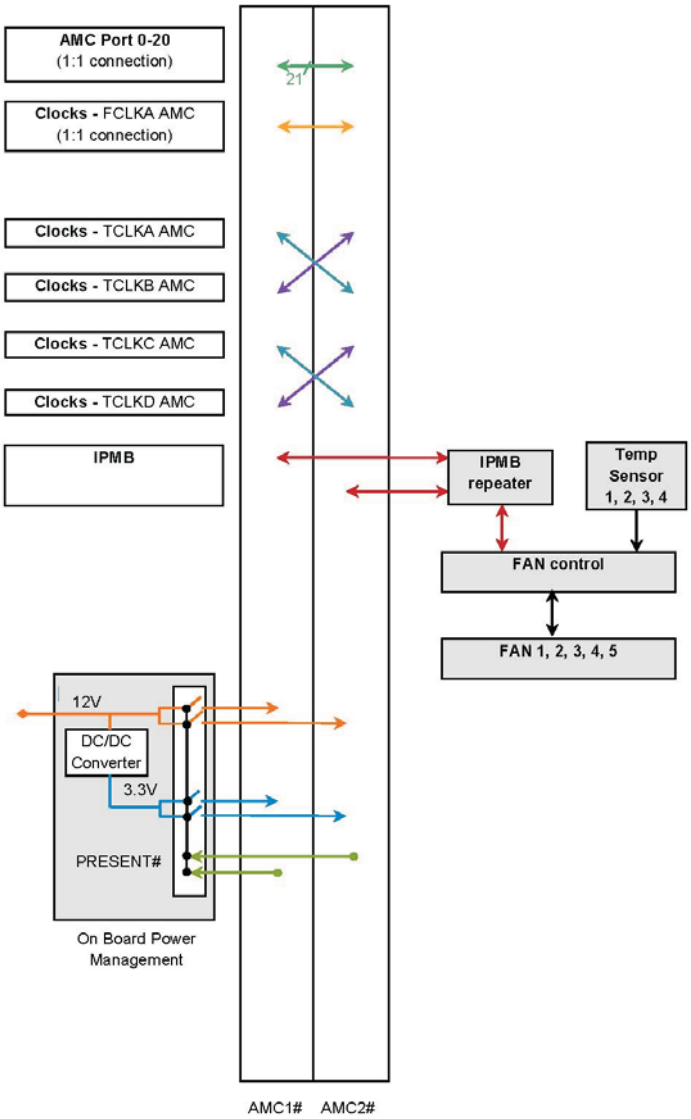
NOTE

- Modified systems available on request

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

ADVANCEDMC MINI SYSTEM FOR 2 SINGLE ADVANCEDMC MODULES

12913001



12613050

PICMG®
Open Modular Computing Specifications

- Small, compact case to hold 2 single full-size AdvancedMC modules
- 150 W cooling capacity at an ambient temperature of 55 °C, airflow from right to left, temperature-regulated fans
- 90 - 264 V_{AC} wide range input on rear of case, 150 W power supply in rear section of enclosure
- Direct connection of all ports between both AdvancedMC slots (see backplane topology); data transfer rates up to 10 Gbps per port
- The system can be stacked and is prepared for a mounting plate
- Fan unit and fan filter are easy to replace
- 12 V_{DC} voltage is activated by the AdvancedMC module presence signal

DELIVERY INCLUDES (completely assembled, cabled and tested)

Item	Qty	Description
1	1	Shielded case, St, black RAL 9005, 1 U, 252 mm wide, 302 mm deep, with 2 horizontal slots for single full-size AdvancedMC modules
2	1	Backplane, 2 slot, with fan control and AdvancedMC slot power activation
3	1	AC mains input via 1 IEC 320-C20 AC mains plug, 150 W open frame PSU, 90 ... 264 V_{AC}
4	2	Fan tray, easy to replace
5	1	Air filter, easy to replace
6	4	Rubber feet, included
7	1	Filler module, 2 HP

ORDER INFORMATION

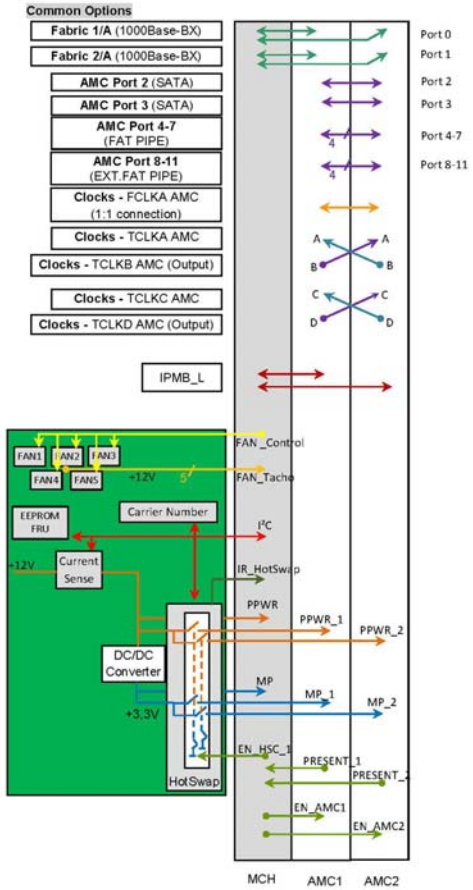
MicroTCA system	Backplane type	Part no.
AdvancedMC mini system for 2 single AdvancedMC modules	Direct connection of ports 0 - 20 and FLCK, cross connects for TCLK A.D	11850-023

NOTE

- Modified systems available on request

MICROTCA SYSTEM WITH INTEGRATED EMCH FOR 2 SINGLE AMC MODULES

12915010



12915050

Topology 23005-491

- Small, compact case to hold 2 single full-size AMC modules. With the integrated 2 HP filler module, 2 single mid-size modules can also be fitted
- Integrated MCH with Ethernet uplink and USB interface
- 2 GbE links from MCH to each of 2 AMC slots
- Direct connection of ports 2 to 11 between both AMC slots (see backplane topology); data transfer rates up to 10 Gbps per port
- 150 W cooling capacity at an ambient temperature of 55 °C, airflow from right to left, temperature-regulated fans
- 90 ... 264 V_{AC} wide voltage range input on rear of case, 150 W PSU in rear section of case
- The system can be stacked and is prepared for a mounting plate
- Fan unit and fan filter are easy to replace

DELIVERY INCLUDES

Item	Qty	Description
1	1	Shielded case, St, black RAL 9005, 1 U, 265 mm wide, 302 mm deep, with 2 horizontal slots for single full-size AdvancedMC modules
2	1	Embedded MCH, installed permanently
3	1	Backplane, 2 slot, with fan control and AdvancedMC slot power activation
4	1	AC mains input via 1 IEC 320-C20 AC mains plug, 150 W open frame PSU, 90 - 264 V_{AC}
5	2	Fan tray, easy to replace
6	1	Air filter, easy to replace
7	4	Rubber feet, included

ORDER INFORMATION

Number of slots	Height U	Width mm	Depth mm	Transmission rate	Backplane type	Part no.
2	1	265	302	10 Gbps/per port	2x GbE from eMCH for every AMC slot, direct connection of ports 2 - 11	11850-016

NOTE

- Modified systems available on request

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

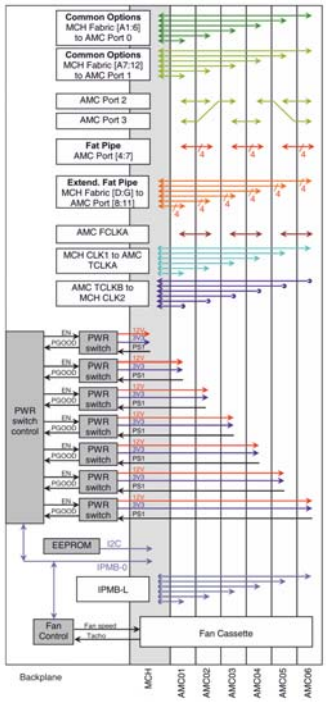
MICROTCA.0 SYSTEM, 1 U, FOR 6 SINGLE MID-SIZE ADVANCEDMC MODULES (MTCA.0, SCOPE)

12915001

Front view (11850-025)

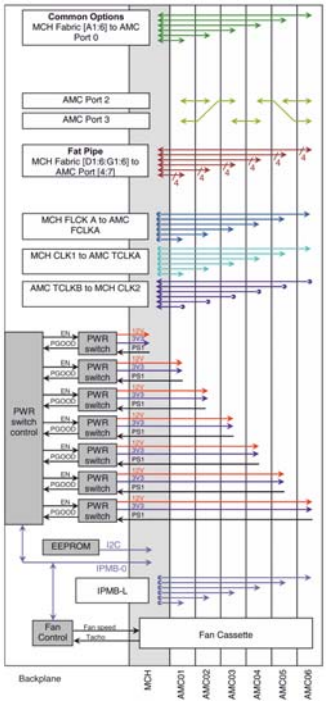
12915002

Rear view (11850-025)



12915006

Backplane topology (11850-024)



12915007

Backplane topology (11850-025)

PICMG®
Open Modular Computing Specifications

- Conforming to PICMG MTCA.0 R1.0 specification
- 1 U, 19" subrack system for 6 single mid-size AdvancedMC modules, 1 single full-size MCH
- AC mains input (100 ... 240 V_{AC}) on rear of case, 400 W PSU built in, power management (PM EMMC) on backplane
- 2 different backplane topologies to MTCA.0 and Scope (see backplane topology)
- Hot-swap fan module with cooling unit manager (CU EMMC), airflow from right to left
- Air filter, swappable from front

DELIVERY INCLUDES

Item	Qty	Description
1	1	MicroTCA system, St, black, RAL 9005, 1 U, 84 HP, 301 mm deep
2	6	Slot for single mid-size AdvancedMC module, with guide rails, for horizontal board mounting
3	1	Slot for single full-size AdvancedMC module, with guide rails, for horizontal board mounting
4	1	Backplane, MTCA.0 or Scope topology, for 6 AdvancedMC modules and 1 MCH
5	1	Hot-swap fan tray with cooling unit manager (CU EMMC) and 5 fans
6	1	Fan tray, replaceable from front
7	1	400 W open frame PSU and power management (PM EMMC) on backplane

ORDER INFORMATION

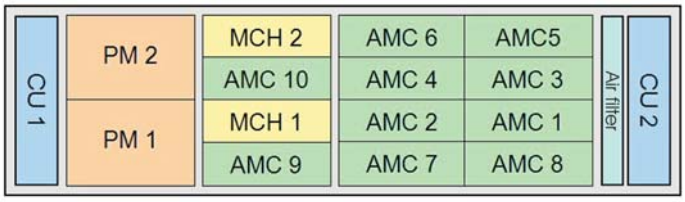
Height U	Width HP	Depth mm	Number of slots	Trans-mis-sion rate	Topology	Part no.
1	84	301	6	40 Gbps	Scope topology	11850-024
1	84	301	6	40 Gbps	MicroTCA.0 topology	11850-025
Replacement parts (FRUs)						
Fan tray (21850-132)						**Page 8.53**
Air filter (21850-118)						**Page 8.53**

NOTE

- Modified systems available on request

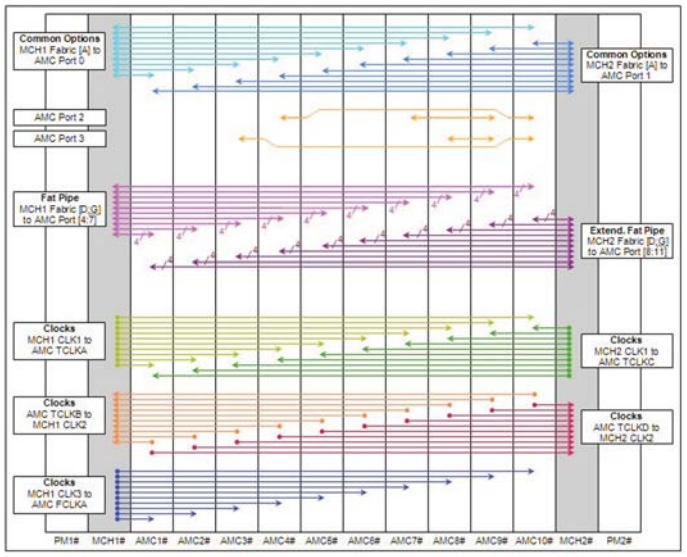
MICROTCA.0 SYSTEM, 3 U, 84 HP, FOR 10 SINGLE FULL-SIZE ADVANCEDMC MODULES

12908003



12907050

Slot allocation



12907051

Backplane topology

- In accordance with PICMG MTCA.0 R1.0 specification
- 3 U, 19" subrack system for 10 single full-size AdvancedMC modules, 2 single full-size MCHs and 2 power modules with up to 12 HP width
- Instead of 8 single full-size AdvancedMC modules, the right-hand board cage can be used for 4 double full-size modules
- Backplane with dual star topology, direct connections for S-ATA/SAS
- Clock topology to PICMG AMC.0 R2.0
- Two hot-swap fan modules in push/pull configuration, each with cooling unit manager (CU EMMC), airflow from right to left
- Air filter, exchangeable from front, with presence signal

DELIVERY COMPRISES

Item	Qty	Description
1	1	MicroTCA system, 3 U, 84 HP, 216 mm deep, powder-coated, black, RAL 9005
2	10	AdvancedMC module slot, with guide rail, for horizontal board mounting
3	1	Backplane with dual-star topology for 10 AdvancedMC modules, 2 MCHs and 2 power modules
4	2	Hot-swap fan unit with cooling unit manager (CU EMMC) and 1 fan;
5	1	Air filter, exchangeable from front
6	4	Splitting kit

ORDER INFORMATION

Height mm	Height U	Width HP	Depth mm	Number of slots	Part no.
133.35	3	84	216	10	11850-011
Accessories					
PFM, single full-size 12 V_{DC} input, 40 A, with PM EMMC, non-redundant, with reverse polarity and overvoltage protection, 1 piece					21596-571
PFM, single full-size 12 V_{DC} input, 80 A, with PM EMMC, non-redundant, without reverse polarity and overvoltage protection, 1 piece					21596-572
AdvancedMC front panels					**Page 8.60**
AdvancedMC filler panels					**Page 8.64**
Replacement parts (FRUs)					
Fan tray (21850-038)					**Page 8.53**
Air filter (21850-034)					**Page 8.53**

NOTE

- For description of the power supply module see page 8.50
- Replacement parts (FRUs) see from page 8.53

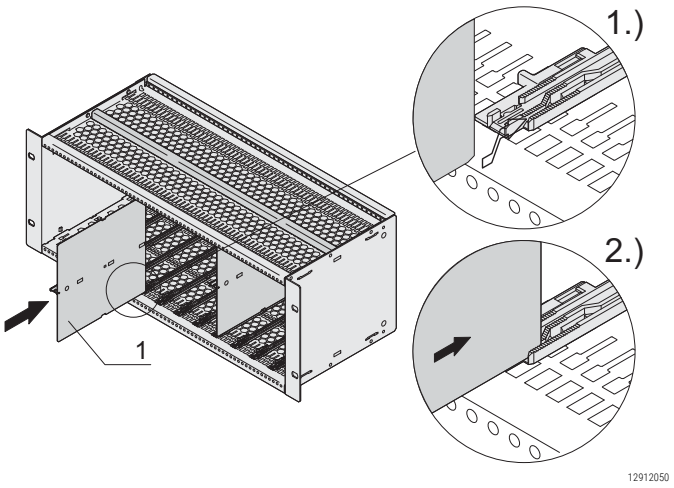
Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

ACCESSORIES AND FIELD REPLACEABLE UNITS (FRUS)

Field replaceable unit (FRU) designates system components that can be replaced on site. This reduces system downtime to a minimum. SCHROFF offers various FRU components for AdvancedTCA systems:

- Splitting kit, see page 8.48
- MicroTCA guide rails, see page 8.49
- Power feed-through modules, see page 8.50
- PSUs (AC/DC, double full-size) with and without management, see from page 8.51
- Fan modules, see from page 8.53
- Air filters, see page 8.53

SPLITTING KIT



- For fitting 2 single AdvancedMC modules one above the other in one double AdvancedMC slot
- Splitting kit is inserted into the appropriate receptacle of the SCHROFF MicroTCA guide rail and locks into the appropriate stud of the guide rail
- With the use of the splitting kit, no slots are lost

DELIVERY COMPRISES

Item	Qty	Description
1	1	Stainless steel, chassis to accommodate a guide rail
2	1	Guide rail, AdvancedMC
3	1	Splitting extrusion, centre
4	1	ESD contact spring
5	1	Fixing material kit, user manual

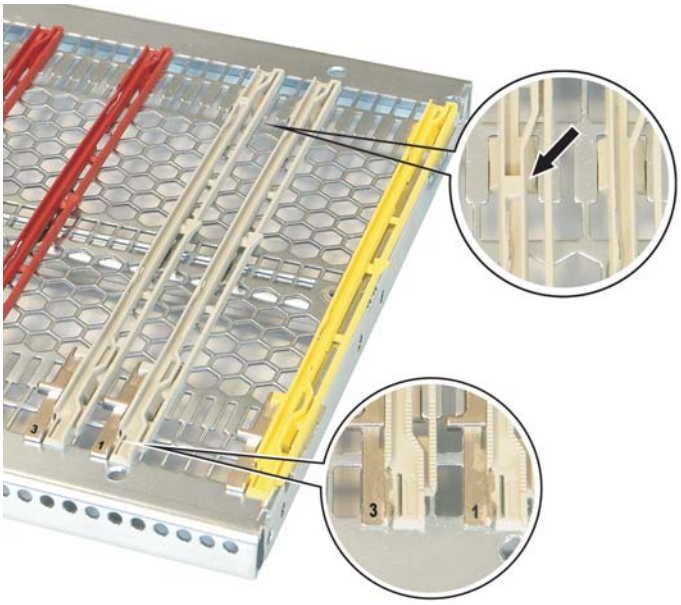
ORDER INFORMATION

Description	Part no.
Splitting kit, PU 5 pieces	**20849-115**

MICROTCA GUIDE RAILS

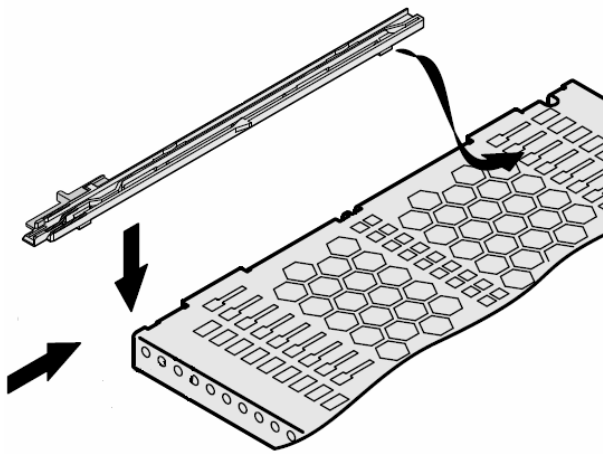
12807022 12807023

top (green) bottom (red)



12807011

Guide rails bottom, grey, for guide rails of 6 HP wide (full-size) MicroTCA carrier hubs



12807059

- Easy installation without tools in 1 HP grid; the minimum distance between two guide rails is 3 HP (compact)

ORDER INFORMATION

Description	Qty/PU	Part no.
Guide rail, top, green, with ESD clip; for all modules	10	**20849-200**
Guide rail, top, green, with ESD clip; for all modules	100	**20849-201**
Guide rail bottom, red; for AdvancedMC function modules	10	**20849-194**
Guide rail bottom, red; for AdvancedMC function modules	100	**20849-195**
Guide rail bottom, yellow; for power supplies	10	**20849-196**
Guide rail bottom, yellow; for power supplies	100	**20849-197**
Guide rail bottom, grey; for left-hand guide rail of a 6 HP wide MicroTCA carrier hub (designation 3)	10	**20849-202**
Guide rail bottom, grey; for right-hand guide rail of a 6 HP wide MicroTCA carrier hub (designation 1)	10	**20849-198**
Guide rail bottom, grey; for right-hand guide rail of a 6 HP wide MicroTCA carrier hub (designation 1)	100	**20849-199**

MICROTCA POWER FEEDER MODULES, SINGLE FULL-SIZE

12812006

Photo shows 21596-571

- Infeed of +12 V_{DC} supply voltage from an external source via D-Sub plug to 16 x 12 V_{DC} outputs to MicroTCA backplane
- Generation of +3.3 V_{DC} management voltage and distribution to 16 outputs
- Used in the power module slot (single full-size) instead of a MicroTCA power module, plug and form factor compatible
- 2 versions
  - With power management (PM EMMC), with protection against overvoltage and polarity reversal of input voltage, 5-pin D-Sub input plug
  - With power management (PM EMMC), no protection against overvoltage or polarity reversal of input voltage, 5-pin D-Sub input plug

DELIVERY COMPRISES

Item	Qty	Description
1	1	Power feeder module, single full-size
2	1	Power management mezzanine board

ORDER INFORMATION

MicroTCA power feeder, single full-size	Part no.
With power management with overvoltage protection	21596-571
With power management without overvoltage protection	21596-572
Accessories	
Connection cable for power feeder module, 5-pin D-Sub 5W5 (-48 V_{DC}) on M5 ring terminal, cable length 1.8 m, 1 piece	23204-835

AC/DC, DOUBLE FULL-SIZE, WITH POWER MANAGEMENT (EMMC)

11316001

- Mains input at front with wide input voltage range for AC voltages with IEC locking system
- Construction compatible with AdvancedMC double full-size
- Supports N+1 and 2+2 redundancy, load sharing and hot swap
- Power management for 16 current channel (12 AMC, 2 CU and 2 MCHs)
- High efficiency
- Visual performance display

The MTCA PSU 600 is an exceptionally efficient power module (PM) for MicroTCA® applications. This 600W power supply is the most efficient available in double-width full-size format. This PM's integrated management controller makes it ideally suited for use in complex communications systems running the latest generations of processors and an increased number of AMC modules. The MTCA PSU 600 provides the power required for 12 AMCs, 2 Cooling Units (CUs) and 2 MicroTCA® Carrier Hubs (MCHs).

DELIVERY INCLUDES

Qty.	Description
1	PSU for MicroTCA Double height (148.3 mm) Full-size width (6 HP) Depth 186.65 mm Connector MicroTCA Power Front panel with handle and EMC gasket (fitted)

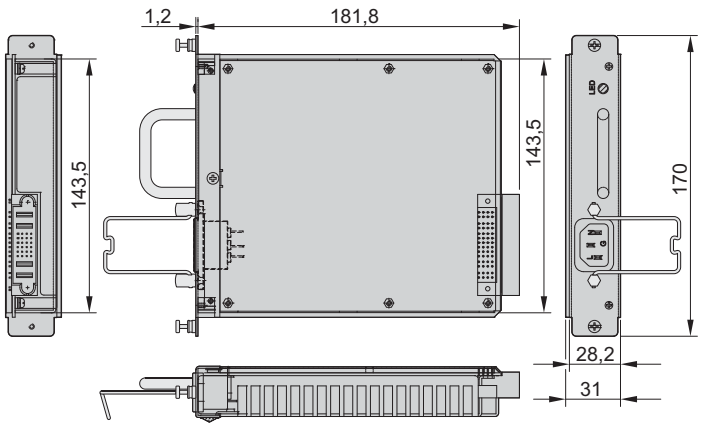
ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V1: 12 V_2: 3.3	I_1: 6.8 I_2: 0.18	600	MTCA PSU 600	**11098-547**

AC/DC, DOUBLE FULL-SIZE, WITHOUT MANAGEMENT

11309004

Photo shows 11098-392



11312050

- Wide input voltage range 90 ... 264 V_{AC}
- Active power factor correction
- Construction compatible with AdvancedMC double full-size
- Single-wire current share cable for redundancy operation
- 2 output voltages, 12 V and 3.3 V
- Corresponds to EMC class B as per EN 55022
- Without MicroTCA power management controller
- Mains input at front

DELIVERY COMPRISES

Qty	Description
1	PSU for MicroTCA height double (148.3 mm) width full-size (6 HP) depth 186.65 mm connector Molex SSI front panel with handle and EMC gasket (fitted)

ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V1: 12 V_2: 3.3	I_1: 25 I_2: 3	300	MCA 300 AC	**11098-392**

NOTE

- Output data for T_A = -25 ... 55 °C with forced cooling of 20 cfm
- Connector FCI 51720-10202402AA or Molex 87631-2019

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

FAN MODULE FOR MICROTCA.0 SYSTEM, 1 U

12915008

- For SCHROFF 1 U MicroTCA system 11850-024 and 11850-025
- With cooling unit enhanced module management controller (CU EMMC)
- Hot-swap fan tray with 4 regulated axial fans (40.2 m³/h each free blowing), 1 unregulated axial fan (17 m³/h), 12 V_{DC}

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Fan module for 1 U MicroTCA.0 system (11850-024, 11850-025)	1	21850-132

FAN MODULE FOR MICROTCA.0 SYSTEMS, 3 U, WITHOUT TELCO ALARM PANEL

12907013

- Fan tray with 1 axial fan (225 m^3/h), free blowing, 12 V_{DC}
- With cooling unit enhanced module management controller (CU EMMC)

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Fan module for 3 U MicroTCA system (11850-003)	1	21850-038

FAN MODULE FOR MICROTCA.4 CUBE SYSTEM, 5 U

12912002

- Hot-swap fan tray with 6 regulated axial fans (109 m³/h each), free blowing, 12 V_{DC}
- With cooling unit enhanced module management controller (CU EMMC); fan speeds for front and rear sections independently adjustable via MCH

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Fan module for 5 U physics cube system (11850-021), 1 piece	1	21850-113

FAN MODULE FOR 5 U MICROTCA.1 CUBE SYSTEM, 5 U

12912006

- Hot-swap fan tray with 4 regulated axial fans (109 m³/h each), free blowing, 12 V_{DC}
- With cooling unit enhanced module management controller (CU EMMC)

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Fan module for 5 U cube system (11850-020)	1	21850-114

FAN MODULE FOR MICROTCA.4 19" SYSTEMS, 9 U

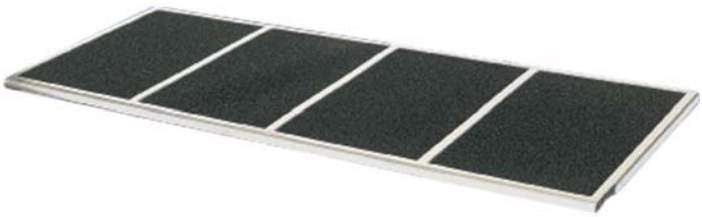
12915005

- Hot-swap fan tray with 6 regulated axial fans (3 x 290 m³/h each free blowing and 3 x 190 m³/h free blowing), 12 V_{DC}
- With cooling unit enhanced module management controller (CU EMMC); fan speeds for front and rear sections independently adjustable via MCH

ORDER INFORMATION

Description	Qty/PU piece	Part no.
Fan module for 9 U MicroTCA.4 19" systems (11850-026)	1	21890-142

AIR FILTERS



12907005

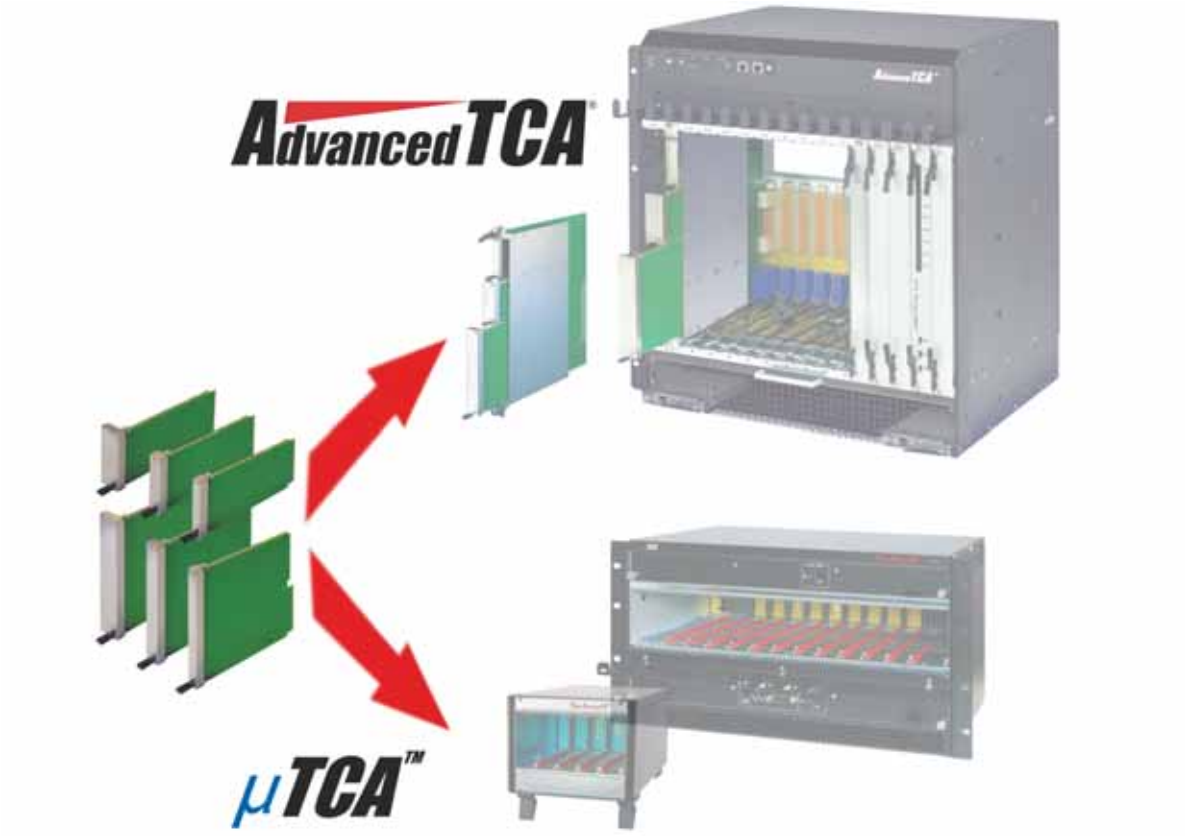
Photo shows air filter 21850-033

- Material: polyurethane UL 94 HF1
- 45 ppi, 80 % dust reduction under NEBS GR-78 core standard

ORDER INFORMATION

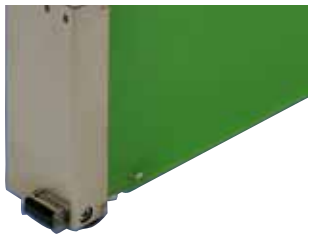
Description	Qty/PU	Part no.
Air filter for 1 U MicroTCA.0 system (11850-024, 11850-025)	1	21850-118
Air filter for 3 U MicroTCA.0 system (11850-003)	1	21850-034
Air filter for 5 U MicroTCA.1 cube system (11850-020)	1	21850-120
Air filter for 5 U MicroTCA.4 cube system (11850-021)	1	21850-116
Air filter for 9 U MicroTCA.4 19" system (11850-026)	1	21890-143

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days



12806029

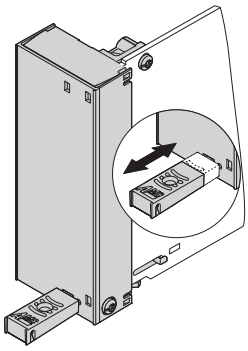
12808006



12808007

12808006

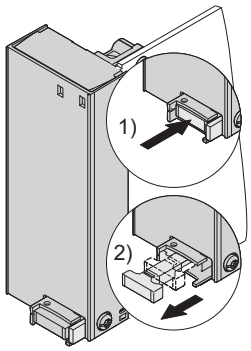
Stainless steel



12808060

Pull-handle mechanism

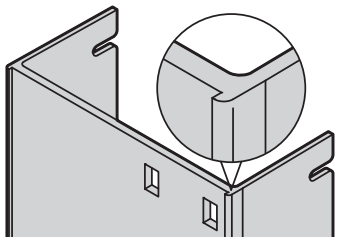
- For compact, mid-size and full-size module widths
- Forward protrusion of handle 20 mm, width 8 mm



12808059

Push-pull handle mechanism

- For mid-size and full-size module widths
- Forward protrusion of handle 5 mm, width 14 mm



12808056

Aluminium extrusion

OVERVIEW

ADVANCEDMC MODULE MECHANICS

- **Front panels with two locking mechanisms, usable for AdvancedMC carriers and MicroTCA systems**
- **Front panels in steel or aluminium extrusion**
- **Dimensions**
  - **Single compact, mid-size, full-size**
  - **Double compact, mid-size, full-size**
- **Ruggedized AdvancedMC modules for MicroTCA.1 and MicroTCA.4 applications**
- **MicroTCA filler modules with adjustable airflow**

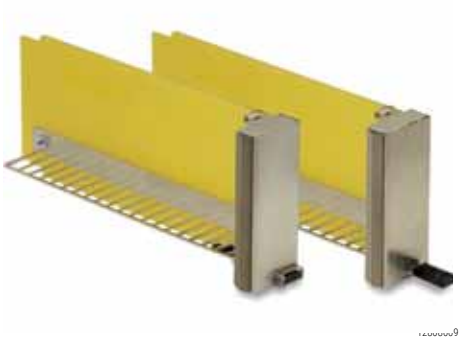
PICMG®
Open Modular Computing Specifications


12808011
Fig. A


12805012
Fig. B

ADVANCEDMC MODULE MECHANICS

- For PICMG® AMC.0 R2.0 (Fig. A), locking of modules without screws
- Ruggedized module mechanics for MicroTCA.1 and MicroTCA.4 (Fig. B) applications, with patented screw locking
- EMC shielded front panel in two materials (stainless steel; aluminium)
- Two different handle mechanisms (pull, push-pull)



ADVANCEDMC-MICROTCA FILLER MODULES

- Front panels with handle, PCB and air baffle for compact, mid-size and full-size AdvancedMC modules
- Air baffles to adjust air resistance of an unused slot
- Air passage adjustable (sliding plates)

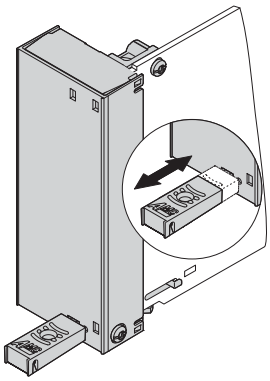
Systems – AdvancedMC modules

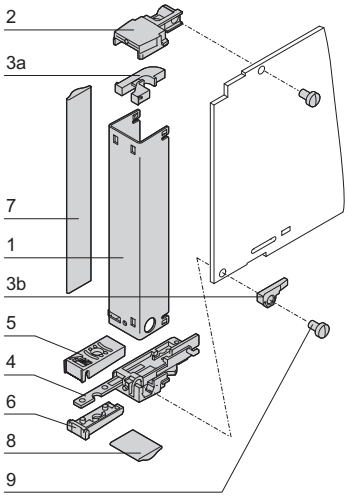
MODULES WITH PULL-HANDLE MECHANISM, PICMG® AMC.0 R2.0

12807006 12807019

Photo shows modules with steel front panel (PCB not included)

Pull-handle mechanism





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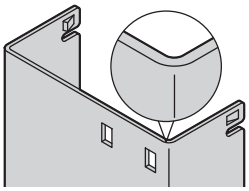
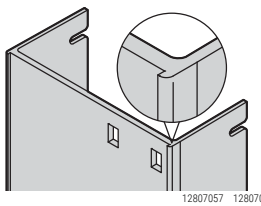
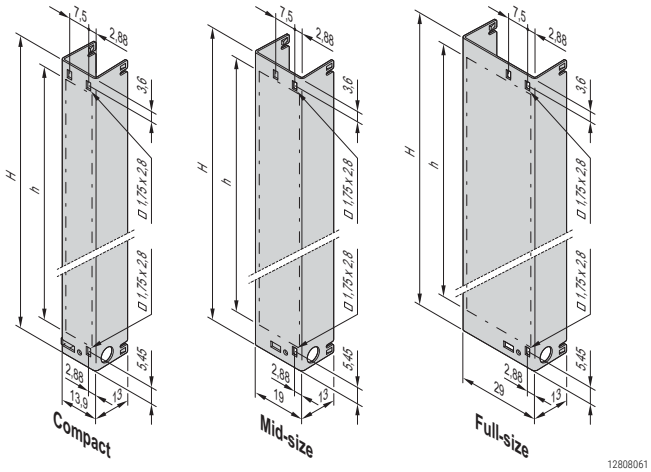




12807057 12807056

Stainless steel

Aluminium extrusion



12808061

- Module in accordance with AdvancedMC standard
- For installation in MicroTCA chassis or AdvancedMC carriers (e.g. conventional, cutaway and hybrid carriers)
- Front panels in 2 versions:
  - Stainless steel
  - Aluminium extrusion; for foil printing

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	U-shaped front panel, stainless steel or Al extrusion
2	1	Accepts light pipe and board bracket at top, Zn die-cast, nickel-plated
3a	1	Light pipe, top, PC, UL 94 V-0
3b	1	Light pipe, bottom, PC, UL 94 V-0
4	1	Pull-handle mechanism with microswitch activation and board bracket
5+6	1	Pull-handle, PC, UL 94 V-0, black
7	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
8	1	Lower EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
9	1	Assembly kit

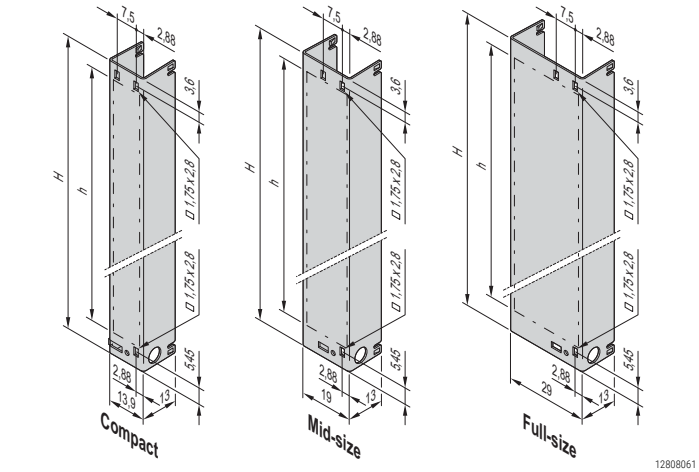
ORDER INFORMATION

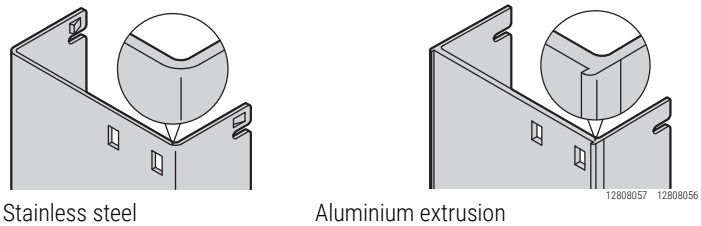
Module with pull-handle mechanism, PICMG® AMC.0 R2.0	H mm	h mm	Part no. Aluminium	Part no. Stainless steel
Single compact, 3 HP	73.8	60.8	20849-312	**20849-127**
Single mid-size, 4 HP	73.8	60.8	**20849-268**	**20849-128**
Single full-size, 6 HP	73.8	60.8	**20849-270**	**20849-129**
Double compact, 3 HP	148.8	135.8	20849-313	**20849-130**
Double mid-size, 4 HP	148.8	135.8	**20849-269**	**20849-131**
Double full-size, 6 HP	148.8	135.8	**20849-271**	**20849-132**
Accessories				
Microswitch for AdvancedMC modules "normally open" for soldering (SMD), PU 10 pieces - page 8.67				**20849-209**
Filler Modules				**Seite 8.62**
Air baffle modules				**Seite 8.62**

Note

- Mechanism with pull-handle mechanism see page 8.60
- SCHROFF offers extensive modification options with the Front Panel Service, including customised cut-outs, foils and silk-screen printing.

FRONT PANELS FOR MODULE WITH PULL-HANDLE MECHANISM, PICMG® AMC.0 R2.0





Stainless steel

Aluminium extrusion

- Front panel for pull-handle mechanism (with cut-outs for light pipe)
- For AdvancedMC modules
- 2 front panel materials:
  - Stainless steel
  - Aluminium extrusion; for foil printing

DELIVERY COMPRISES

Item	Qty	Description
1	1	U-shaped front panel

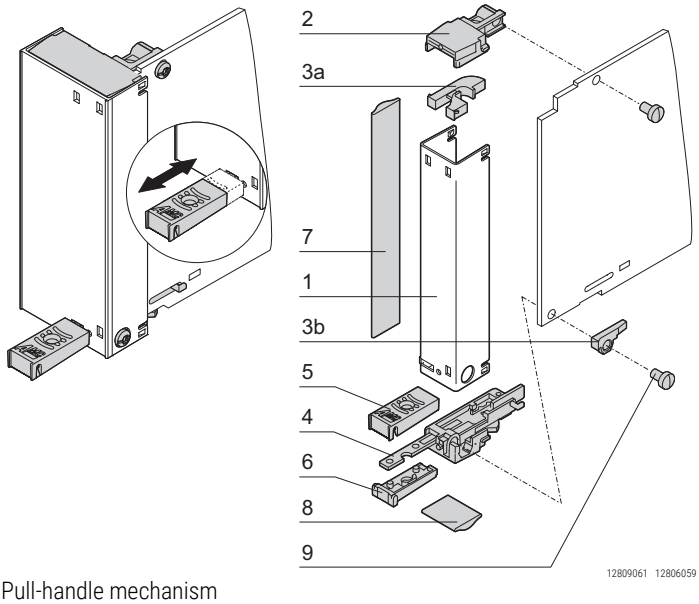
ORDER INFORMATION

Front panel for module with pull-handle mechanism, PICMG® AMC.0 R2.0	Part no. Aluminium	Part no. Stainless steel
Single compact, 3 HP	**30849-708**	**30849-402**
Single mid-size, 4 HP	**30849-658**	**30849-403**
Single full-size, 6 HP	**30849-682**	**30849-404**
Double compact, 3 HP	**30849-714**	**30849-405**
Double mid-size, 4 HP	**30849-670**	**30849-406**
Double full-size, 6 HP	**30849-694**	**30849-407**

Note

- Locking mechanism for front panel see page 8.60
- SCHROFF offers extensive modification options with the Front Panel Service, including customised cut-outs, foils and silk-screen printing.

PULL-HANDLE MECHANISM, PICMG® AMC.0 R2.0



Pull-handle mechanism

- Complete pull-handle mechanism, designed for microswitch activation (hot-swap), includes light pipe
- For AdvancedMC modules

DELIVERY COMPRISES (kit)

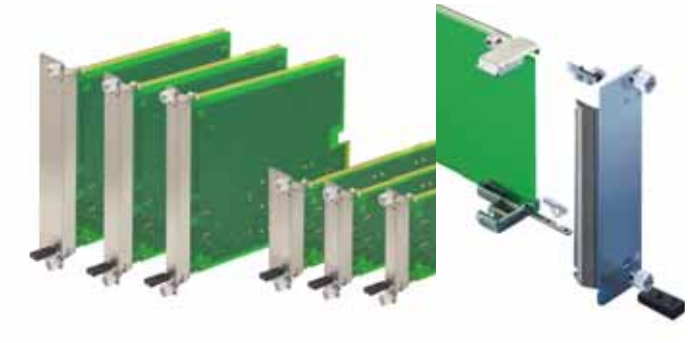
Item	Qty	Description
2	1	Accepts light pipe and board bracket at top, Zn die-cast, nickel-plated
3a	1	Light pipe, top, PC, UL 94 V-0
3b	1	Light pipe, bottom, PC, UL 94 V-0
4	1	Pull-handle mechanism with microswitch activation and board bracket
5+6	1	Pull-handle, PC, UL 94 V-0, black
7	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
8	1	Lower EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
9	1	Assembly kit

ORDER INFORMATION

Pull-handle mechanism, PICMG® AMC.0 R2.0	Part no.
For single compact, 3 HP	**20849-151**
For single mid-size, 4 HP	**20849-152**
For single full-size, 6 HP	**20849-153**
For double compact, 3 HP	**20849-154**
For double mid-size, 4 HP	**20849-155**
For double full-size, 6 HP	**20849-156**

- Front panel for pull-handle mechanism page 8.59

MODULES WITH RUGGEDIZED PULL-HANDLE MECHANISM (MICROTCA.1 OR MICROTCA.4), SHIELDED



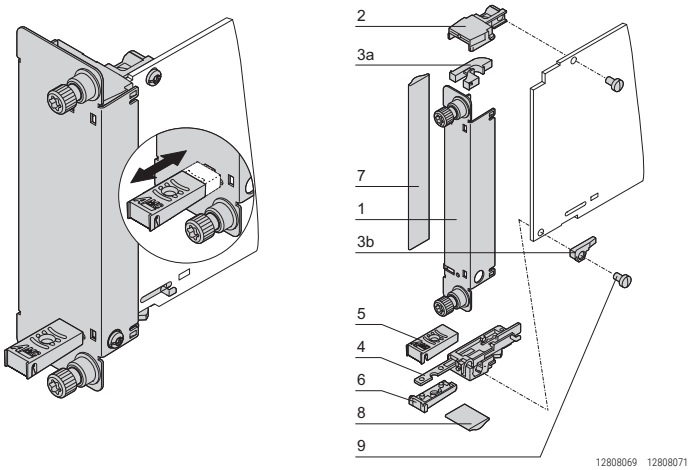
12808015 12805012

- Module in accordance with AdvancedMC standard
- Modules conform to:
  - PICMG® AMC.0 R2.0
  - Ruggedized: MicroTCA.1, MicroTCA.4
- Mounts in MicroTCA chassis or AdvancedMC carrier (e.g. cutaway, conventional or hybrid carrier)
- Stainless steel front panel
- Additional securing of components in MicroTCA system; with patented screw locking

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	U-shaped front panel, stainless steel; with welded-on screw locking, Torx T10
2	1	Board support, die-cast zinc, nickel-plated
3a	1	Light pipe, top, PC, UL 94 V-0
3b	1	Light pipe, bottom, PC, UL 94 V-0
4	1	Pull-handle mechanism with microswitch activation and board bracket
5+6	1	Pull-handle, PC, UL 94 V-0, black
7	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
8	1	Lower EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
9	1	Assembly kit

Pull-handle mechanism with additional screw locking



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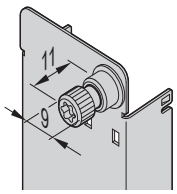
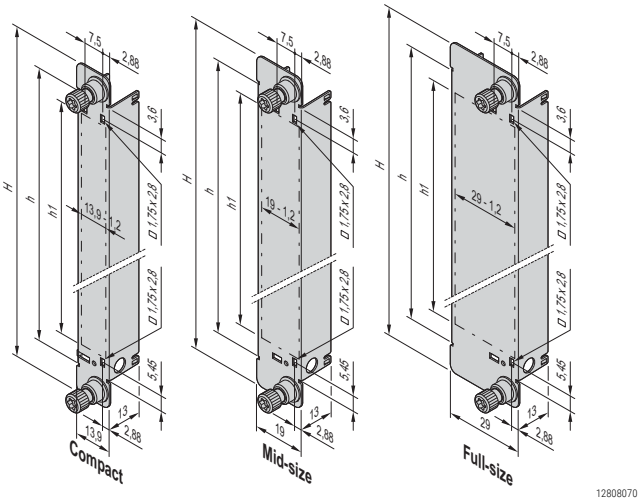


Steel, stainless

12808072 12809001

Screw locking



12808070

ORDER INFORMATION

Module with ruggedized pull-handle mechanism	H mm	h mm	h1 mm	Part no.
Single compact, 3 HP	95.0	73.8	60.8	**21850-066**
Single mid-size, 4 HP	95.0	73.8	60.8	**21850-067**
Single full-size, 6 HP	95.0	73.8	60.8	**21850-068**
Double compact, 3 HP	170.0	148.8	135.8	**21850-069**
Double mid-size, 4 HP	170.0	148.8	135.8	**21850-070**
Double full-size, 6 HP	170.0	148.8	135.8	**21850-071**
Accessories				
Microswitch for AdvancedMC modules "normally open" for soldering (SMD), PU 10 pieces - page 8.67				**20849-209**
Individual components				
Screw locking (patented) for ruggedized front panel Screw retainer must be welded to front panel (screw, expansion bolt, bushing; fitted), PU 10 pieces				**21850-057**

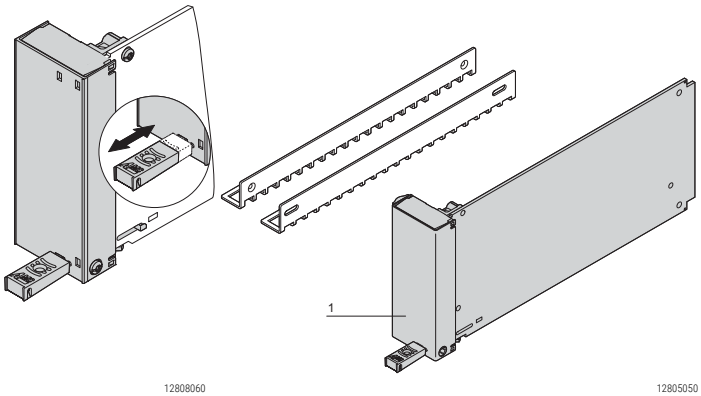
Note

- Filler modules MicroTCA.1 and MicroTCA.4 see from page 8.63
- SCHROFF offers extensive modification options with the Front Panel Service, including customised cut-outs, foils and silk-screen printing.

FILLER MODULES WITH PULL-HANDLE MECHANISM

12807012

Filler module ECO, single, with air baffle



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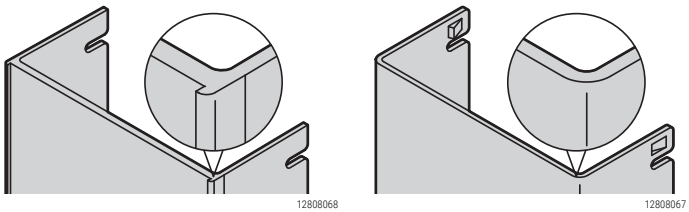
Pull-handle mechanism



12808068 12808067

Aluminium extrusion Stainless steel

- Shielded filler modules are used to close unused slots
- The optional air baffle (airflow adjustable) can be used to prevent an air short-circuit
- For conventional, cutaway and hybrid carrier
- Pull-handle mechanism meets AdvancedMC standard; pull handle to extract sub-assembly
- 2 front panel materials:
  - Stainless steel
  - Aluminium extrusion; for foil labelling

DELIVERY COMPRISES (assembled)

Item	Qty	Description
1	1	AdvancedMC filler module, consisting of
	1	U-shaped front panel, stainless steel or Al extrusion
	1	Board support, die-cast zinc, nickel-plated
	1	PCB
	1	Pull-handle mechanism and board bracket
	1	Pull-handle, plastic, PC, UL 94 V-0, black
	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
	1	Lower EMC gasket, core: foam, sleeve: textile cladding with CuNi coating

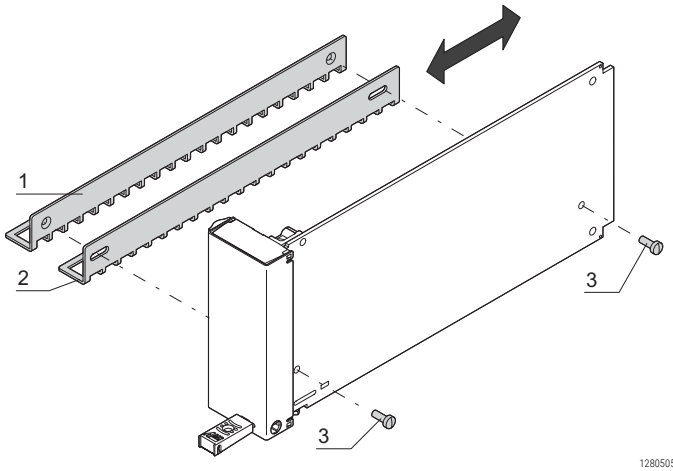
ORDER INFORMATION

Filler module with pull-handle mechanism	Part no. Aluminium	Part no. Stainless steel
Single compact, 3 HP	**20849-304**	**20849-022**
Single mid-size, 4 HP	**20849-248**	**20849-106**
Single full-size, 6 HP	**20849-250**	**20849-024**
Double compact, 3 HP	**20849-305**	**20849-023**
Double mid-size, 4 HP	**20849-249**	**20849-107**
Double full-size, 6 HP	**20849-251**	**20849-025**

Note

- Please order air baffle separately, see page 8.62
- Low-cost alternative: Filler module with fixed handle, see page 8.65

AIR BAFFLE FOR ADVANCEDMC FILLER MODULES



12805051

- Retrofittable

DELIVERY COMPRISES

Item	Qty	Description
1	1	Metal sheet with perforation, Al
2	1	Sliding metal sheet with perforation, Al
3	1	Assembly kit

ORDER INFORMATION

Description	Qty/PU	Part no.
Air baffle for compact filler module	10	20849-016
Air baffle for mid-size filler module	10	**20849-017**
Air baffle for full-size filler module	10	**20849-018**

MICROTCA FILLER MODULES WITH AIR BAFFLE

12812001

Photo shows mid-size double module

- In accordance with MicroTCA.1 and MicroTCA.4 specifications
- With air baffle
- Shielded filler modules are used to close unused slots and together with the air baffle plates prevent air short circuits occurring through unused slots
- Can be screwed on; is inserted into the guide rail
- With retention screws for screwing onto the board cage
- With air baffle
- Used to close an empty slot

DELIVERY COMPRISES (assembled)

Item	Qty	Description
1	1	Front panel with side panel and air baffle, stainless steel, 1 mm; with captive screws (2 pieces)
2	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating

ORDER INFORMATION

Description	Part no.
MicroTCA filler module with air baffle, mid-size single	21850-104
MicroTCA filler module with air baffle, full-size single	21850-105
MicroTCA filler module with air baffle, mid-size double	21850-106
MicroTCA filler module with air baffle, full-size double	21850-107

MICROTCA FILLER MODULES (ABOVE AN MCH)

12812003

Photo shows full-size single module

- In accordance with MicroTCA.1 and MicroTCA.4 specifications
- Filler module is fitted above an MCH or PM when double modules are used
- Shielded filler modules are used to close unused slots
- Can be screwed on; is supported on the guide rail
- Mit Befestigungsschraube zum Anschrauben an den Kartenkorb
- Wird verwendet um die Lücke zu schließen, wenn eine Single Mid-size Karte mit Splitting Kit in einen Double Mid-size Slot eingesetzt wird

DELIVERY COMPRISES

Item	Qty	Description
1	1	Front panel, stainless steel, 1 mm; with captive screw (1 piece)
2	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating

ORDER INFORMATION

Description	Part no.
MicroTCA filler module with front panel, mid-size single	21850-102
MicroTCA filler module with front panel, mid-size double	21850-103

MICROTCA FILLER MODULES, 2 HP

12807014

Photo shows AdvancedMC-Filler Modul, Single

- In accordance with MicroTCA.1 and MicroTCA.4 specifications
- Shielded filler modules are required e.g. if a mid-size or full-size AdvancedMC module is fitted in a 84 HP system
- Can be screwed on
- With retention screws for screwing onto the board cage
- Used to close the gap if a mid-size module is installed in a full-size slot

DELIVERY COMPRISES

Item	Qty	Description
1	1	Front panel, stainless steel, 0.6 mm
2	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating

ORDER INFORMATION

Description	Qty	Part no.
MicroTCA filler module, single, 2 HP	1 piece (SPQ 5)	**20849-213**
MicroTCA filler module, double, 2 HP	1 piece (SPQ 5)	**20849-214**

Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple. Pricing is per individual item.

Pozidrive panhead screw M3 x 6, zinc-plated, 100 pieces	**21102-024**

RTM FILLER MODULES WITH AIR BAFFLE

12812002

Photo shows full-size double module

- In accordance with MicroTCA.1 and MicroTCA.4 specifications
- Filler Modul zum Abdecken leerer Slots
- Shielded rear transition (RTM) filler modules are used to close unused slots and together with the air baffle plates prevent air short circuits occurring through unused slots
- Can be screwed on
- With retention screws for screwing onto the board cage
- With air baffle
- Used to close an empty RTM (Rear Transition Module) slot if no RF backplane is installed

DELIVERY COMPRISES (assembled)

Item	Qty	Description
1	1	Front panel with side panel and air baffle, stainless steel, 1 mm; with captive screws (2 pieces)
2	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating

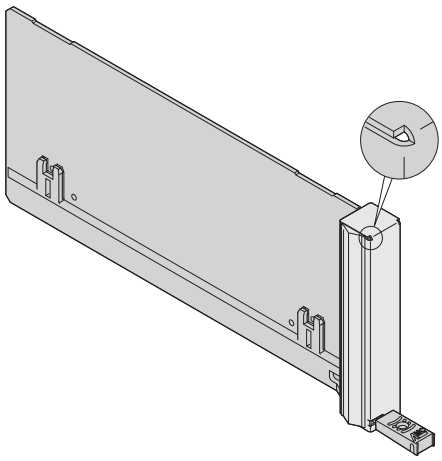
ORDER INFORMATION

Description	Part no.
RTM filler module with air baffle, mid-size double	21850-108
RTM filler module with air baffle, full-size double	21850-109
MicroTCA RTM-Filler Modul mit Flansch und Luftschottblech, Double Mid-size (RF BP)	21850-130
MicroTCA RTM-Filler Modul mit Flansch und Luftschottblech, Double Full-size (RF BP)	21850-131
MicroTCA RTM-Filler Modul mit Flansch und Luftschottblech, Double Full-size (RF BP, Zone 3)	21850-129

FILLER MODULE ECO WITH FIXED HANDLE

12809002

Filler module ECO, single, with air baffle



12809052

Single compact module

- Shielded filler modules are used to close unused slots
- The optional air baffle (airflow adjustable) can be used to prevent an air short-circuit
- For conventional, cutaway and hybrid carriers and MicroTCA systems
- Low-cost filler module (no pull- or push-pull-handle mechanism)

DELIVERY COMPRISES (assembled)

Item	Qty	Description
1	1	AdvancedMC ECO filler module, consisting of
	1	Front panel, stainless steel
	1	PCB, plastic, PC, UL 94 V-0 with built-in air baffle holder
	1	Handle, fixed, plastic, PC, UL 94 V-0, black
	1	Lateral EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
	1	Lower EMC gasket, core: foam, sleeve: textile cladding with CuNi coating

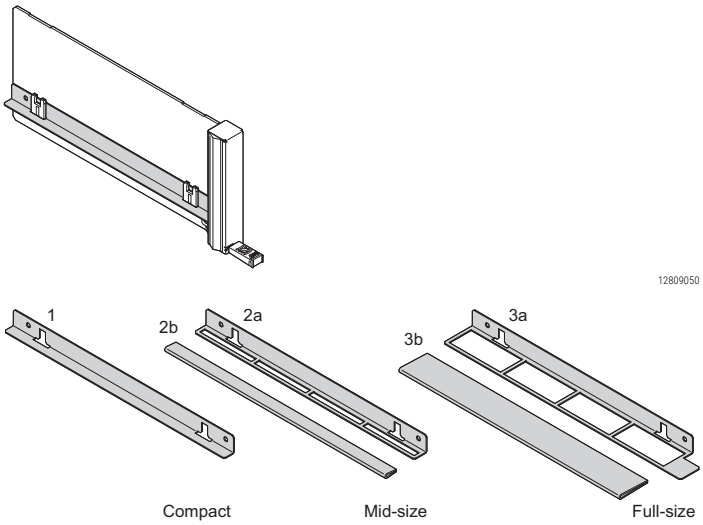
ORDER INFORMATION

	Part no.
Single compact, 3 HP	**20849-348**
Single mid-size, 4 HP	**20849-350**
Single full-size, 6 HP	**20849-352**
Double compact, 3 HP	20849-349
Double mid-size, 4 HP	**20849-351**
Double full-size, 6 HP	**20849-353**

Note

- Microswitch cannot be used
- Please order air baffle separately
- Filler modules with handle mechanism (pull- or push-pull-handles) see from page 8.62

AIR BAFFLE FOR FILLER MODULE ECO WITH FIXED HANDLE



12809050

12809051

- Retrofittable; simply clip onto the PCB of the filler module
- To adjust the airflow volume the plastic cover can be individually cut to size (not for compact modules)

ORDER INFORMATION

Air baffle for filler modules ECO with fixed handle		Part no.
For compact filler module, PU 10 pieces	Item 1: VA plate	20849-355
For mid-size filler module, PU 10 pieces	Item 2a: VA plate with ventilation slots; Item 2b: plastic cover, PVC, UL 94 V-0	20849-356
For full-size filler module, PU 10 pieces	Item 3a: VA plate with ventilation slots; Item 3b: plastic cover, PVC, UL 94 V-0	20849-357

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

MODULE COVER FOR MTCA.4 FRONT AND RTM MODULES

12815001

Illustration shows MTCA.4 AdvancedMC module with MTCA.4 cover

12815002

Illustration shows MTCA.4 AdvancedMC RTM module with MTCA.4 cover

12815003

Illustration shows MTCA.4 AdvancedMC front and RTM module with MTCA.4 cover

- To protect the sensitive electronics
- Protects both mounting sides
- Stainless steel

DELIVERY INCLUDES

Item	Qty	Description
1	1	Cover for mounting side 1, stainless steel
2	1	Cover for mounting side 2, stainless steel
3	1	Fixing materials kit

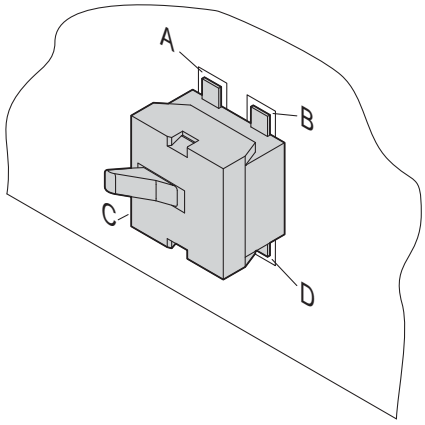
ORDER INFORMATION

Description	Part no.
Module cover for MTCA.4 front modules, double mid-size	**21850-133**
Module cover for MTCA.4 RTM modules, double mid-size	**21850-134**

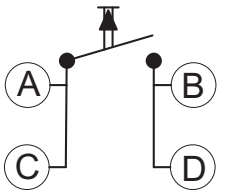
Note

- Double full-size modules available on request

MICROSWITCH FOR ADVANCEDMC MODULES

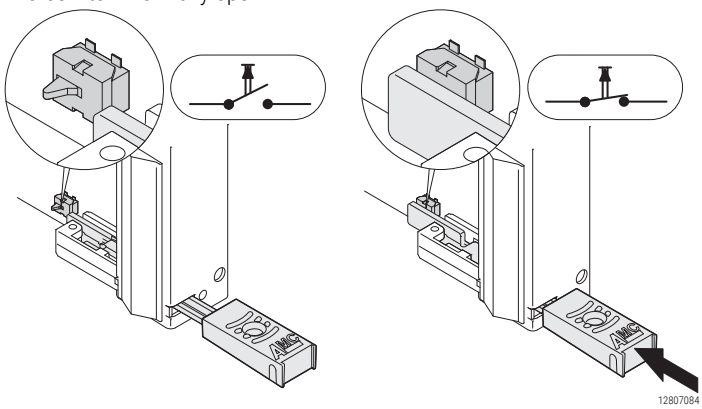


12807050



12807078

Microswitch "normally open"


12807084

- Microswitch for soldering (SMD)

ORDER INFORMATION

Description	Qty/PU	Part no.
Microswitch for AdvancedMC modules "normally open"	10	**20849-209**

Technical data

Max. switch current	1 mA, 5 V_{DC}
Operating temperature	-15 °C ... +70 °C
Electrical lifespan	10^5 switching cycles

Systems – CompactPCI subrack systems

12306002

WHAT WE UNDERSTAND TO BE A SYSTEM

We at SCHROFF regard a system as being a combination of mechanical components like a subrack or case with electronic components such as a backplane and power supply unit, a cooling unit where appropriate and a system management module.

A STRONG STANDARD RANGE

Our extensive and highly-developed standard range offers you mechanical, electronic and thermal components in an almost unlimited variety of dimensions and specifications. Simply select a complete ready system or configure your system from our standard components, online or using the catalogue, to your exact requirements.

FLEXIBILITY FOR MODIFICATIONS

Often only small adjustments are needed to create the required solution from a standard product. And we have set ourselves up to offer just that. We can make modifications in accordance with your individual specifications - with our usual speed and reliability.

COMPETENT WITH NEW DEVELOPMENTS

If your requirements cannot be met with standard products or modified standard solutions, our qualified and experienced team will create a customised solution for your system. We have all the necessary development and manufacturing competencies gathered under one roof.

STANDARDS/APPROVALS

- Inner and outer dimensions in accordance with:
  IEC 60297-3-101 / IEEE 1101.1
  IEC 60297-3-102 / IEEE 1101.10/11
  IEC 60297-3-103
- Ingress protection IP 20 in accordance with IEC 60529
- EMC testing in accordance with IEC 61587-3
- In accordance with PICMG 2.0 rev. 3.0, PICMG 2.16 and PXI 2.0

PICMG
Open Modular Computing Specifications

AREAS OF APPLICATION

- Measurement, control and instrumentation technology
- Automation technology, machine monitoring
- Aerospace
- Defence systems
- Medical technology
- Telecommunications

Systems – CompactPCI subrack systems

OVERVIEW

COMPACTPCI SUBRACK AND CASE SYSTEMS

- **Large selection of standard CompactPCI, PSB and H.110 systems**
- **Standard systems to the new CompactPCI PlusIO and CompactPCI Serial standards**
- **Individual configuration within 9 working days**
- **Custom solutions on request**

12310002

COMPACTPCI SERIAL

CompactPCI Serial (PICMG CPCI-S.0) is a systematic further development of CompactPCI. Instead of the former PCI bus, this defines the current and future serial protocols for data transmission. In addition to PCIe, S-ATA, USB 2.0 & 3.0 and Ethernet are also available on every slot.

12309004

COMPACTPCI PLUSIO

CompactPCI PlusIO (PICMG 2.30) defines a unified pinout for the fast serial PCIe, S-ATA, USB and Ethernet protocols on the 32-bit CompactPCI system slot. Hybrid CompactPCI/CompactPCI Serial systems can be built. CompactPCI PlusIO thus offers simple migration to the new technology.

12302002

COMPACTPCI

CompactPCI (PICMG 2.0) was specified in 1995 and is based on the widely-used PCI bus. This bus, with the CompactPCI specification, is packaged in a robust modular 19" enclosure and is thus suitable for industrial use.

12306003

PSB

PSB (Packet Switching Backplane, PICMG 2.16) and H.110 (Computer Telephony Bus, PICMG 2.5) are CompactPCI sub-specifications that define additional buses, specifically for telecommunications applications, in 6 U CompactPCI.

SUBRACKS

CompactPCI subracks for building an individual CompactPCI system can be found in the subracks section, page 6.16

SERVICEPLUS

e.g. individual configuration and assembly
e.g. modifications (integration)
e.g. downloads (CAD drawings, user manuals, test reports)
e.g. custom solutions

Systems – CompactPCI Serial

COMPACTPCI SERIAL, 4 U, WITH/WITHOUT REAR I/O

12315001

Front view (24579-416)

12315002

Front view with rear I/O (24579-421)

12315003

Rear view with rear I/O (24579-421)

12315004

Fan module

- 4 U CompactPCI Serial system with vertical 3 U board cage
- Airflow from bottom to top with fan modules that can be changed on the front
- Retrofittable air filter
- Supports PCIe up to Gen3, USB 2.0 and 3.0, S-ATA up to Rev 3.0, and Ethernet up to 10 GBase-T
- Preference types can be ordered directly from stock, other configurations on request
- AC wide range input,
  1 pluggable 300 W PSU (without rear I/O),
  2 pluggable 300 W PSUs (with rear I/O)
- 9 slot backplane, system slot left, Ethernet as star

DELIVERY INCLUDES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; front handles
2	9	Slot at front; IEEE guide rails incl. ESD clips (ESD clips fitted at bottom front), for vertical board mounting (3 U, 160 mm deep)
3	9	Version with rear I/O: Slot at rear; IEEE guide rails incl. ESD clips (ESD clips fitted at bottom), for vertical mounting of rear I/O boards (3 U, 80 mm deep)
4	1	CompactPCI Serial backplane for 3 U boards; 9 slot, system slot left (without rear I/O part no. 23007-629, with rear I/O part no. 23007-669)
5	1 / 2	Power backplane, 3 U, 8 HP with 1 x Pwrblade connector without rear I/O, 2 power backplanes for version with rear I/O (part no. 23098-397)
6	1 / 2	19" PSU, 300 W, 3 U, 8 HP (part no. 11098-538); 2 PSUs installed for version with rear I/O
7	1	AC input module, 3 U, 8 HP; A/C line filter, max. current 10 A
8	1	Hot-swap fan tray, pull-out, 1 U, 3 × 12 V_{DC} fans
9	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Width HP	Depth mm	Number of slots	Version	Part no.
4	177	84	275	9	Without rear I/O	**24579-416**
4	177	84	275	9	With rear I/O	**24579-421**
Accessories						
Air filter retainer for CompactPCI Serial systems 1 piece						24579-632
Air filter mat for CompactPCI, CompactPCI Serial, and VME systems 1 piece						**60713-471**

Note

- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG CPCI-S.0
- Modified systems available on request

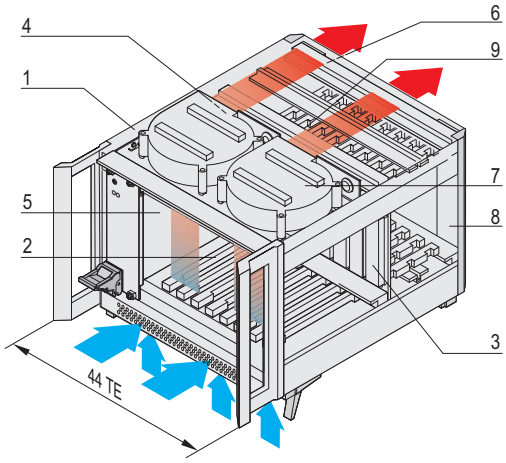
PICMG®
Open Modular Computing Specifications

Systems – CompactPCI Serial subrack sys-

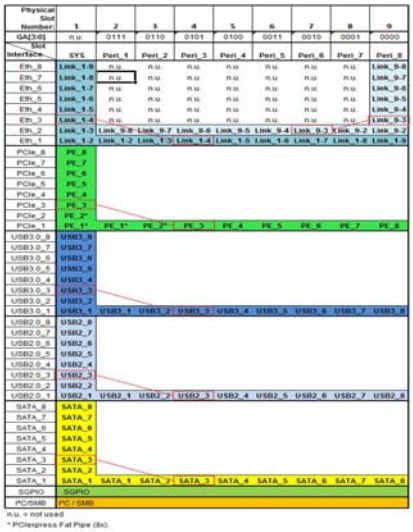
4 U, 9 SLOT, 44 HP, WITHOUT REAR I/O, WITH 19" PSU

12315005

Frontansicht



12312050



12415029

Backplane topology

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep, 9 slot
- Backplane
  - 9 slot, 3 U, CompactPCI Serial
- 19" PSU, 300 W, 3 U, 8 HP
- Heat dissipation by two radial fans, from front to rear

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	ratiopacPRO-air case, RAL 9006, shielded, perforated air inlet/ exhaust openings front and rear; front handles RAL 7016
2	9	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (3 U, 160 mm deep)
3	1	Backplane for 3 U boards; 9 slot CompactPCI Serial (part no. 23007-629)
4	1	Power backplane, 3 U, 8 HP with 1 x P47 connector (part no. 23098-397)
5	1	19" compatible power supply, 250 W (3 U, 8 HP; part no. 11098-538)
6	1	AC input module, 3 U, 8 HP; AC line filter, 110 ... 250 V_{AC}, 50 ... 60 Hz, max. current 10 A
7	2	Radial fan, 36 m^3/h each, free blowing
8	1	Front panel, rear, 3 U, 36 HP
9	1	Cable harness, adaptor board (23098-399) to connect all system components

ORDER INFORMATION

Height U	Height mm	Width HP	Depth mm	Number of slots	Part no.
4	177	44	275	9	24579-634

Accessories

Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.32**
Fan control modules (FCM)	**Page 8.108**

Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG CPCI-S.0

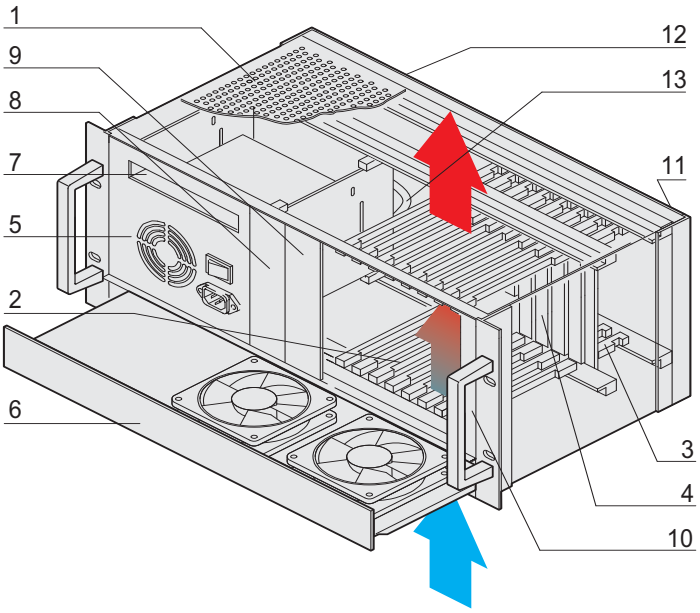
PICMG®
Open Modular Computing Specifications

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

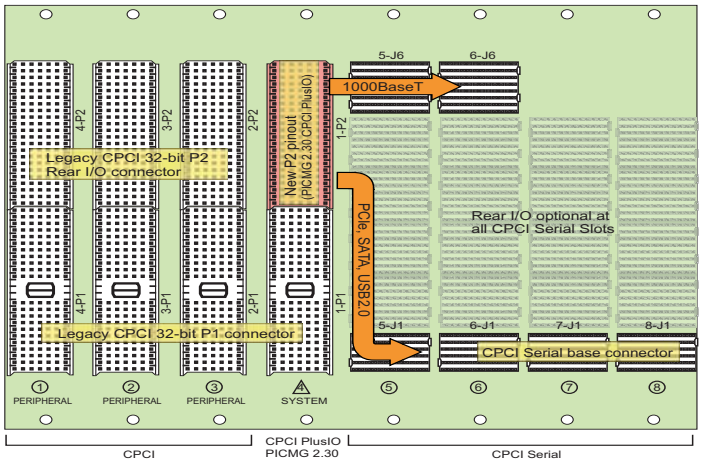
Systems – CompactPCI PlusIO subrack sys-

4 U, 8 SLOT, WITH REAR I/O, ATX PSU

12309004



12308050



12409051

Backplane topology

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep, 8 slot
  - Rear, rear I/O: 3 U, 80 mm deep, 3 slot
- Backplane
  - 4 slot, 3 U, 32 bit, CompactPCI
  - 4 slot, 3 U, CompactPCI PlusIO
  - Power Backplane
- ATX PSU, 300 W
- Heat dissipation by 1 U hot-swap fan unit, from bottom to top
- Option to mount a slimline DVD drive and hard disk

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; front handles
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (3 U, 160 mm deep)
3	3	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slots comprising 4 slots 32-bit CompactPCI plus 4 slots CompactPCI PlusIO (PICMG 2.30, part no. 23007-601)
5	1	ATX power supply, 300 W; 32 HP wide range input 100 ... 240 V_{AC}, (3.3 V/28 A, 5 V/35 A, 12 V/22 A, -12 V/0.8 A); IEC AC input module with socket; mains switch; fan
6	1	Hot-swap fan tray, extractable, 1 U, 2 × 12 V_{DC} fan
7	1	Module to accomodate a slimline DVD drive unit
8	1	3 U, 8 HP module to accommodate a hard disk drive
9	1	Front panel, front, 3 U, 8 HP
10	1	Front panel, front, 3 U, 4 HP, removable, to expand system slot to 8 HP
11	1	Front panel, rear, 3 U, 24 HP
12	1	Front panel, rear, 3 U, 48 HP
13	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Width HP	Depth mm	Number of slots	Part no.
4	177	84	275	8	24579-405
Accessories					
Equipment cables					**Page 3.38**
Front panels					**Page 7.5**
Modules to mount drive units					**Page 8.110**
Front panels with handle					**Page 7.32**
Fan control modules (FCM)					**Page 8.108**

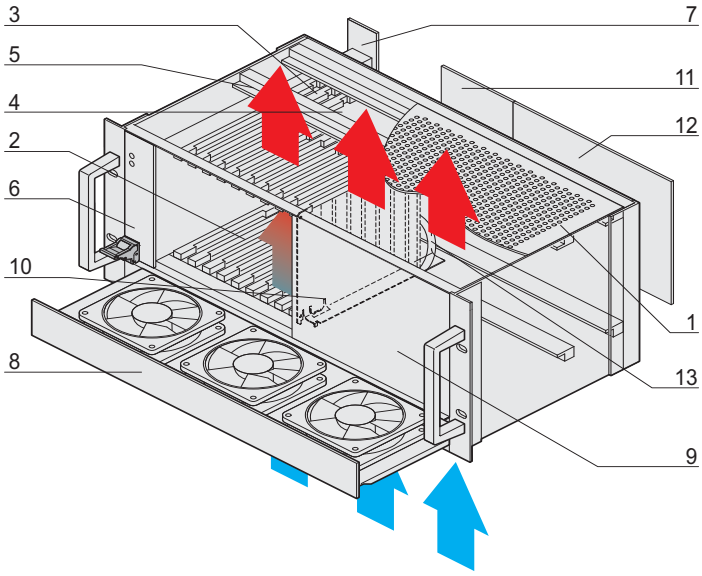
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

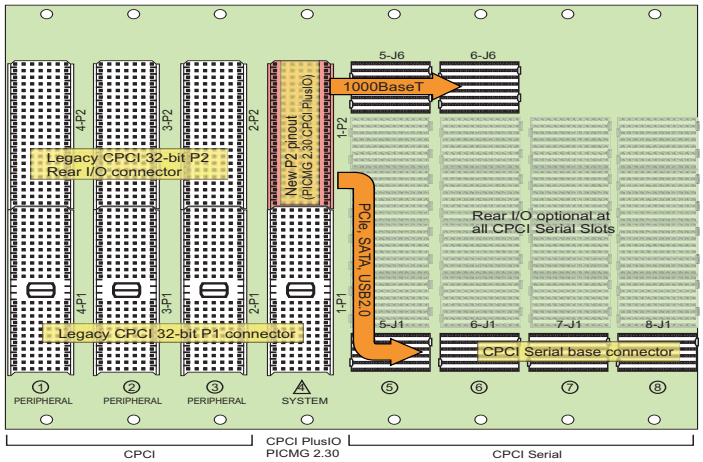
Systems – CompactPCI PlusIO subrack sys-

4 U, 8 SLOT, WITH REAR I/O, 19"-COMPATIBLE PSU

12309005



12309053



12409051

Backplane topology

PICMG®
Open Modular
Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep, 8 slot
  - Rear, rear I/O: 3 U, 80 mm deep, 3 slot
- Backplane
  - 4 slot, 3 U, 32 bit, CompactPCI
  - 4 slot, 3 U, CompactPCI PlusIO
  - Power backplane
- 19"-compatible PSU, 250 W, 3 U, 8 HP
- Heat dissipation by 1 U hot-swap fan unit, from bottom to top
- Option to mount a hard disk

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; front handles
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (3 U, 160 mm deep)
3	3	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slots comprising 4 slots 32-bit CompactPCI plus 4 slots CompactPCI PlusIO (PICMG 2.30, part no. 23007-601)
5	1	Power backplane, 3 U, 8 HP with 1 x P47 connector (part no. 23098-105)
6	1	19" compatible power supply, 250 W (3 U, 8 HP, part no. 13100-141)
7	1	AC input module, 3 U, 8 HP; AC line filter, 110 ... 250 V_{AC}, 50 ... 60 HZ, max. current 10 A
8	1	Hot-swap fan tray, extractable, 1 U, 3 x 12 V_{DC} fans
9	1	Front panel front, 3 U, 44 HP
10	1	Air baffle, 3 U, 160 mm deep
11	1	Front panel, rear, 3 U, 60 HP
12	1	Front panel, rear, 3 U, 4 HP
13	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Width HP	Depth mm	Number of slots	Part no.
4	177	84	275	8	24579-400

Accessories	
Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.32**
Fan control modules (FCM)	**Page 8.108**

Note

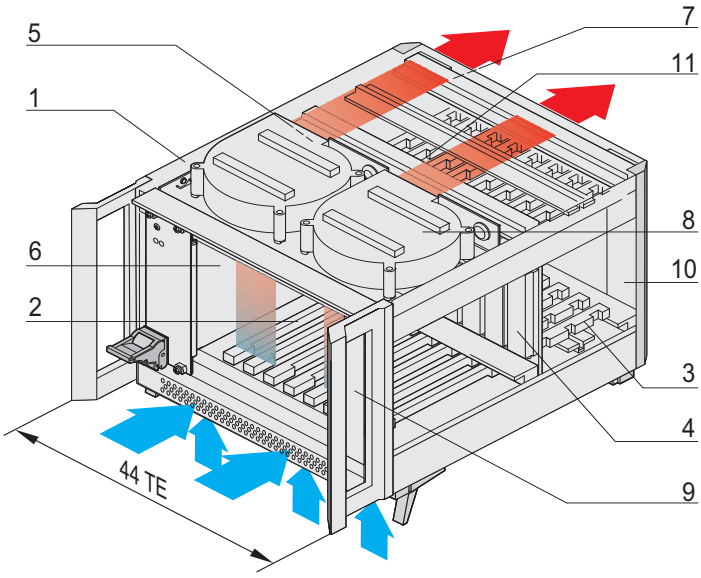
- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

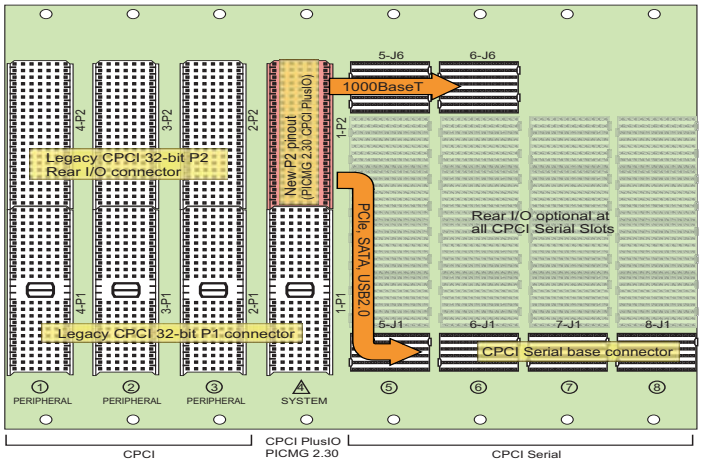
Systems – CompactPCI PlusIO subrack sys-

4 U, 8 SLOT, 44 HP, WITH REAR I/O

12312001



12309052



12409051

Backplane topology

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep
  - Rear I/O: 3 U, 80 mm deep, 3 slot
- Backplane
  - 4 slot, 3 U, 32 bit, CompactPCI
  - 4 slot, 3 U, CompactPCI PlusIO
  - Power Backplane
- 19" PSU, 250 W, 3 U, 8 HP
- Heat dissipation by two radial fans, from front to rear

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	ratiopacPRO-air case, RAL 9006, shielded, perforated air inlet/ exhaust openings front and rear; front handles RAL 7016
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted at bottom front), for vertical boards (3 U, 160 mm deep)
3	3	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted at bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slots comprising 4 slots 32-bit CompactPCI plus 4 slots CompactPCI PlusIO (PICMG 2.30, part no. 23007-601)
5	1	Power backplane, 3 U, 8 HP with 1 x P47 connector part no. 23098-105)
6	1	19" compatible power supply, 250 W (3 U, 8 HP; part no. 13100-141)
7	1	AC input module, 3 U, 8 HP; AC line filter, 110 ... 250 V_{AC}, 50 ... 60 HZ, max. current 10 A
8	2	Radial fan, 36 m^3/h each, free blowing
9	1	Front panel, front, 3 U, 4 HP, removable
10	1	Front panel, rear, 3 U, 24 HP
11	1	Cable harness to connect all system components

Height U	Height mm	Width HP	Depth mm	Number of slots	Part no.
4	177	44	275	8	24579-605

Accessories

Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.32**
Fan control modules (FCM)	**Page 8.108**

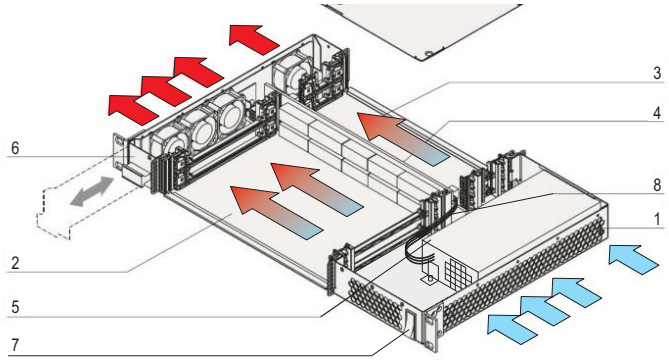
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

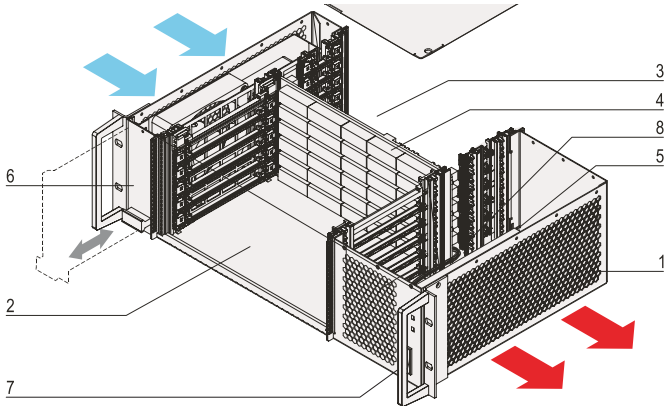
SYSTEMS, 1, 2, 3 U, WITH REAR I/O AND ATX PSU

12305001

12305005



12304055



12304060

- System for horizontal board mounting with board format
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane: 2, 4, 6 slot, 64 bit; system slot on left
- ATX PSU
- Heat dissipation by extractable hot-swap fan unit;
  in 1 U system from right to left;
  in 2 and 3 U systems from left to right

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, St, powder-coated, black, RAL 9005
2	1	Number of front slots see Order Information; IEEE guide rails, incl. ESD clips (ESD clips fitted to front left), for horizontal board mounting (6 U, 160 mm deep)
3	1	Number of rear slots see Order Information; IEEE guide rails, incl. ESD clips (ESD clips fitted to front left), for horizontal mounting of rear I/O boards (6 U, 80 mm deep)
4	1	Backplane for 6 U boards, for number of slots see Order Information, 64 bit; system slot on the left
5	1	ATX PSU, wide input range 100 ... 240 V_{AC} (rating data see Order Information); IEC plug, switch (controls DC power only), LED (Power ON); Fan
6	1	Hot-swap fan unit, number of fans see Order Information
7	1	Mains switch
8	1	Cable harness to connect all system components

Note

- Modified systems available on request
- System in accordance with
  IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

ORDER INFORMATION

Height U	Height mm	Depth mm	Backplane Slots	Fan unit Number of fans	Power supply	Part no.
1	43.65	275	2 slot, 6 U	4	ATX 250 W, 3.3 V/14 A, 5 V/23 A, 12 V/16 A, -12 V/0.5 A	**24579-077**
2	88.10	275	4 slot, 6 U	2	ATX 250 W, 3.3 V/14 A, 5 V/20 A, 12 V/16 A, -12 V/0.8 A	**24579-081**

***)** Systems with additional heat dissipation in rear I/O space for 3 U systems available on request

PICMG
Open Modular Computing Specifications

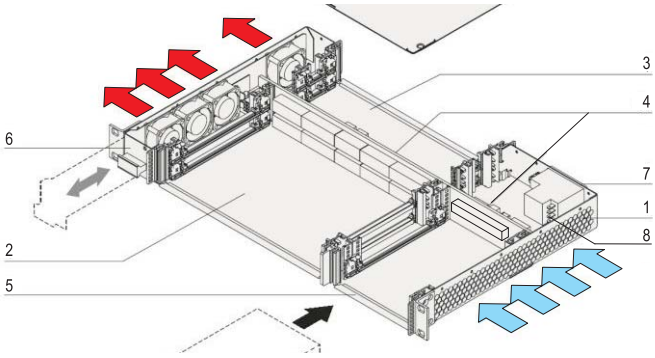
Accessories	
Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.32**
Fan control modules (FCM)	**Page 8.108**

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

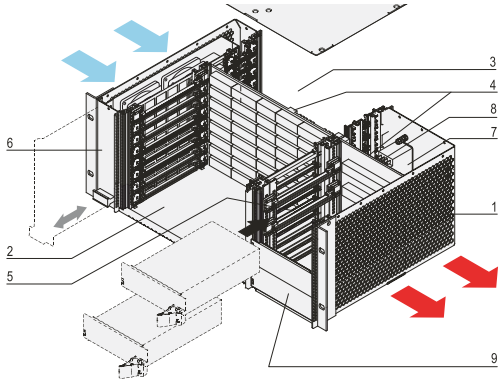
SYSTEMS, 1, 2, 3, 4 U, WITH REAR I/O, FOR 19" PSU

12305002

12305007



12304056



- System for horizontal board mounting with board format
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Monolithic backplane for signals and power
  - 2, 4, 6, 8 slot, 6 U, 64 bit; system slot on left
  - Power plug to PICMG 2.11 (P 47)
- Prepared for installation of 19" CompactPCI PSUs (3 U, 8 HP)
- Heat dissipation by extractable hot swap fan unit; 1 U system from right to left; in 2, 3 and 4 U systems from left to right

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, St, powder-coated, black, RAL 9005
2	1	Number of slots to front see Order Information; IEEE guide rails, incl. ESD clips (ESD clips fitted front right), for horizontal board mounting (6 U, 160 mm deep)
3	1	Number of rear slots see Order Information; IEEE guide rails, incl. ESD clips (ESD clips fitted front right), for horizontal mounting of rear I/O boards (6 U, 80 mm deep)
4	1	Monolithic backplane for 6 U boards and voltage supply, for number of slots see Order Information, 64 bit; system slot left, in accordance with PICMG 2.0 rev. 3.0, voltage supply: 1 x P 47 socket for 1 U, 2 x P 47 socket for 2, 3, 4 U
5	1	Installation space for 19" CompactPCI power supply unit (3 U, 8 HP; For quantity see Order Information)
6	1	Hot-swap fan unit, number of fans see Order Information
7	1	AC input (IEC plug), mains filter module, fuse, mains switch
8	1	Cable harness to connect all system components
9	1	3 U, 8 HP front panel, mounted at front, from 2 U system

Note

- Modified systems available on request
- 48 V_{DC} version on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

ORDER INFORMATION

Height U	Height mm	Depth mm	Backplane Slots	Fan unit Number of fans	Power supply (please order separately)	Quantity Connector type	Part no.
1	43.65	275	2 slot, 6 U	4	1	1 x P 47	**24579-078**
2	88.10	275	4 slot, 6 U	2	2	2 x P 47	**24579-082**
3	132.50	275	6 slot, 6 U	1 *)	2 ... 3	2 x P 47	**24579-080**
4	177.00	275	8 slot, 6 U	4 *)	2 ... 4	2 x P 47	24579-106
19" compatible power supply, 250 W, 3 U, 8 HP Please order PSU separately, see page 9.24							**13100-141**

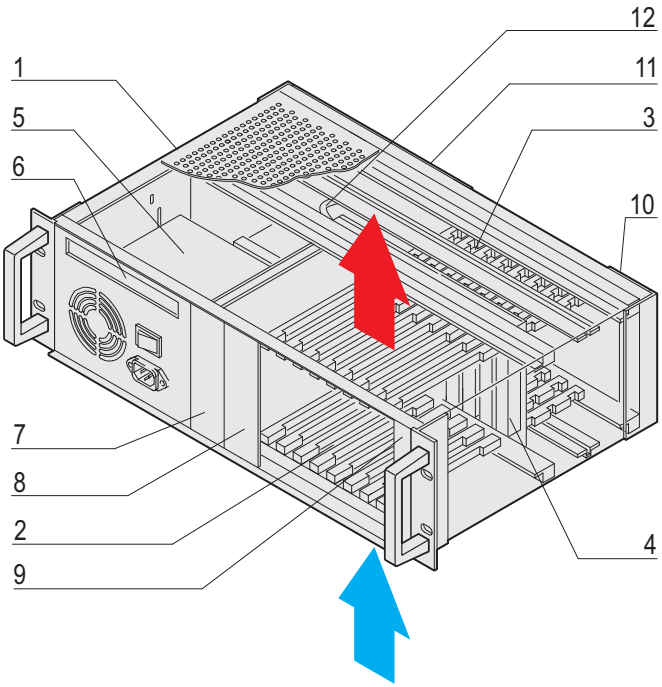
***)** Systems with additional heat dissipation in rear I/O space for 3 U and 4 U systems available on request

PICMG®
Open Modular Computing Specifications

Accessories	
Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.32**
Fan control modules (FCM)	**Page 8.108**

SYSTEM, 3 U, 8 SLOT, WITH REAR I/O

12302002



12303053

PICMG
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep
  - Rear, rear I/O: 3 U, 80 mm deep
- Backplane
  - 8 slot, 3 U, 32 bit; system slot on right
  - 8 HP wide CPU can be used
- ATX PSU, 300 W
- Heat dissipation by convection, upward from below
- Option to mount a slimline DVD drive and hard disk

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; 2 front handles
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted bottom front), for vertical boards (3 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slot, 32 bit (part no. 23006-818); system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	ATX power supply; 300 W; 32 HP, wide input range 100 ... 240 V_{AC} (3.3 V/28 A, 5 V/35 A, 12 V/22 A, -12 V/0.8 A); IEC AC input module with socket; mains switch; fan
6	1	Module to accomodate a slimline DVD drive unit
7	1	3 U, 8 HP module to accommodate a hard disk drive
8	1	Front panel front, 3 U, 8 HP
9	1	Front panel, front, 3 U, 4 HP, to expand system slot to 8 HP
10	1	Front panel, rear, 3 U, 4 HP
11	1	Front panel, rear, 3 U, 48 HP
12	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
3	132.55	275	8	**24579-031**
Accessories				
DC fan 12 V, air flow volume 140 m^3/h, 119 x 119 x 32 mm, 1 piece				**60713-600**
Fan retainer for 119 x 119 x 32 mm fan, (E)PB foam, 1 piece				**24579-212**
Fan tray, 1 U for 3 or 6 U CompactPCI systems (boards assembled vertically), 1 piece				**24579-105**
Air filter consisting of filter holder and filter mat, PU 1 set				**24579-033**
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.32**
Fan control modules (FCM)				**Page 8.108**

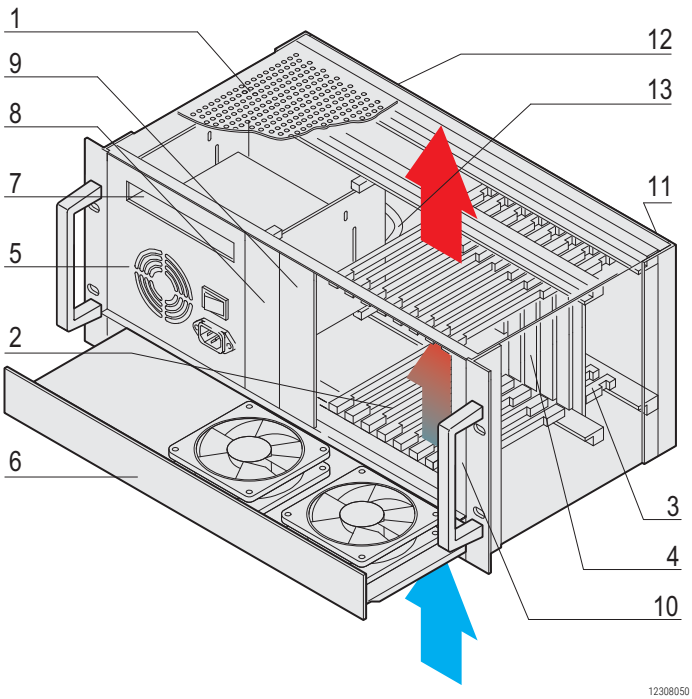
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

SYSTEM, 4 U, 8 SLOT, WITH REAR I/O, ATX FRAME PSU

12308001



12308050

PICMG
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep
  - Rear, rear I/O: 3 U, 80 mm deep
- Backplane
  - 8 slot, 3 U, 32 bit; system slot on right
  - 8 HP wide CPU can be used
- ATX PSU, 300 W
- Heat dissipation by 1 U hot-swap fan unit, upward from below
- Option to mount a slimline DVD drive and hard disk

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; front handles
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (3 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slot, 32 bit (part no. 23006-818); system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	ATX power supply, 300 W; 32 HP, wide input range 100 ... 240 V_{AC} (3.3 V/28 A, 5 V/35 A, 12 V/22 A, -12 V/0.8 A); IEC AC input module with socket; mains switch; fan
6	1	Hot-swap fan tray, extractable, 1 U, 2 × 12 V_{DC} fans
7	1	Module to accomodate a slimline DVD drive unit
8	1	Module to accomodate a CD ROM drive, 3 U, 8 HP
9	1	Front panel, front, 3 U, 8 HP
10	1	Front panel, front, 3 U, 4 HP, removable, to expand system slot to 8 HP
11	1	Front panel, rear, 3 U, 4 HP
12	1	Front panel, rear, 3 U, 48 HP
13	1	Cable harness to connect all system components

ORDER INFORMATION

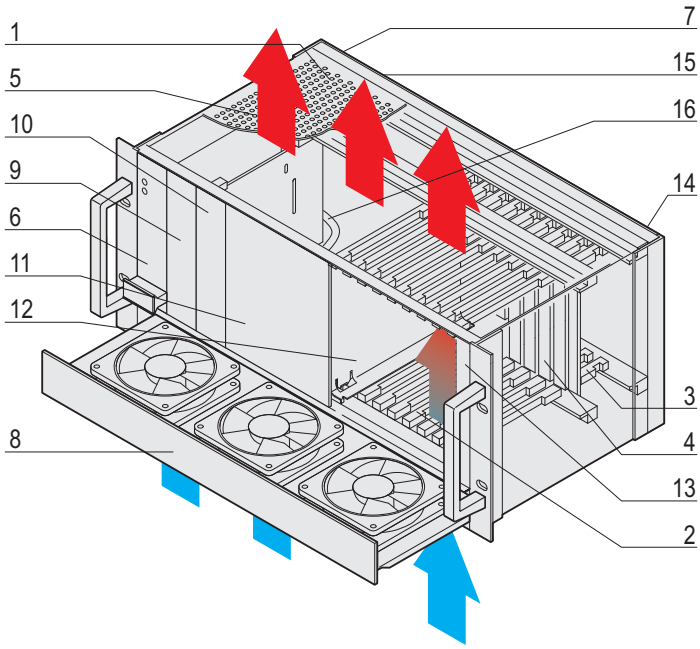
Height U	Height mm	Width HP	Depth mm	Number of slots	Part no.
4	177	84	275	8	24579-250
Accessories					
Air filter consisting of filter holder and filter mat, PU 1 set					**24579-033**
Equipment cables					**Page 3.38**
Front panels					**Page 7.5**
Modules to mount drive units					**Page 8.110**
Front panels with handle					**Page 7.32**
Fan control modules (FCM)					**Page 8.108**

Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

SYSTEM, 4 U, 8 SLOT, WITH REAR I/O, 19"-COMPATIBLE PSU

12308005



12308052

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep
  - Rear, rear I/O: 3 U, 80 mm deep
- Backplane
  - 8 slot, 3 U, 32 bit; system slot on right
  - 8 HP wide CPU can be used, power backplane
- 19"-compatible PSU, 250 W, 3 U, 8 HP
- Heat dissipation by 1 U hot-swap fan unit, from bottom to top
- Option to mount a hard disk

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; front handles
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (3 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slot, 32 bit (part no. 23006-818); system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	Power backplane, 3 U, 8 HP with 1 x P47 plug
6	1	19" compatible power supply, 250 W (3 U, 8 HP; part no. 13100-141)
7	2	AC input module, 3 U, 8 HP; AC line filter, 110 ... 250 V_{AC}, 50 ... 60 HZ, max. current 10 A
8	1	Hot-swap fan tray, extractable, 1 U, 3 x 12 V_{DC} fans
9	1	Front panel front, 3 U, 8 HP
10	1	3 U, 8 HP module to accommodate a hard disk drive
11	1	Front panel front, 3 U, 24 HP
12	1	Air baffle, 3 U, 160 mm deep
13	1	Front panel, front, 3 U, 4 HP, removable, to expand system slot to 8 HP
14	1	Front panel, rear, 3 U, 4 HP
15	1	Front panel, rear, 3 U, 40 HP
16	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Width HP	Depth mm	Number of slots	Part no.
4	177	84	275	8	24579-260

Accessories	
Air filter consisting of filter holder and filter mat, PU 1 set	**24579-033**
Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.32**
Fan control modules (FCM)	**Page 8.108**

Note

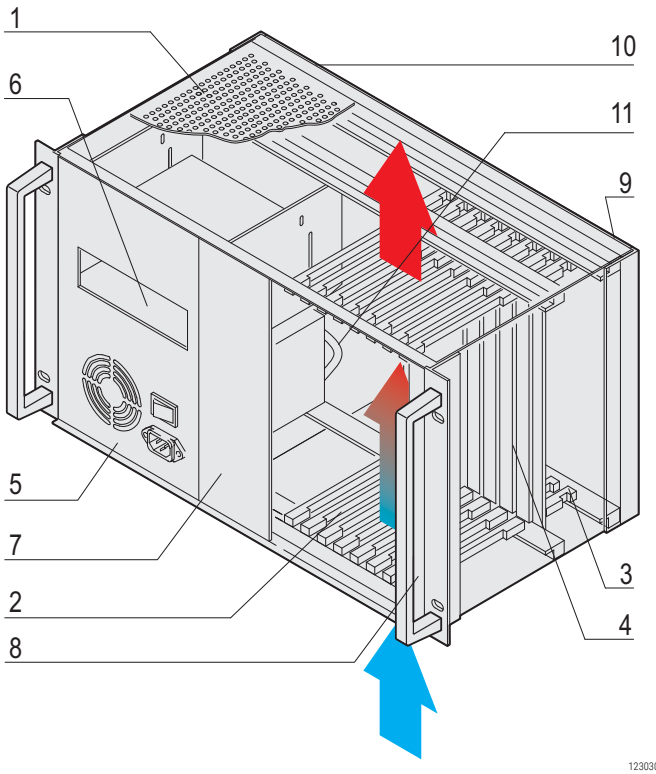
- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Systems – CompactPCI subrack systems

6 U, 8 SLOT, WITH REAR I/O

12302004



12303056

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane
  - 8 slot, 6 U, 64 bit; system slot to right
  - 8 HP wide CPU can be used
- ATX PSU, 300 W
- Heat dissipation by convection, from bottom to top
- Option to mount a 5.25" DVD drive unit

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; 2 front handles
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (6 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (6 U, 80 mm deep)
4	1	Backplane for 6 U boards; 8 slot, 64 bit (part no. 23006-868); system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	ATX power supply, 300 W, 32 HP, wide input range 100 ... 240 V_{AC} (3.3 V/28 A, 5 V/35 A, 12 V/22 A, -12 V/0.8 A); IEC AC input module with socket; mains switch; fan
6	1	Module to accomodate a 5.25" DVD drive
7	1	Front panel, front, 6 U, 16 HP
8	1	Front panel, front, 6 U, 4 HP, removable, to expand system slot to 8 HP
9	1	Front panel, rear, 6 U, 4 HP
10	1	Front panel, rear, 6 U, 48 HP
11	1	Cable harness to connect all system components

ORDER INFORMATION

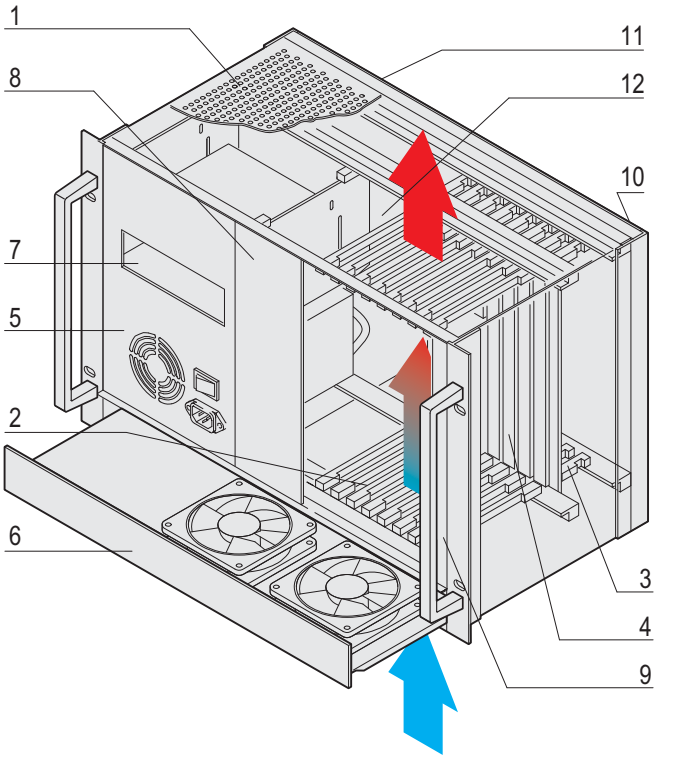
Height U	Height mm	Depth mm	Number of slots	Part no.
6	265.9	275	8	**24579-030**
Accessories				
DC fan 12 V, air flow volume 140 m^3/h, 119 x 119 x 32 mm, 1 piece				**60713-600**
Fan retainer for 119 x 119 x 32 mm fan, (E)PB foam, 1 piece				**24579-212**
Fan tray, 1 U for 3 or 6 U CompactPCI systems (boards assembled vertically), 1 piece				**24579-105**
Air filter consisting of filter holder and filter mat, PU 1 set				**24579-033**
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.32**
Fan control modules (FCM)				**Page 8.108**

Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

SYSTEM, 7 U, 8 SLOT, WITH REAR I/O

12302013



12303057

PICMG
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane
  - 8 slot, 6 U, 64 bit, system slot to right
  - 8 HP wide CPU can be used
- ATX PSU, 300 W
- Heat dissipation by 1 U hot-swap fan unit, from bottom to top
- Option to mount a 5.25" DVD drive unit

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated top cover and base plate; Front handles
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (6 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (6 U, 80 mm deep)
4	1	Backplane for 6 U boards; 8 slot, 64 bit (part no. 23006-868; system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	ATX power supply, 300 W, 32 HP, wide input range 100 ... 240 V_{AC} (3.3 V/28 A, 5 V/35 A, 12 V/22 A, -12 V/0.8 A); IEC AC input module with socket; mains switch; fan
6	1	Hot-swap fan tray, extractable, 1 U, 2 × 12 V_{DC} fans
7	1	Module to accomodate a 5.25" DVD drive
8	1	Front panel, front, 6 U, 16 HP
9	1	Front panel, front, 6 U, 4 HP, removable, to expand system slot to 8 HP
10	1	Front panel, rear, 6 U, 4 HP
11	1	Front panel, rear, 6 U, 48 HP
12	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
7	310.35	275	8	**24579-026**
Accessories				
Air filter consisting of filter holder and filter mat, PU 1 set				**24579-033**
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.32**
Fan control modules (FCM)				**Page 8.108**

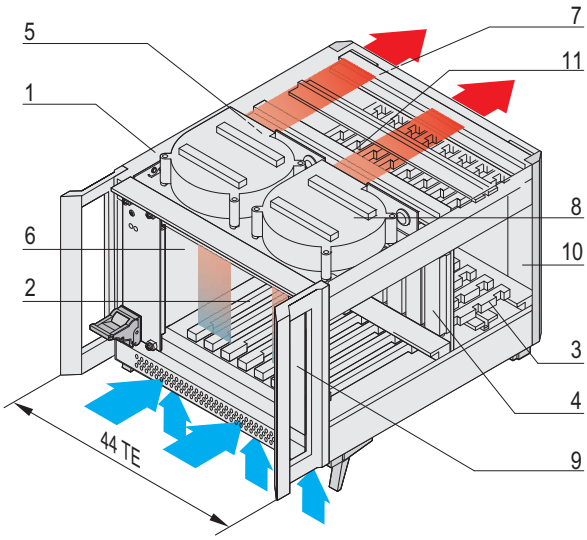
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11; backplane in accordance with PICMG 2.0 rev. 3.0 and 2.30

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

SYSTEM, 4 U, 8 SLOT, 44 HP, WITH REAR I/O

12309003



12309052

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep
  - Rear, rear I/O: 3 U, 80 mm deep
- Backplane
  - 8 slot, 3 U, 32 bit, system slot on right
  - 8 HP wide CPU can be used
- 19" PSU, 250 W, 3 U, 8 HP
- Heat dissipation by two radial fans, from front to rear

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	ratiopacPRO-air case, RAL 9006, shielded, perforated air inlet/ exhaust openings front and rear; front handles RAL 7016
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (3 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slot, 32 bit (part no. 23006-818); system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	Power backplane, 3 U, 8 HP with 1 x P47 plug
6	1	19" compatible power supply, 250 W (3 U, 8 HP; Part no. 13100-141)
7	1	AC input module, 3 U, 8 HP; AC line filter, 110 ... 250 V_{AC}, 50 ... 60 HZ, max. current 10 A
8	2	Radial fan, 36 m^3/h each, free blowing
9	1	Front panel, front, 3 U, 4 HP, removable, to expand system slot to 8 HP
10	1	Front panel, rear, 3 U, 4 HP
11	1	Cable harness to connect all system components

ORDER INFORMATION

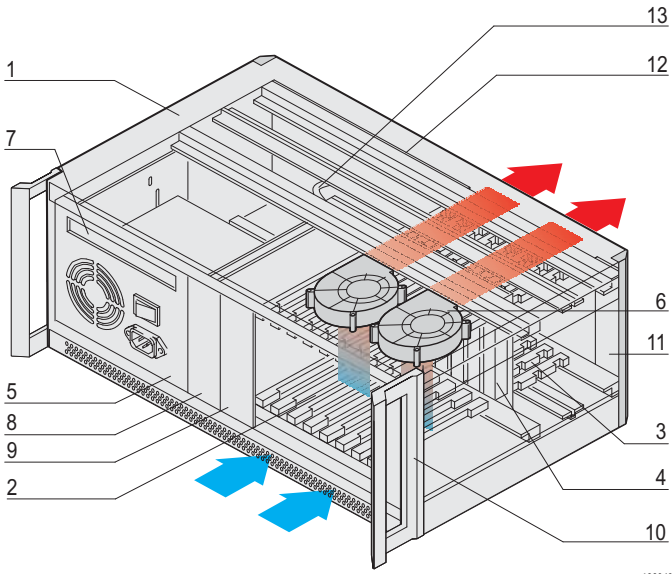
Height U	Height mm	Width HP	Depth mm	Number of slots	Part no.
4	177	44	275	8	24579-604
Accessories					
Equipment cables					**Page 3.38**
Front panels					**Page 7.5**
Modules to mount drive units					**Page 8.110**
Front panels with handle					**Page 7.32**
Fan control modules (FCM)					**Page 8.108**

Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11); Backplane, conforms to PICMG 2.0 rev. 3.0

SYSTEM, 4 U, 8 SLOT, WITH REAR I/O

12304002



12304050

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 3 U, 160 mm deep
  - Rear, rear I/O: 3 U, 80 mm deep
- Backplane
  - 8 slot, 3 U, 32 bit, system slot to right
  - 8 HP wide CPU can be used
- ATX PSU, 300 W
- Heat dissipation by two radial fans, front to rear
- Option to mount a slimline DVD drive and hard disk

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	ratiopacPRO-air case, RAL 9006, shielded, perforated air inlet/ exhaust openings front and rear; front handles RAL 7016
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (3 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (3 U, 80 mm deep)
4	1	Backplane for 3 U boards; 8 slot, 32 bit (part no. 23006-818); system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	ATX power supply, 300 W, wide range input 100 ... 240 V_{AC}, (3.3 V/28 A, 5 V/35 A, 12 V/22 A, -12 V/0.8 A); IEC AC input module with socket; mains switch; fan; 32 HP
6	2	Radial fan, 36 m^3/h each, free blowing
7	1	Module to accomodate a slimline DVD drive unit
8	1	3 U, 8 HP module to accommodate a hard disk drive
9	1	Front panel, front, 3 U, 8 HP
10	1	Front panel, front, 3 U, 4 HP, removable, to expand system slot to 8 HP
11	1	Front panel, rear, 3 U, 4 HP
12	1	Front panel, rear, 3 U, 48 HP
13	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
4	177	275	8	**24579-602**
Accessories				
Spare fan unit Air barrier with 2 fitted radial fans, 1 piece				24579-225
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.32**
Fan control modules (FCM)				**Page 8.108**

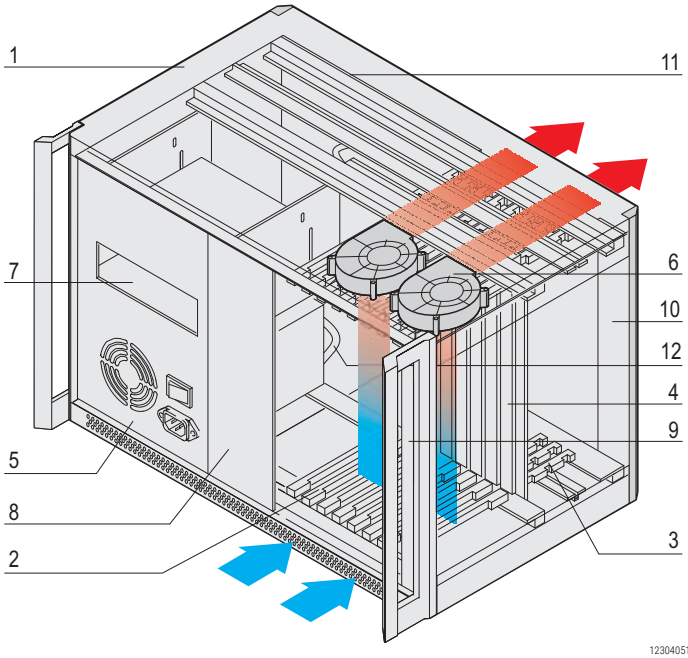
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11); Backplane, conforms to PICMG 2.0 rev. 3.0

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

SYSTEMS, 7 U, 8 SLOT, WITH REAR I/O

12304003



12304051

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane
  - 8 slot, 6 U, 64 bit, system slot to right
  - 8 HP wide CPU can be used
- ATX PSU, 300 W
- Heat dissipation by two radial fans, from front to rear
- Option to mount a 5.25" DVD drive unit

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	ratiopacPRO-air case, RAL 9006, shielded, perforated air inlet/ exhaust openings front and rear; front handles RAL 7016
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (6 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical rear I/O boards (6 U, 80 mm deep)
4	1	Backplane for 6 U boards; 8 slot, 64 bit (part no. 23006-868); system slot on right, 4 HP (8 HP wide CPU can be used)
5	1	ATX power supply, 300 W, wide input range 100 ... 240 V_{AC} (3.3 V/28 A, 5 V/35 A, 12 V/22 A, -12 V/0.8 A); IEC-plug; mains switch; fan; 32 HP
6	2	Radial fan, 36 m^3/h each, free blowing
7	1	Module to accomodate a 5.25" DVD drive
8	1	Front panel, front, 6 U, 16 HP, for fitting a hard disk drive
9	1	Front panel, front, 6 U, 4 HP, removable, to expand width of system slot to 8 HP
10	1	Front panel, rear, 6 U, 4 HP
11	1	Front panel, rear, 6 U, 48 HP
12	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
7	310.35	275	8	**24579-612**
Accessories				
Spare fan unit Air barrier with 2 fitted radial fans, 1 piece				24579-225
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.32**
Fan control modules (FCM)				**Page 8.108**

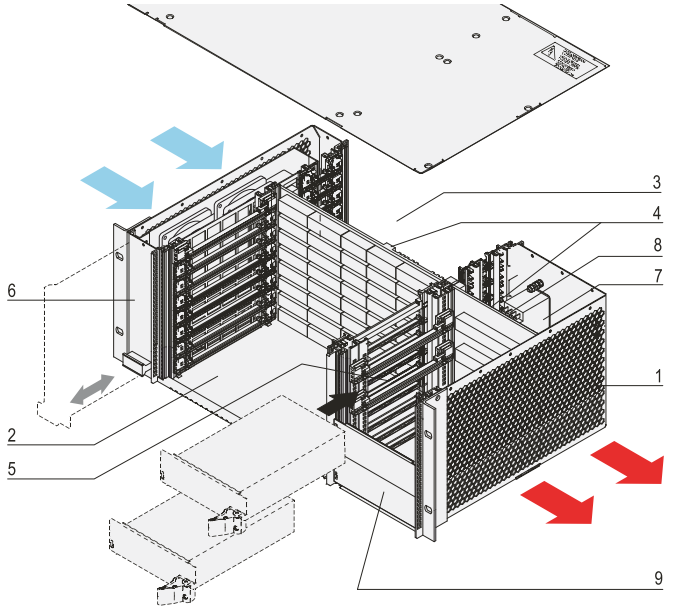
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11); Backplane, conforms to PICMG 2.0 rev. 3.0

Systems – CompactPCI subrack systems,

SYSTEM, 4 U, 8 SLOT, WITH REAR I/O, FOR TELECOMS APPLICATIONS

12306003



12305050

PICMG®
Open Modular Computing Specifications

- System for horizontal board mounting with board format
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Monolithic backplane for (signals and power) 64-bit CompactPCI; PSB (**P**ackage **S**witched **B**ackplane), PICMG 2.16; H.110
  - 8 slot, 6 U, 64 bit CompactPCI (2 fabric/switch slots, 6 node slots H.110), system slot to left
  - Integrated power backplane with 2 x P 47 connectors
- Prepared to accept two 19" CompactPCI PSUs 250 W (3 U, 8 HP)
- Heat dissipation by extractable hot-swap fan unit, from left to right

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, St, powder-coated, black, RAL 9005
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to front right), for horizontal board mounting (6 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to front right), for horizontal mounting of rear I/O boards (6 U, 80 mm deep)
4	1	Backplane for 6 U boards and voltage supply (2 x P 47 sockets); 64-bit CompactPCI; PSB, 2 fabric/switch slots; 6 node H.110 bus slots; part no. 23006-611
5	–	Prepared to accommodate two 19" CompactPCI PSUs (250 W, 3 U, 8 HP), part no. 13100-141
6	1	Hot-swap fan unit, 4 fans, each 109 m^3/h (64 cfm)
7	1	AC input (IEC plug), mains filter module, fuse, mains switch
8	1	Cable harness to connect all system components
9	2	Front panel front, 3 U, 8 HP

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
4	177	275	8	**24579-135**
Accessories				
19" compatible power supply, 250 W, 3 U, 8 HP Please order PSU separately, see page 9.24				**13100-141**
Fan tray for black systems, to ventilate rear I/O space 7 fans				24579-112
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.32**
Fan control modules (FCM)				**Page 8.108**

Note

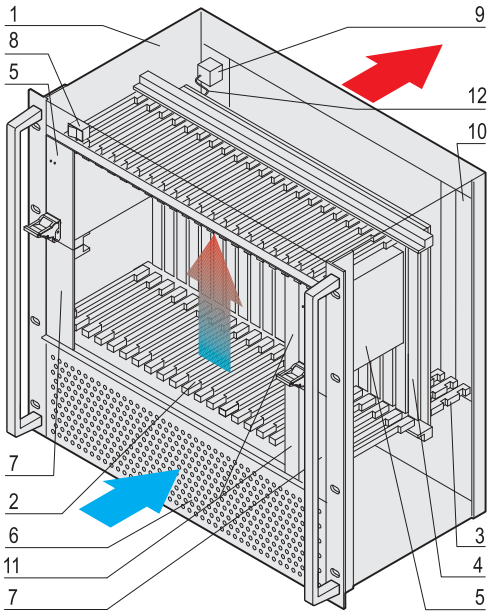
- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11); Backplane, conforms to PICMG 2.16

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Systems – CompactPCI subrack systems,

SYSTEM, 10 U, 16 SLOT, WITH REAR I/O, FOR TELECOMS APPLICATIONS

12302005



12303058

PICMG®
Open Modular Computing Specifications

- System for vertical board mounting with board format
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane, PSB (**p**ackage **s**witched **b**ackplane), PICMG 2.16
  - 16-slot, 6 U, 64 bit (2 fabric/switch slots, 14 node slots)
- Two 19" CompactPCI power supplies, 250 W (3 U, 8 HP), prepared for installation of two further 19" compatible PSUs
- Heat dissipation by fan module, from front to rear
- Prepared for system monitoring with a chassis monitoring module (CMM)

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; perforated front panel to front and rear, 19" bracket in RAL 9006; remaining parts passivated in aluminium; front handles (RAL 9005)
2	16	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical boards (6 U, 160 mm deep)
3	16	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to front bottom), for vertical mounting of rear I/O boards (6 U, 80 mm deep)
4	1	PSB backplane for 6 U boards, 64 bit, 2 fabric/switch slots, 14 node slots, 2 CompactPCI segments, system slot left and right; part no. 23006-610
5	2	19" compatible power supply, 250 W (3 U, 8 HP); part no. 13100-141
6	1	Extractable fan unit with filter mat, 3 fans, 24 V_{DC}, 270 m^3/h (160 cfm)
7	2	Front panel, front, 3 U, 8 HP, space for two further power supplies
8	1	DC switch on front
9	1	AC input (IEC connector), mains filter module, fuse, 6 U, 8 HP
10	1	Front panel, rear, 6 U, 8 HP
11	2	Front panel, front, 3 U, 4 HP, cover for optional CMM module space
12	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
10	443.7	275	16	**24579-028**
Accessories				
19" compatible power supply, 250 W, 3 U, 8 HP Please order PSU separately, see page 9.24				**13100-141**
Chassis monitoring module (CMM) 3 U, 4 HP, 160 mm deep, 1 piece Please order PSU separately, see page 8.109				23207-022
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.32**
Fan control modules (FCM)				**Page 8.108**

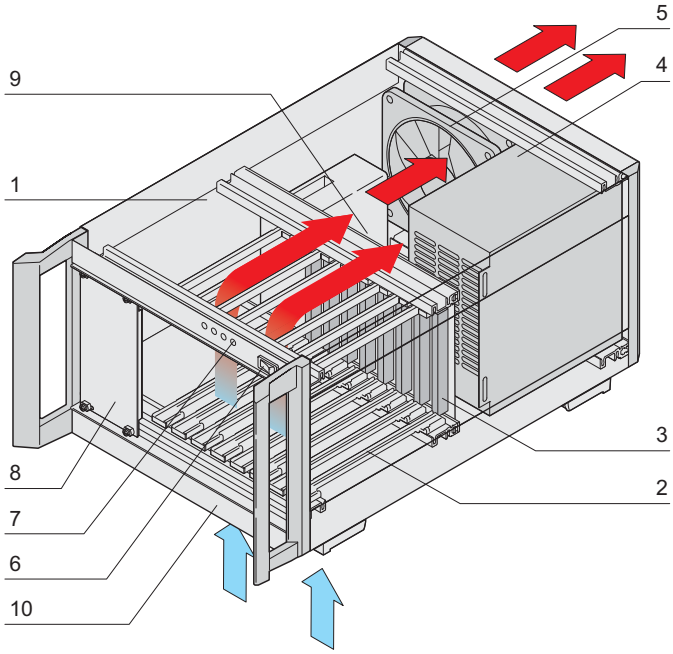
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11); Backplane, conforms to PICMG 2.16

Systems – PXI case system

PXI SYSTEM, 4 U, 8 SLOT, 44 HP

12307002



12307050

- PXI desktop chassis, 4 U, 44 HP
- PXI backplane, 8 slot, 3 HE, 64 bit, system slot left
- Heat dissipation to rear from below
- ATX power supply 400 W, wide-range AC input with power switch on the back of the device
- Backplane with clock switching internal / external

DELIVERY INCLUDES (completely assembled, wired and tested)

Item	Qty	Description
1	1	ratiopacPRO-air case, RAL 9006, with 19" mounting brackets and handles RAL 7016, 4 U, 44 HP; shielded; perforated base plate; tip-up feet
2	8	Front slots, with 2 IEEE guide rails each, incl. ESD clips (ESD clips assembled at bottom front), for vertical boards (3 U, 160 mm deep)
3	1	Backplane for 3 U boards; 8 slot, 64 bit (part no. 23006-578); System slot on the left
4	1	Power supply, ATX (PS2), 400 W, wide range input 100 ... 240 V_{AC}; Output 3.3 V/28 A, 5 V/40 A, 12 V/12 A, -12 V/ 1 A; IEC AC input module with socket; AC mains switch; Fan
5	1	Fan, 170 m^3/h (100 cfm) assembled on rear panel
6	1	Mains switch, DC, front
7	1	Voltage display
8	1	Front panel, 10 U
9	1	Cable harness to connect all system components
10	1	Filter mat and holder

ORDER INFORMATION

Height U	Width HP	Depth mm	Number of slots	Qty/PU piece	Part no.
4	44	355	8	1	**14579-008**

NOTE

- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11); backplane conforms to PICMG rev. 3.0 and PXI 2.0
- Modified systems available on request

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

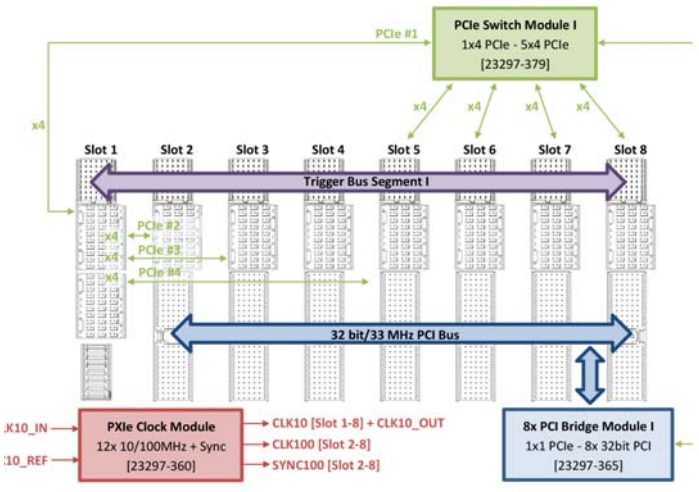
Systems – PXI-Express case system

PXI-EXPRESS SYSTEM, 4 U, 8 SLOT, 44 HP

12306001

12318002

Rear view



12318050

Backplane topology

- PXI Express desktop chassis, 4 U, 44 HP
- 1 PXIe System slot an 7 Hybrid slots
- Ultra-high performance Gen 3 PCIe switching with a default four-link (4x4) system slot
- Powerful cooling concept with low fan noise, 50 W per slot @ 15K temperature increase
- Heat dissipation to rear from below with temperature controlled fans
- Wide range AC input with mains switch on the rear side, power push bottom on the front
- Rear panel external 10 MHz clock inputs/outputs

DELIVERY INCLUDES (completely assembled, wired and tested)

Item	Qty	Description
1	1	RatiopacPRO chassis with handles; 4 U, 44 HP, 315 mm deep; shielded; tip-up feet
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips assembled at bottom front), for vertical boards (3 U, 160 mm deep)
3	1	PXIe Backplane for 3 U boards; 8 slot; system slot on the left
4	1	PCIe 24 Lane Switch Module, PCIe Gen 3, mounted on backplane backside
5	1	PCIe-PCI Bridge Module, PCIe x1 to 32-bit 33 MHz, mounted on backplane backside
6	1	PXI Express Clock Module, PXI-1 & PXI-5 CLKs, mounted on backplane backside
7	1	Power supply 400 W; wide range input 100 ... 240 V_{AC}; output: 3.3 V/ 25 A, 5 V/25 A, 12 V/15 A, --12 V/2 A; 5 V aux/1 A
8	2	80 mm fans with 258 m³/h (152.3 cfm) each
9	1	Fan Control module, FCM2
10	1	Mains inlet connector with switch, filter and fuse
11	1	Power push button
12	1	External 10 MHz REF clock output via BNC connector
13	1	Optional 10 MHz REF clock source via BNC connector
14	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Width HP	Depth mm	Number of slots	Qty/PU piece	Part no.
4	44	315	8	1	**14579-030**

TECHNICAL DATA

Ambient temperature [°C]	0 °C ... 50 °C
Input voltage range [V_{AC}]	100 ... 240 V_{AC} at 50/60 Hz
Sound pressure level [dB(A)]	21 dBA (auto fan at 25 °C), 48 dBA (max fan speed)

NOTE

- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11); backplane conforms to PICMG rev. 3.0 and PXI-5
- Modified systems available on request

Systems – PXI-Express case system

Systems – VME, VME64x, VXS, VPX

10006001

WHAT WE UNDERSTAND TO BE A SYSTEM

We at SCHROFF regard a system as being a combination of mechanical components like a subrack or case with electronic components such as a backplane and power supply unit, a cooling unit where appropriate and a system management module.

A STRONG STANDARD RANGE

Our extensive and highly-developed standard range offers you mechanical, electronic and thermal components in an almost unlimited variety of dimensions and specifications. Simply select a complete ready system or configure your system from our standard components, online or using the catalogue, to your exact requirements.

FLEXIBILITY FOR MODIFICATIONS

Often only small adjustments are needed to create the required solution from a standard product. And we have set ourselves up to offer just that. We can make modifications in accordance with your individual specifications - with our usual speed and reliability.

COMPETENT WITH NEW DEVELOPMENTS

If your requirements cannot be met with standard products or modified standard solutions, our qualified and experienced team will create a customised solution for your system. We have all the necessary development and manufacturing competencies gathered under one roof.

STANDARDS/CERTIFICATIONS

- Inner and outer dimensions in accordance with:
  IEC 60297-3-101 / IEEE 1101.1
  IEC 60297-3-102 / IEEE 1101.10/11
  IEC 60297-3-103
- Ingress protection IP 20 in accordance with IEC 60529
- EMC testing in accordance with IEC 61587-3
- In accordance with VITA 1-1994 and VITA 1.1-1997

MEMBER VITA
Open Standards, Open Markets

AREAS OF APPLICATION

- Measurement, control and instrumentation technology
- Automation technology, machine monitoring
- Aerospace
- Defence technology
- Medical technology
- Test systems

Systems – VME, VME64x, VXS, VPX

OVERVIEW

CHASSIS AND TOWER SYSTEMS

- **STANDARD SYSTEMS FROM STOCK**
- **INDIVIDUAL CONFIGURATION WITHIN 9 WORKING DAYS**
- **ROBUST MECHANICS, EFFECTIVE HEAT DISSIPATION AND EMC SHIELDING**

10002001

VME SUBRACK SYSTEMS

- 3 ... 8 U subrack systems, aluminium, silver
- With fan control module (FCM) for fan monitoring and control

10008001 10002007

VME64X SUBRACK SYSTEMS

- Subrack systems
  - 1, 2 U, steel, black (RAL 9005)
  - 3 ... 10 U, aluminium, silver
- With fan control module (FCM) for fan monitoring and control

10005004

10006002

VME64x VXS

VME64X/VXS TOWER SYSTEMS

- Tower systems, aluminium, RAL 9006, RAL 7016
- With fan control module (FCM) for air monitoring and control
- Chassis suitable for use as a test system

10011001

VPX CASE SYSTEM

- Case system, 4 U, RAL 9006, RAL 7016
- Well suited as test system

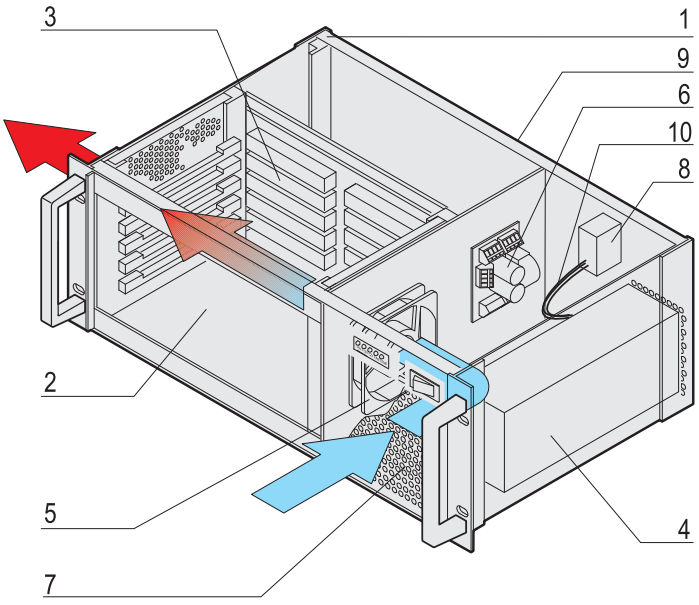
SERVICEPLUS

e.g. individual configuration and assembly
e.g. modifications (integration)
e.g. downloads (CAD drawings, user manuals, test reports)
e.g. custom solutions

Systems – VME subrack systems

3 U, 5 SLOT

10002004



10002050

MEMBER VITA

30402059

- System for horizontal board mounting with board format
  - Front: 6 U, 160 mm deep
- Backplane VME
  - 5 slot, 6 U, J1/J2 monolithic
- PSU, open frame, 250 W
- Heat dissipation by 1 fan, from front to left; temperature-controlled by fan control module (FCM)
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al, with perforated side panels and front handles (RAL 7016)
2	5	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal board mounting (6 U, 160 mm deep)
3	1	Backplane VME for 6 U boards, 5 slots, J1/J2 monolithic (part no. 23001-065)
4	1	Power supply unit, open frame; 250 W (part no.11098-316)
5	1	Fan; temperature-dependent speed control
6	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
7	1	Front panel, perforated, 3 U; display module; mains switch
8	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
9	1	Rear panel, Al
10	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
3	132.55	277.5	5	**20836-310**
Accessories				
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

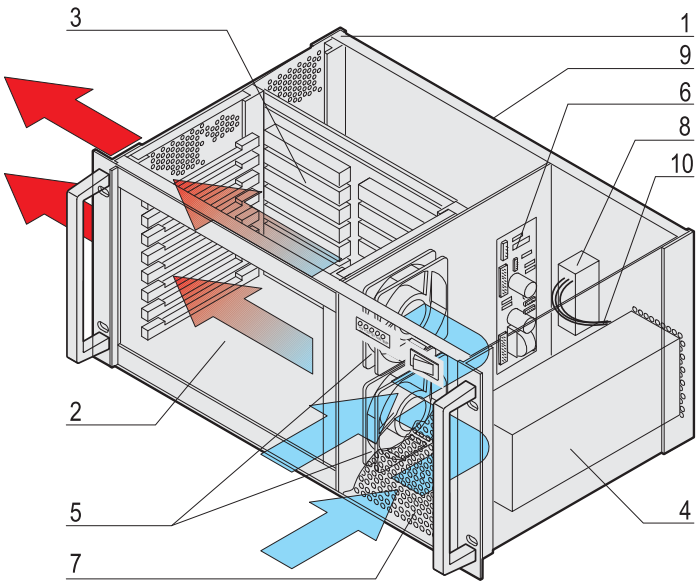
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11;
  Backplane konform zu VITA 1.1-1994

Systems – VME subrack systems

4 U, 8 SLOT

10002001



10006050

MEMBER VITA

30402059

- System for horizontal board mounting with board format
  - Front: 6 U, 160 mm deep
- Backplane VME
  - 8 slot, 6 U, J1/J2 monolithic
- PSU, open frame, 444 W (400 W at < 180 V_{AC})
- Heat dissipation by 2 fans, from front to left; temperature-controlled by fan control module (FCM)
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al, with perforated side panels; front handles (RAL 7016)
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal board mounting (6 U, 160 mm deep)
3	1	Backplane VME for 6 U boards, 8 slots, J1/J2 monolithic (part no. 23001-068)
4	1	Power supply unit, open frame; 444 W (400 W at < 180 V_{AC}; part no. 11098-267)
5	2	Fan; temperature-dependent speed control
6	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
7	1	Front panel, perforated, 4 U; display module; mains switch
8	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
9	1	Rear panel, Al
10	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
4	177	277.5	8	**20836-415**
Accessories				
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

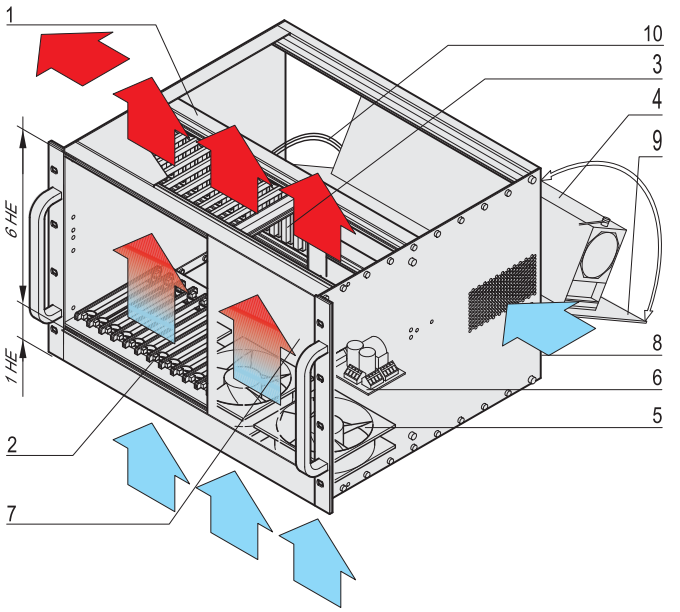
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11;
  Backplane konform zu VITA 1.1-1994

Systems – VME subrack systems

7 U, 12 SLOT

10002003



10002054

1 HE = 1 U

MEMBER VITA

30402059

- System for vertical board mounting with board format
  - Front: 6 U, 160 mm deep
- Backplane VME
  - 12 slot, 6 U, J1/J2 monolithic
- PSU, open frame, 444 W (400 W at < 180 V_{AC})
- Heat dissipation by pull-out hot-swap fan unit, from bottom to top; filter mat; temperature-controlled by fan control module (FCM)
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; 19" bracket, with plain top cover and base plate (RAL 9006); front handles (RAL 7016)
2	12	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical board mounting (6 U, 160 mm deep)
3	1	Backplane VME for 6 U boards, 12 slots, J1/J2 monolithic (part no. 23001-072)
4	1	Power supply unit, open frame; 444 W (400 W at < 180 V_{AC}; part no. 11098-267)
5	1	Hot-swap fan tray with 3 fans, pull-out, 1 U; air filter; temperature-dependent speed control
6	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-028)
7	1	Front panel 6 U, 36 HP
8	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse, mains switch
9	1	Rear panel, hinged, Al, 6 U, 84 HP
10	1	Cable harness to connect all system components

ORDER INFORMATION

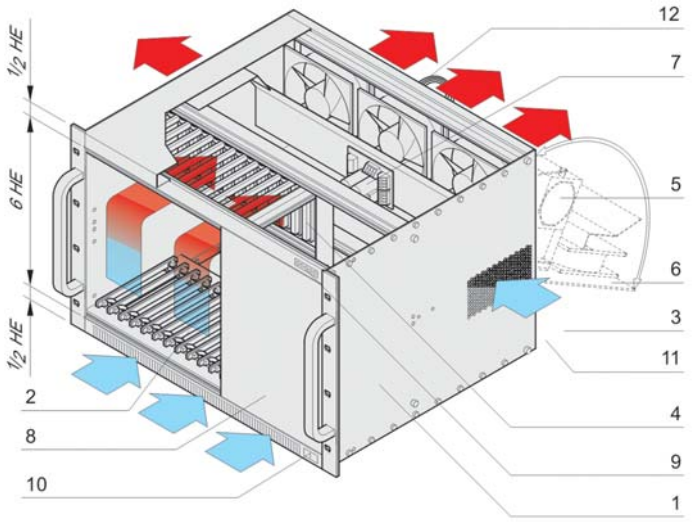
Height U	Height mm	Depth mm	Number of slots	Part no.
7 (1 + 6)	310.35	355	12	20836-715
Accessories				
Air filter consisting of filter holder and filter mat, PU 1 set				**24579-033**
Backplanes				**Page 10.15**
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11;
  Backplane konform zu VITA 1.1-1994

7 U, 12 SLOT, FOR TRANSITION MODULES

10002002



30402059

- System for vertical board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear: 6 U, 12 HP, 80 mm deep; for transition modules
- Backplane VME
  - 12 slot, 6 U, J1/J2 monolithic
- PSU, open frame, 444 W (400 W at < 180 V_{AC})
- Heat dissipation by 3 fans, from front to rear; temperature-controlled by fan control module (FCM)
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; 19" bracket, plain top cover and base plate (RAL 9006); front handles (RAL 7016)
2	12	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical board mounting (6 U, 160 mm deep)
3	3	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical mounting of transition module (6 U, 80 mm deep) covered with EMC front panel 6 U / 12 HP
4	1	Backplane VME for 6 U boards, 12 slots, J1/J2 monolithic (part no. 23001-072)
5	1	Power supply unit, open frame; 444 W (400 W at < 180 V_{AC}; part no. 11098-267)
6	3	Fan; rear panel, hinged, 5 U, 84 HP; temperature-dependent speed control
7	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
8	1	Front panel 6 U, 36 HP
9	1	Display module
10	1	Mains switch
11	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
12	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
7 (1/2 + 6 + 1/2)	310.35	355	12	20836-716

Accessories	
Backplanes	**Page 10.15**
Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.18**
Fan control modules (FCM)	**Page 8.108**

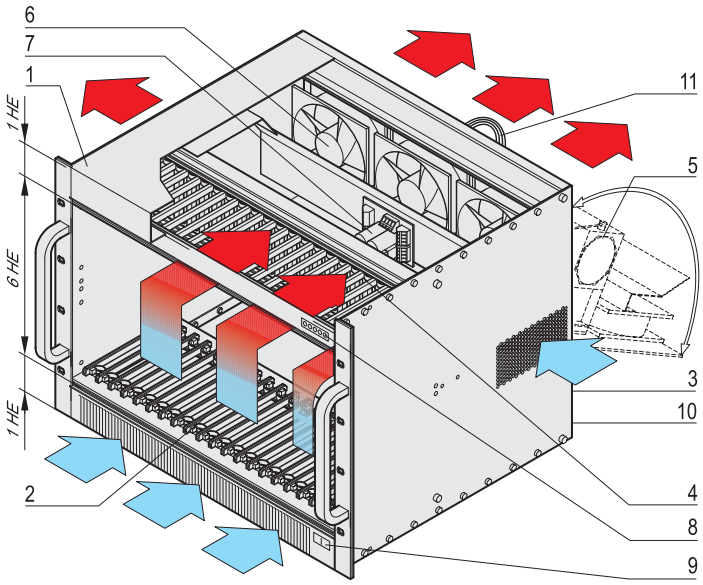
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11;
  Backplane konform zu VITA 1.1-1994

Systems – VME subrack systems

8 U, 21 SLOT

10002005



10002058

1 HE = 1 U

MEMBER VITA

30402059

- System for vertical board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear: 6 U, 12 HP, 80 mm deep; for transition modules
- Backplane VME
  - 21 slot, 6 U, J1/J2 monolithic
- PSU, open frame, 744 W (600 W at < 180 V_{AC})
- Heat dissipation by 3 fans, from front to rear; temperature-controlled by fan control module (FCM)
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; 19" bracket, plain top cover and base plate (RAL 9006); front handles (RAL 7016)
2	21	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical board mounting (6 U, 160 mm deep)
3	3	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical mounting of transition module (6 U, 80 mm deep) covered with EMC front panel 6 U/12 HP
4	1	Backplane VME for 6 U boards, 21 slots, J1/J2 monolithic (part no. 23001-081)
5	1	Power supply unit, open frame; 744 W (600 W at < 180 V_{AC}; part no. 11098-140)
6	3	Fan; rear panel, hinged, 5 U, 84 HP; temperature-dependent speed control
7	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
8	1	Display module
9	1	Mains switch
10	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
11	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
8 (1 + 6 + 1)	354.8	355	21	**20836-815**
Accessories				
Backplanes				**Page 10.15**
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

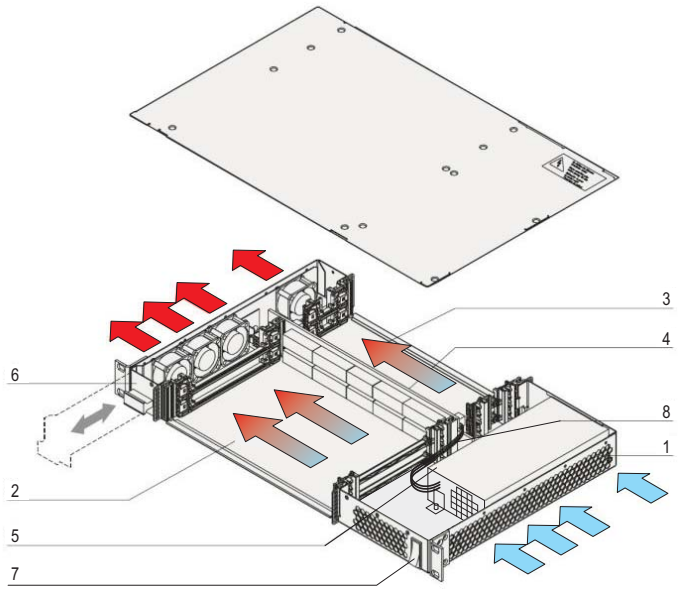
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11;
  Backplane konform zu VITA 1.1-1994

System – VME64x subrack systems

1 U, 2 SLOT, WITH REAR I/O

10005003



12304055

MEMBER VITA

30402059

- System for horizontal board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane VME64x
  - 2 slot, 6 U, with P0 plug
- ATX PSU, 250 W
- Heat dissipation by pull-out hot-swap fan unit, from right to left
- Fan monitoring and voltage display

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, steel plate, black powder-coated (RAL 9005)
2	2	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal mounting of rear I/O boards (6 U, 160 mm deep)
3	2	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal mounting of rear I/O boards (6 U, 80 mm deep)
4	1	Backplane VME64x for 6 U boards, 2 slot, with P0 plug, with connector plug for fan unit and ATX PSU
5	1	ATX power supply; 250 W; wide range input 100 ... 240 V_{AC}, output 3.3 V/14 A, 5 V/23 A, 12 V/16 A, -12 V/0.5 A; with IEC connector; mains switch; fan
6	1	Hot-swap fan unit with 4 fans; incl. fan monitoring and voltage display
7	1	DC switch (with LED), switches off only the DC output of the power supply unit, power ON
8	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
1	44.45	277.5	2	**20836-145**

Accessories	
Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.18**

Note

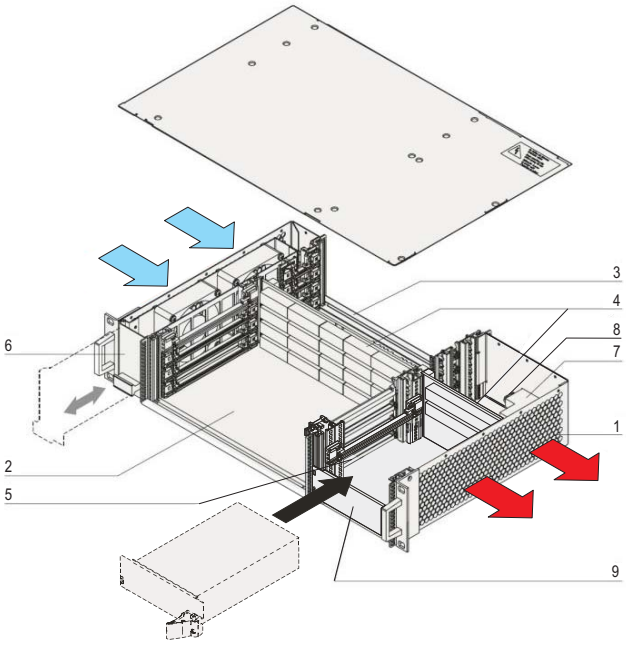
- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11; backplane conforms to VITA 1.1-1997

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

System – VME64x subrack systems

2 U, 4 SLOT, WITH REAR I/O

10008001



12304057

MEMBER VITA

30402059

- System for horizontal board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane VME64x
  - 4 slot, 6 U, with P0 plug
- Power backplane to PICMG 2.11 (P 47), prepared for installation of two 19" compatible PSUs, 250 W (3 U, 8 HP)
- Heat dissipation by pull-out hot-swap fan unit, from left to right
- Fan monitoring and voltage display

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, steel plate, black powder-coated (RAL 9005)
2	4	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal mounting of rear I/O boards (6 U, 160 mm deep)
3	4	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal mounting of rear I/O boards (6 U, 80 mm deep)
4	1	Backplane VME64x for 6 U boards, 4 slots, with P0 plug (part no. 23001-534), power backplane, 2 x P47 plug (part no. 23098-115)
5	1	Installation space 3 U, 8 HP for two 19" compatible PSUs
6	1	Hot-swap fan unit with 2 fans (12 V_{DC}); incl. fan monitoring and voltage display
7	1	AC mains input module (IEC 320-C14 plug, mains filter, mains switch, mains fuse)
8	1	Cable harness to connect all system components
9	1	3 U, 8 HP front panel, front mounted

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
2	88.1	277.5	4	20836-245
Accessories				
19" compatible power supply, 250 W, 3 U, 8 HP Technical data see page 9.23				**13100-141**
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**

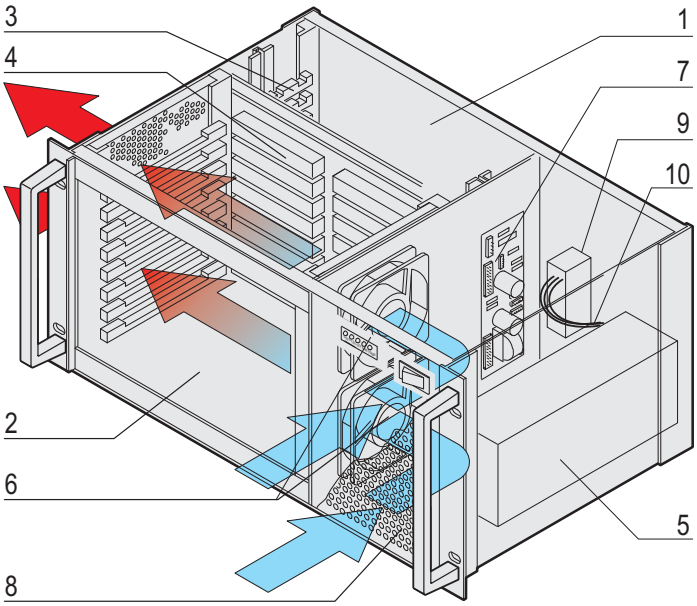
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11;
  backplane conforms to VITA 1.1-1997

System – VME64x subrack systems

4 U, 8 SLOT, WITH REAR I/O

10002006



10002052

30402059

- System for horizontal board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane VME64x
  - 8 slot, 6 U, without P0 plug
- PSU, open frame, 560 W (400 W at < 180 V_{AC})
- Heat dissipation by fan, from front to left
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al, with perforated side panels and front handles (RAL 7016)
2	8	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal mounting of rear I/O boards (6 U, 160 mm deep)
3	8	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to right), for horizontal mounting of rear I/O boards (6 U, 80 mm deep)
4	1	Backplane VME64x for 6 U boards, 8 slots, without P0 plug (part no. 23001-508)
5	1	Power supply unit, open frame; 560 W (400 W at < 180 V_{AC}; part no. 11098-212)
6	2	Fan; temperature-dependent speed control
7	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
8	1	Front panel with ventilation openings, 4 U; display module, mains switch
9	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
10	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
4	177	277.5	8	**20836-416**
Accessories				
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

Note

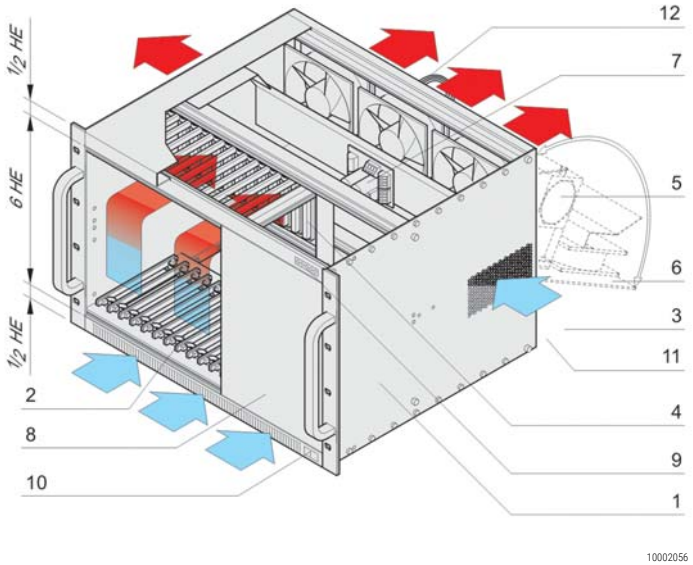
- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11;
  backplane conforms to VITA 1.1-1997

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

System – VME64x subrack systems

7 U, 12 SLOT, WITH REAR I/O

10002007



10002056

1 HE = 1 U

MEMBER VITA

30402059

- System for vertical board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear: 6 U, for 3 transition modules
- Backplane VME64x
  - 12 slot, 6 U, without P0 plug
- PSU, open frame, 642 W (600 W at < 180 V_{AC})
- Heat dissipation by fan, from front to rear
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; with plain top cover and base plate (RAL 9006); front handle (RAL 7016); 19" bracket
2	12	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical board mounting (6 U, 160 mm deep)
3	3	Rear slot; for transition modules, for vertical board mounting (6 U, 4 HP)
4	1	Backplane VME64x for 6 U boards, 12 slots, without P0 plug (part no. 23001-512)
5	1	Power supply unit, open frame; 642 W (600 W at < 180 V_{AC}; part no. 11098-207)
6	3	Fan; on hinged rear panel; speed control 5 U, 84 HP
7	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
8	1	Front panel 6 U, 36 HP;
9	1	Display module
10	1	Mains switch
11	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
12	1	Front panel at rear with textile EMC gasket, 6 U, 12 HP
13	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
7 (1/2+6+1/2)	310.35	355	12	**20836-717**
Accessories				
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

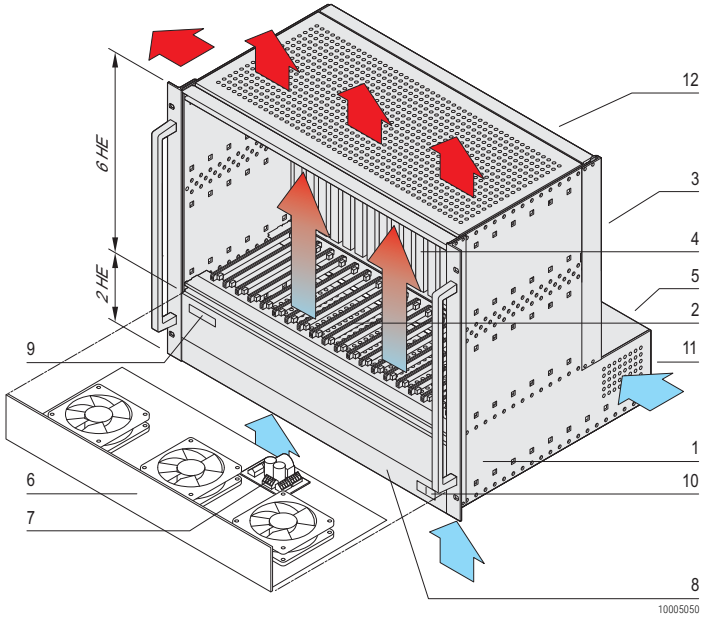
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11;
  backplane conforms to VITA 1.1-1997

System – VME64x subrack systems

8 U, 21 SLOT, WITH REAR I/O

10005001



10005050

1 HE = 1 U

MEMBER VITA

30402059

- System for vertical board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane VME64x
  - 21 slot, 6 U, with P0 plug
- PSU, open frame, 642 W (600 W at < 180 V_{AC})
- Heat dissipation by pull-out fan unit, from bottom to top; temperature-controlled by fan control module (FCM)
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al, with perforated top cover and base plate; front handles (RAL 7016), 19" bracket, front panels (RAL 9006)
2	21	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical board mounting (6 U, 160 mm deep)
3	21	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical mounting of rear I/O boards (6 U, 80 mm deep)
4	1	Backplane VME64x for 6 U boards, 21 slots, with P0 plug (part no. 23001-551)
5	1	Power supply unit, open frame; 642 W (600 W at< 180 V_{AC}; part no. 11098-207)
6	1	Fan unit with 3 fans, 1.5 U (24 V_{DC}, 250 m³/h each, 148 cfm); temperature-dependent speed control; filter mat
7	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-028)
8	1	Front panel 0,5 U, 84 HP;
9	1	Display module
10	1	Mains switch
11	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
12	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
8	354.8	412	21	20836-820
Accessories				
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11; backplane conforms to VITA 1.1-1997

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

VME64X RUGGED SYSTEM 10 U, 12 SLOT

10019002

10019001

10019003

10019004

- 10 U system, 84 HP, 490 mm depth
- For rugged applications with increased shock and vibration resistance
- Based mechanically on the Sschroff subrack EuropacPRO type "R"
- Space for up to two pluggable 6 U power supplies, one 6 U power supply included
- 24 V_{DC} input on the back, main switch on the front of the housing
- LED voltage indicator on the front
- 6 U I / O card cage, front and back, with 12-slot VME64x backplane
- Optional mounted telescopic rails
- Optimal EMC protection through hinged front panel and rear with integrated Honeycomp filter

DELIVERY INCLUDES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al; 19" angle, closed top and bottom plate; front handles; hinged front panel; hinged rear panel; Honeycombfilter; recessed front and rear board cage
2	12	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to front bottom), for vertical board mounting (6 U, 160 mm deep)
3	12	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical mounting of rear I/O boards (6 U, 80 mm deep)
4	1	VME64x backplane for 6 U boards, 12 Slot, Monolithic with P0 (Part no. 23001-542)
5	1	Power-Backplane for 6 U plug-in power supplies (Part no. 23098-394)
6	1	Plug-in power supplies, 6 U, 8 HP; 500 W (Part no. 13100-145)
7	3	Fan unit, exchangeable from the front; temperature-dependent speed control
8	1	Fan control module (FCM2) for fan monitoring/regulating (Part no. 23207-140)
9	1	Display module
10	1	Main switch, front side
11	1	DC mains input (IEC 320-C14 connector), mains filter, mains fuse
12	1	Cable harness to connect all system components
13	1	User manaul

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
10	443.7	490	12	20836-280
Accessories				
AC/DC switched mode power supply Quad, 500 W 3.3V / 5V / 12V / -12V 500 W with CPCI signalling				13100-145

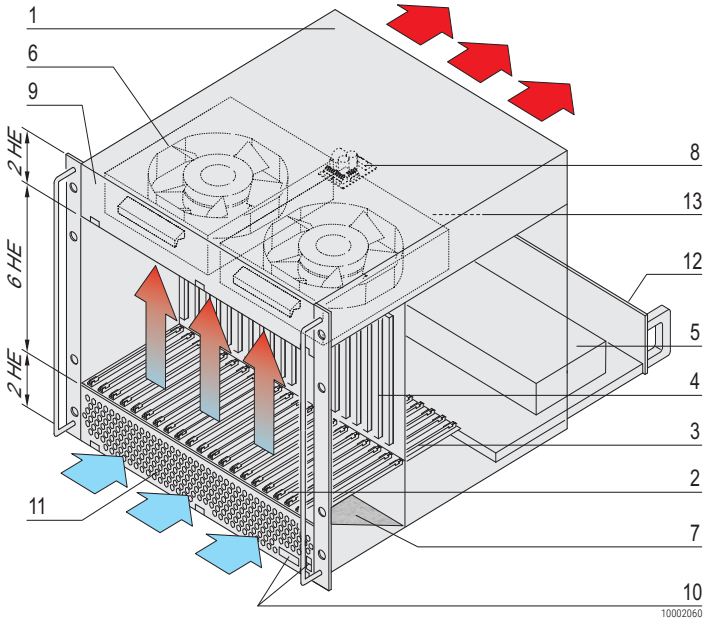
NOTE

- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11;
  backplane conforms to VITA 1.1-1997

System – VME64x subrack systems

10 U, 21 SLOT, WITH REAR I/O

10002010



10002060

1 HE = 1 U

MEMBER VITA

30402059

- System for vertical board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane VME64x
  - 21 slot, 6+1 U, with P0 plug
- PSU, open frame, 1000 W
- Heat dissipation by 2 pull-out fan units, from front to rear; temperature-controlled by fan control module (FCM)
- Display module for DC operating voltages, fan and temperature alarm

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Shielded 19" chassis, Al, with plain top cover and base plate; front handles (RAL 7016), 19" bracket, front panels (RAL 9006)
2	21	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical board mounting (6 U, 160 mm deep)
3	21	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical mounting of rear I/O boards (6 U, 80 mm deep)
4	1	VME64x backplane for 6 U boards + 1 U, 21 slots, with P0 connector
5	1	Power supply unit, open frame; 1000 W; wide range input, 100 ... 240 V_{AC} output 3.3 V/60 A, 5 V/120 A, 12 V/17 A, -12 V/17 A; mounted fan
6	2	Fan module with speed-controlled radial fan (500 m³/h = 295 cfm each) for ventilation of boards; mounted behind hinged front panel (2 U)
7	1	Air filter
8	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
9	1	Front panel, hinged, 2 U, 84 HP
10	1	Display module; mains switch, DC
11	1	Front panel, hinged, perforated, 2 U, 84 HP
12	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
13	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Depth mm	Number of slots	Part no.
10	443.7	456.5	21	**20836-220**
Accessories				
Fan module 1 piece				20836-855
Chassis Monitoring Module (CMM) for monitoring of voltage, temperature and digital inputs, 1 kit				20836-223
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

Note

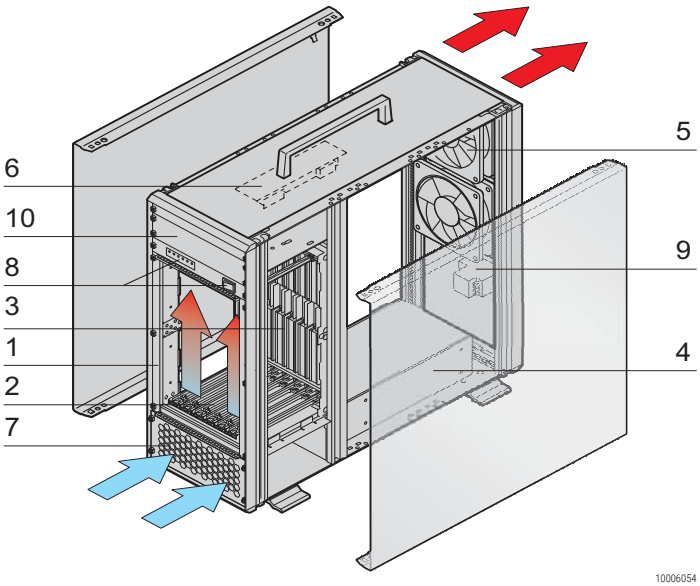
- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11; backplane conforms to VITA 1.1-1997

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

System – VME64x Tower systems

7 SLOT, WITHOUT REAR I/O

10005002



10006054

MEMBER VITA

30402059

- Tower system for vertical board mounting with board format
  - Front: 6 U, 160 mm deep
- Backplane VME64x
  - 7 slot, 6 U, without P0 plug
- PSU, open frame, 560 W (400 W at < 180 V_{AC})
- Heat dissipation by 2 fans, from front to rear; temperature-controlled with fan control module (FCM)
- Display module for DC operating voltages and fan alarm
- Option to mount a 5.25" DVD drive unit

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Tower system based on ratiopacPRO case, shielded, 500 mm deep, lateral parts in RAL 9006; handle, front frame and feet in RAL 7016
2	7	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical board mounting (6 U, 160 mm deep)
3	1	Backplane VME64x for 6 U boards, 7 slots, without P0 plug (part no. 23001-507)
4	1	Power supply unit, open frame; 560 W (400 W at < 180 V_{AC}; part no. 11098-212)
5	2	Fan; speed-controlled; for ventilation of boards
6	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
7	1	Front panel, perforated, 4 U
8	1	Display module; mains switch
9	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
10	1	Module to accomodate a 5.25" DVD drive unit
11	1	Cable harness to connect all system components

ORDER INFORMATION

Height mm	Width mm	Depth mm	Number of slots	Part no.
496.25	177.00	500	7	10836-050
Accessories				
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

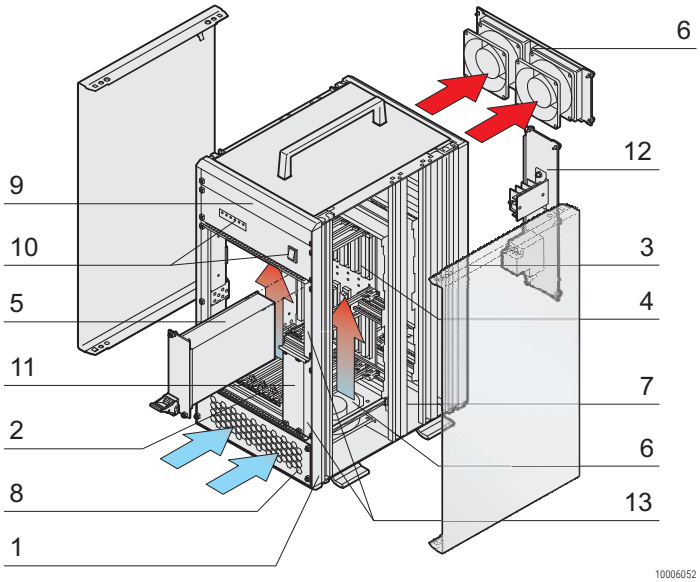
Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11; backplane conforms to VITA 1.1-1997

System – VME64x Tower systems

7 SLOT, WITH REAR I/O

10005004



10006052

MEMBER VITA

30402059

- Tower system for vertical board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane VME64x
  - 7 slot, 6 U, without P0 plug
- PSU, 19" compatible, 250 W;
  a second PSU can optionally be fitted
- Heat dissipation by 4 fans, from front to rear;
  temperature-controlled with fan control module (FCM)
- Display module for DC operating voltages and fan and temperature alarm
- Option to mount a 5.25" DVD drive unit

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Tower system based on ratiopacPRO case, shielded, 300 mm deep, lateral parts in RAL 9006; handle, front frame and feet in RAL 7016
2	7	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical board mounting (6 U, 160 mm deep)
3	7	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical mounting of rear I/O boards (6 U, 80 mm deep)
4	1	VME64x backplane for 6 U boards, 7 slots, without P0 connector
5	1	19" compatible power supply, 250 W (3 U, 8 HP; part no. 13100-141)
6	4	Fan; speed-controlled; for ventilation of boards
7	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
8	1	Front panel, perforated, 5 U
9	1	Module to accomodate a 5.25" DVD drive unit
10	1	Display module; mains switch
11	1	Front panel 3 U, 8 HP; removable, to allow fitting of a further chassis power supply unit
12	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
13	2	Front panel 3 U, 4 HP;
14	1	Cable harness to connect all system components

ORDER INFORMATION

Height mm	Width mm	Depth mm	Number of slots	Part no.
496.25	221.45	300	7	**10836-045**
Accessories				
19" compatible power supply, 250 W, 3 U, 8 HP 1 piece, technical data see page 9.22				**13100-141**
Air filter kit 1 piece				20836-235
Equipment cables				**Page 3.38**
Front panels				**Page 7.5**
Modules to mount drive units				**Page 8.110**
Front panels with handle				**Page 7.18**
Fan control modules (FCM)				**Page 8.108**

Note

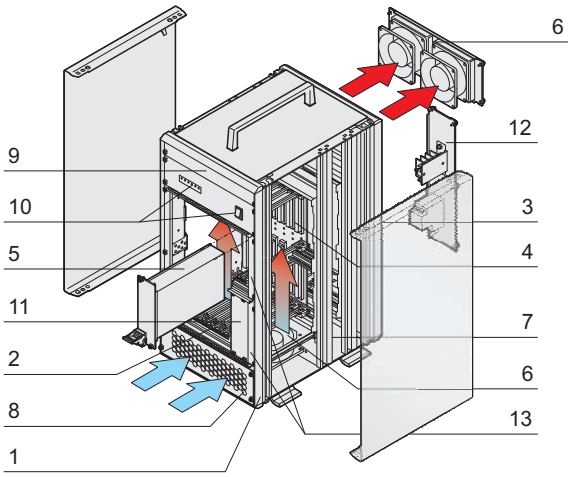
- Modified systems available on request
- System in accordance with IEC 60297-3-101, 102, 103; IEEE 1101.1, 1101.10/11;
  backplane conforms to VITA 1.1-1997

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

Systems – VXS (VITA 41) Tower systems

7 SLOT, WITH REAR I/O

10006002



10006052

- Tower system for vertical board mounting with board formats
  - Front: 6 U, 160 mm deep
  - Rear, rear I/O: 6 U, 80 mm deep
- Backplane VXS/VME64x
  - 4 slot VME64x, 6 U, with P0 plug
  - 3 x VXS payload slots connected as ring
- PSU, 19" compatible, 250 W;
  a second PSU can optionally be fitted
- Heat dissipation by 4 fans, from front to rear;
  temperature-controlled with fan control module (FCM)
- Display module for DC operating voltages and fan and temperature alarm
- Option of fitting a 5.25" DVD drive unit

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	Tower system based on ratiopacPRO case, shielded, 300 mm deep, lateral parts in RAL 9006; handle, front frame and feet in RAL 7016
2	7	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical board mounting (6 U, 160 mm deep)
3	7	Rear slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom), for vertical mounting of rear I/O boards (6 U, 80 mm deep)
4	1	VXS backplane, 3 slots VME64x, 4 slot; for 6 U boards; with P0 connector; 3 x VXS payload slots, ring connected (part no. 23001-701)
5	1	19" compatible power supply, 250 W (3 U, 8 HP; part no. 13100-141)
6	4	Fan; speed-controlled; for ventilation of boards
7	1	Fan control module (FCM) for fan monitoring/regulating (part no. 23207-021)
8	1	Front panel, perforated, 5 U
9	1	Module to accomodate a 5.25" DVD drive unit
10	1	Display module; mains switch
11	1	Front panel 3 U, 8 HP; for fitting a further plug-in power supply
12	1	AC mains input (IEC 320-C14 plug), mains filter, mains fuse
13	2	Front panel 3 U, 4 HP;
14	1	Cable harness to connect all system components

ORDER INFORMATION

Height mm	Width mm	Depth mm	Number of slots	Part no.
496.25	221.45	300	7	10836-060

30407001

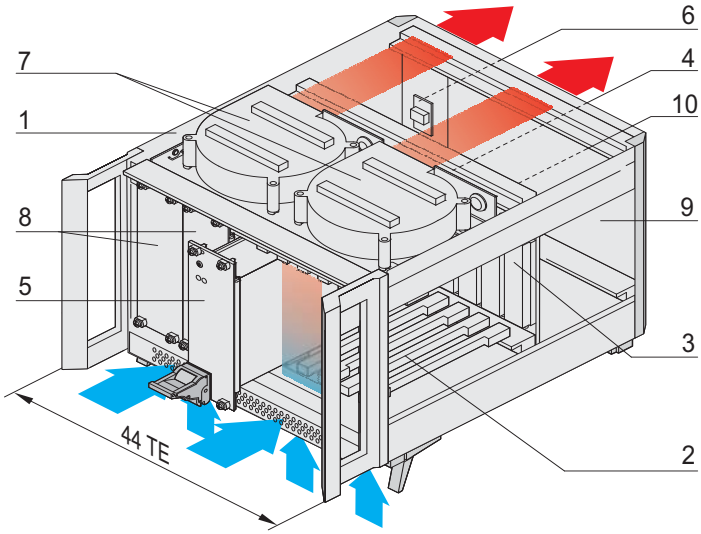
Accessories	
19" compatible power supply, 250 W, 3 U, 8 HP 1 piece, technical data page 9.22	**13100-141**
Air filter kit 1 piece	20836-235
Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.110**
Front panels with handle	**Page 7.18**

Note

- Modified systems available on request
- System in accordance with IEC 60297-3-101, -102, -103; IEEE 1101.1, 1101.10/11;
- Backplane, conforms to VITA 41.0, -41.1, -41.10, -41.11

VPX CASE SYSTEM, 4 U, 5 SLOTS, WITH/WITHOUT REAR I/O

10011001



10011050

MEMBER VITA Open Standards, Open Markets

- System for vertical board mounting with board format 3 U, 160 mm deep
- VPX backplane, in accordance with VITA 46, 5 slot, 3 U, 0.8" pitch, full mesh topology
- 19" PSU, 250 W, 3 U, 8 HP (further PSU optional)
- Heat dissipation by 2 radial fans, from front to rear

DELIVERY COMPRISES (completely assembled, wired and tested)

Item	Qty	Description
1	1	ratiopacPRO-air case, RAL 9006, shielded, perforated air inlet/ exhaust openings front and rear; front handles RAL 7016
2	5	Front slot; IEEE guide rails, incl. ESD clips (ESD clips fitted to bottom front), for vertical board mounting (3 U, 160 mm deep)
2a	5	Slot at rear (only with rear I/O version): IEEE guide rails, incl. ESD clips (ESD clips assembled at bottom), for vertical rear I/O boards (3 U, 80 mm deep)
3	1	Backplane for 3 U boards; 5 slot VPX, full mesh topology
4	1	Power backplane, 3 U, 8 HP with 2 x P47 connector
5	1	19" compatible power supply, 250 W (3 U, 8 HP; part no. 13100-141)
6	1	AC input module, rear, 3 U, 8 HP 110 ... 250 V_{AC}, 50 ... 60 HZ, max. current 10 A; AC line filter, switch, fuse
7	2	Radial fan, 36 m^3/h each, free blowing
8	2	Front panel, front, 3 U, 8 HP
9	1	Front panel, rear, 3 U, 36 HP
10	1	Cable harness to connect all system components

ORDER INFORMATION

Height U	Height mm	Width HP	Depth mm	Number of slots	Version	Part no.
4	177	44	275	5	Without rear I/O	**20836-444**
4	177	44	275	5	With rear I/O	20836-447

Accessories

Equipment cables	**Page 3.38**
Front panels	**Page 7.5**
Modules to mount drive units	**Page 8.108**
Front panels with handle	**Page 7.18**
Fan control modules (FCM)	**Page 8.106**

Note

- Modified systems available on request

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

Systems – embedded COM systems

EMBEDDED TEST SYSTEMS FOR COME TYPE 6

13017006

- Embedded system with x86 COM Express type 6 module
- A variety of interfaces, such as PCIe, mPCIe, USB, DisplayPort and XMC slot
- Internal interfaces for additional boards to enhance functionality, e.g. for fieldbus interfaces or TFT connector
- Slot for an XMC module
- With the prototype module available as an accessory, you have access to various signals such as GPI/O, I²C, etc.
- Power logic designed as plug-in module, 18 to 26.4 V_{DC} input, can be replaced easily
- Excellent modular cooling solution, can be easily adapted to different processor performance levels and environmental conditions

DELIVERY INCLUDES (completely assembled, cabled and tested)

Item	Qty.	Description
1	1	Shielded enclosure, St, powder-coated, black, RAL 9005
2	1	Heat sinks, cooling without fans
3	1	COM carrier
4	1	Type 6 Basic module with Intel® Core™ i7-6820EQ quad core processor; 8 GB DDR4-SODIMM-2400
5	1	120 GB SSD hard drive
6	1	Conversion kit for the installation of Compact, Basic or Mini COM Express modules
7	1	XMC cover
8	1	Fan for XMC module

ORDER INFORMATION

Description	Part no.
Embedded COM System with congatec conga-TS170/i7-6820EQ (045900) COM Express Type 6 Basic module with Intel® Core™ i7-6820EQ quad core processor with 2.8 GHz up to 3.5 GHz, 8 MB L2 cache, GT2 graphics and 2133 MT/s dual channel DDR4 memory interface, Chipset QM170	21265-030
Accessories	
Table power supply, 120 W, 100 to 240 V_{AC}, 20 V_{DC}/6 A, 1 piece	
Table power supply, 90 W, 100 to 240 V_{AC}, 19 V_{DC}/4.74 A, 1 piece	
Mains cable, SCHUKO/UTE SCHUKO/UTE plug, IEC 60320 socket, 2.5 m, 1 piece	**62150-191**
Mains cable, BS British Standard plug, IEC 60320 C13 socket, 2.5 m, 1 piece	**60103-137**
Equipment cable USA USA connector, IEC 60320 female connector, 2 m, 1 piece	**60103-141**
Mains cable, IEC IEC 60320 C14 plug, IEC 60320 C13 socket, 2.5 m, 1 piece	**60197-053**
Table stand for embedded COM system 1 piece	
Wall mount set for embedded COM system 1 piece	
Vesa mount for embedded COM system 1 piece	
Postcode module 1 piece	
Prototype module 1 piece	
Ethernet module 1 x GbE, 1 piece	
LVDS module 1 piece	

EMBEDDED TEST SYSTEMS FOR COME TYPE 6

TECHNICAL DATA

Enclosure: Width x height x depth	375.5 mm x 44.45 mm (without heat sink) x 250 mm
Cooling	Fanless (COM module), 40 mm fan (XMC), heat sink - large
Input voltage	18 to 26.4 V_{DC}
Hard-drive mount	1 x 2.5"
Hard drive	120 GB S-ATA SSD
COM module	Type 6 Basic module with Intel® Core™ i7-6820EQ quad core processor; 8 GB DDR4-SODIMM-2400
Internal interfaces	PCIe x4 slots: 1 (PCIe Gen 3) mPCIe slots: 1 (PCIe Gen 3) mPCIe / mSATA slots: 1 (PCIe Gen 3, S-ATA 3.0) S-ATA connector: 3 (S-ATA 3.0) Memory card slot: 1 (MicroSD) SIMM slot: 2 (Micro SIMM) Serial port: 2 Parallel port: 1 PS/2 mouse and keyboard connector: 1 Speaker: 1 LVDS module adapter: 1 Fieldbus module connector: 1 Interface for POST code display: 1 Prototype board interface: 1 XMC module slots: 1 XMC I/O signal header: 1
External interfaces	Front: DisplayPort: 2 (DP 1.1 and DP 1.2) DVI: 1 (DVI-D) USB: 4 (USB 3.0) Audio: 1 (HD Audio, S/PDIF Optical) Ethernet: 1 (10/100/1000 Mbps) Rear side: VGA: 1 Serial port: 1 (DSUB9) Power supply: 1 (18 to 26.4 V_{DC})

NOTE

- Other configurations available on request

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

EMBEDDED SYSTEMS, COME TYPE 6

13017002

Frontansicht (21265-010)

13017005

Frontansicht (21265-020)

- Embedded system with x86 COM Express type 6 module
- A variety of interfaces, such as PCIe, mPCIe, USB, DisplayPort
- Internal interfaces for additional boards to enhance functionality, e.g. for fieldbus interfaces or TFT connector
- Power logic designed as plug-in module, 18 to 26.4 V_{DC} input, can be replaced easily
- Excellent modular cooling solution, can be easily adapted to different processor performance levels and environmental conditions

DELIVERY INCLUDES (completely assembled, cabled and tested)

Item	Qty.	Description
1	1	Shielded enclosure, St, powder-coated, black, RAL 9005
2	1	Heat sinks, cooling without fans
3	1	COM carrier
4a	1	21265-010: Type 6 Compact module with Intel® Celeron® 3955U quad core processor; 4 GB DDR4-SODIMM-2400
4b	1	21265-020: Type 6 Basic module with Intel® Core™ i7-6820EQ quad core processor; 8 GB DDR4-SODIMM-2400
5	1	120 GB SSD hard drive
6	1	Conversion kit for the installation of Compact, Basic or Mini COM Express modules

ORDER INFORMATION

Description	Part no.
Embedded COM System with congatec conga-TC170/3955U (045203) COM Express Type 6 Compact module with Intel® Celeron® 3955U dual core processor with 2.0 GHz, 2 MB L2 cache and 2133 MT/s dual channel DDR4 memory interface	21265-010
Embedded COM System with congatec conga-TS170/i7-6820EQ (045900) COM Express Type 6 Basic module with Intel® Core™ i7-6820EQ quad core processor with 2.8 GHz up to 3.5 GHz, 8 MB L2 cache, GT2 graphics and 2133 MT/s dual channel DDR4 memory interface, Chipset QM170	21265-020
Accessories	
Table power supply, 120 W, 100 to 240 V_{AC}, 20 V_{DC}/6 A, 1 piece	
Table power supply, 90 W, 100 to 240 V_{AC}, 19 V_{DC}/4.74 A, 1 piece	
Mains cable, SCHUKO/UTE SCHUKO/UTE plug, IEC 60320 socket, 2.5 m, 1 piece	**62150-191**
Mains cable, BS British Standard plug, IEC 60320 C13 socket, 2.5 m, 1 piece	**60103-137**
Equipment cable USA USA connector, IEC 60320 female connector, 2 m, 1 piece	**60103-141**
Mains cable, IEC IEC 60320 C14 plug, IEC 60320 C13 socket, 2.5 m, 1 piece	**60197-053**
Table stand for embedded COM system 1 piece	
Wall mount set for embedded COM system 1 piece	
Vesa mount for embedded COM system 1 piece	
Postcode module 1 piece	
Prototype module 1 piece	
Ethernet module 1 x GbE, 1 piece	
LVDS module 1 piece	

EMBEDDED SYSTEMS, COME TYPE 6

TECHNICAL DATA

Order No.	21265-010	21265-020
Enclosure: Width x height x depth	250 mm x 44.45 mm (without heat sink) x 250 mm	250 mm x 44.45 mm (without heat sink) x 250 mm
Cooling	Fanless, heat sink - mid size	Fanless, heat sink - large
Input voltage	18 to 26.4 V_{DC}	18 to 26.4 V_{DC}
Hard-drive mount	1 x 2.5"	1 x 2.5"
Hard drive	120 GB S-ATA SSD	120 GB S-ATA SSD
COM module	Type 6 Compact module with Intel® Celeron® 3955U dual core processor; 4 GB DDR4-SODIMM-2400	Type 6 Basic module with Intel® Core™ i7-6820EQ quad core processor; 8 GB DDR4-SODIMM-24000
Internal interfaces	PCIe x4 slots: 1 (PCIe Gen 3) mPCIe slots: 1 (PCIe Gen 3) mPCIe / mSATA slots: 1 (PCIe Gen 3, S-ATA 3.0) S-ATA connector: 3 (S-ATA 3.0) Memory card slot: 1 (MicroSD) SIMM slot: 2 (Micro SIMM) Serial port: 2 Parallel port: 1 PS/2 mouse and keyboard connector: 1 Speaker: 1 LVDS module adapter: 1 Fieldbus module connector: 1 Interface for POST code display: 1 Prototype board interface: 0 XMC module slots: 0 XMC I/O signal header: 0	PCIe x4 slots: 1 (PCIe Gen 3) mPCIe slots: 1 (PCIe Gen 3) mPCIe / mSATA slots: 1 (PCIe Gen 3, S-ATA 3.0) S-ATA connector: 3 (S-ATA 3.0) Memory card slot: 1 (MicroSD) SIMM slot: 2 (Micro SIMM) Serial port: 2 Parallel port: 1 PS/2 mouse and keyboard connector: 1 Speaker: 1 LVDS module adapter: 1 Fieldbus module connector: 1 Interface for POST code display: 1 Prototype board interface: 0 XMC module slots: 0 XMC I/O signal header: 0
External interfaces	Front: DisplayPort: 2 (DP 1.1 and DP 1.2) DVI: 1 (DVI-D) USB: 4 (USB 3.0) Audio: 1 (HD Audio, S/PDIF Optical) Ethernet: 1 (10/100/1000 Mbps) Rear side: VGA: 1 Serial port: 1 (DSUB9) Power supply: 1 (18 to 26.4 V_{DC})	Front: DisplayPort: 2 (DP 1.1 and DP 1.2) DVI: 1 (DVI-D) USB: 4 (USB 3.0) Audio: 1 (HD Audio, S/PDIF Optical) Ethernet: 1 (10/100/1000 Mbps) Rear side: VGA: 1 Serial port: 1 (DSUB9) Power supply: 1 (18 to 26.4 V_{DC})

NOTE

- Other configurations available on request

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

FAN CONTROL MODULE (FCM2)

12102002 12109001

FCM with straight connector FCM with angled connector

- The fan control module (FCM2) is a standalone fan controller for 12 V fans
- Up to 6 fans can be monitored and controlled
- Signal monitoring of up to 6 temperature sensors
- Monitoring of 3.3 V, 5 V, 12 V and -12 V voltages
- FCM2 supply voltage: 12 V
- Can control status LEDs for Over Temp, Fan Fail, 3.3 V, 5 V, 12 V and -12 V
- In case of overheating or the failure of a fan, the other fans can be set to full speed
- Status information can be queried via a I²C interface
- Suitable for a 4 wire fan with PWM or control voltage input
- With straight or angled connector plug

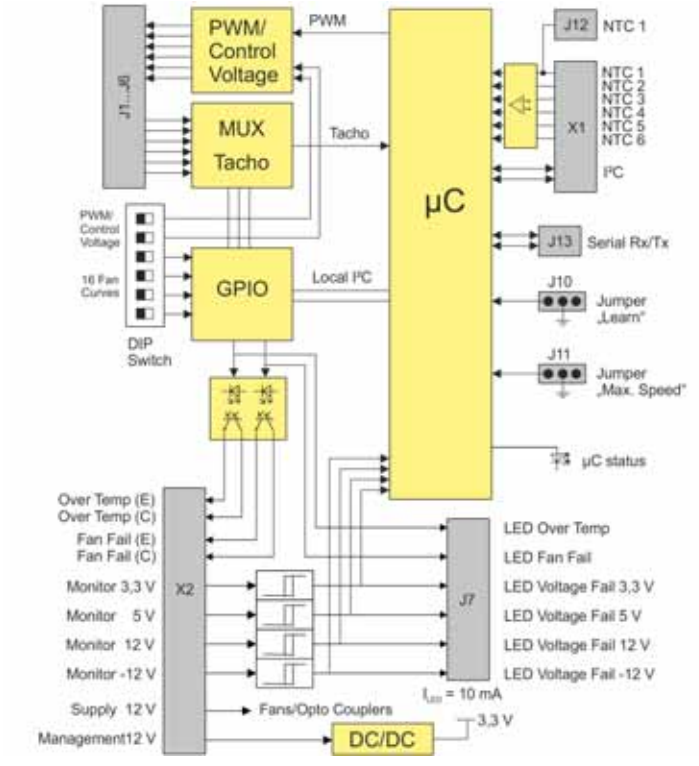
DELIVERY INCLUDES

Item	Qty.	Description
1	1	Fan control module (FCM2), width 40 mm, depth 119 mm, height 15 mm

ORDER INFORMATION

Description	Height mm	Width mm	Depth mm	Part no.
Connector plug, straight	15	40	119	23207-160
Connector plug, angled (90°), for mounting on pull-out Schroff fan unit	15	40	119	23207-162
Accessories				
Temperature sensor for FCM2 Cable length 400 mm, with insulation displacement connector suitable for J12 on FCM2, 1 piece				**23204-882**

Block diagram inputs and outputs



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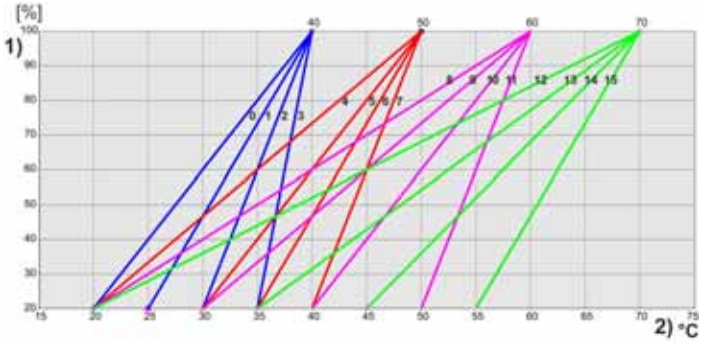
Speed characteristics inputs and outputs

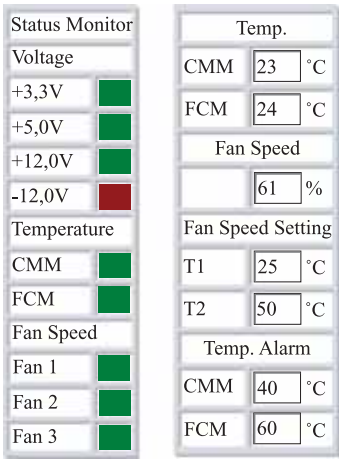


09802053

1) Pulse-width modulation;
2) temperature;
0 ... 15 Setting with 4 bit DIP switches

CHASSIS MONITORING MODULE (CMM)

12303001



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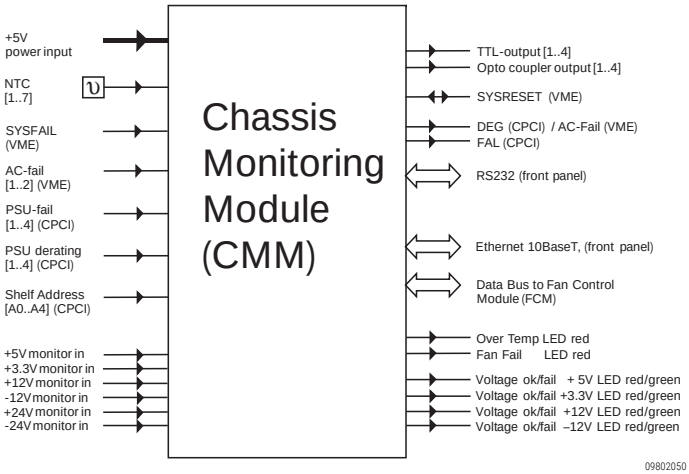
Status display via web browser



09802050

Block diagram inputs and outputs

- Monitoring of voltages, temperatures and digital inputs
- Communication and remote control via RS 232 or Ethernet interface (10BaseT)
- Inputs and outputs for VME specific and CPCI specific signals, further digital and LED outputs
- Data bus for communication with the Schroff Fan Control Module (FCM)
- Pluggable in 3 U euroboard format

DELIVERY COMPRISES

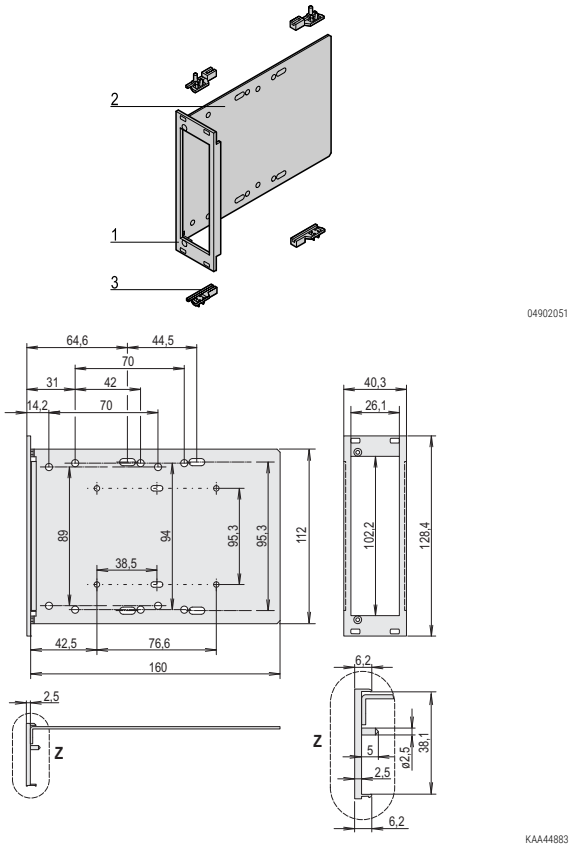
Item	Qty	Description
1	1	Chassis monitoring module (CMM), height 3 U, depth 160 mm, width 4 HP, front panel fitted

ORDER INFORMATION

Description	Height U	Depth mm	Part no.
Chassis monitoring module (CMM)	3	160	23207-022

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

MODULE TO MOUNT DRIVE UNIT, WITH FRONT PANEL, U PROFILE, SHIELDED 1 × 3 1/2", 3 U VERTICAL



DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	U profile front panel with drive unit cut-out, Al, 2.5 mm, front anodised, rear colourless chromated, 2 alignment pins, stainless steel, pressed-in
2	1	Side panel, plug-in version, Al, 1.5 mm, chromated
3	4	Guide rail, PBT UL 94 V-0, red
4	1	Assembly kit

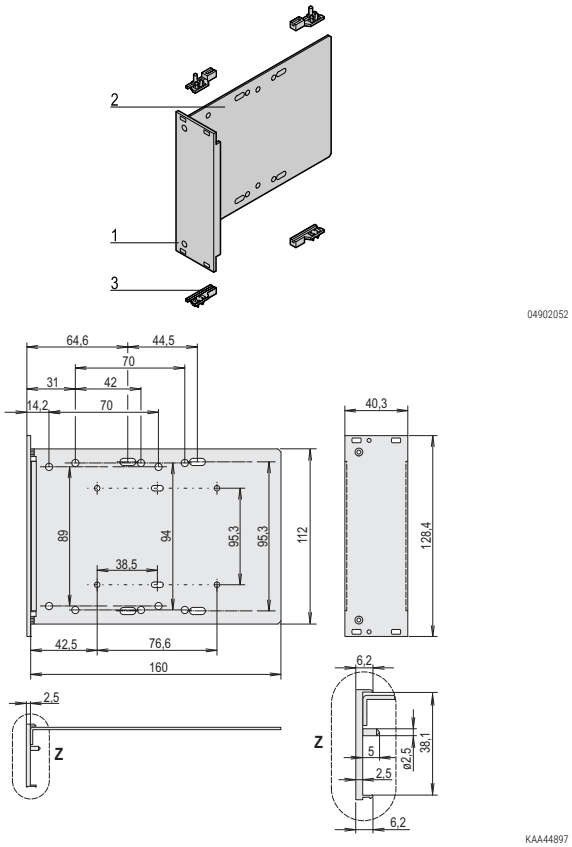
ORDER INFORMATION

Front panel dimensions		Part no.
Height	Width	
U	HP	
3	8	**24579-042**

NOTE

- Suitable for europacPRO, ratiopacPRO, CompactPCI, VMEbus and VME64xbus only
- Covers for drive unit cut-outs see page 8.110

MODULE TO MOUNT DRIVE UNIT, WITH FRONT PANEL, U PROFILE, SHIELDED HD 1 × 3 1/2", 3 U VERTICAL



DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	U profile front panel, Al, 2.5 mm, front anodised, rear iridescent green chromated; 2 alignment pins, stainless steel, pressed-in
2	1	Side panel, plug-in version, Al, 1.5 mm, chromated
3	4	Guide rail, PBT UL 94 V-0, red
4	1	Assembly kit

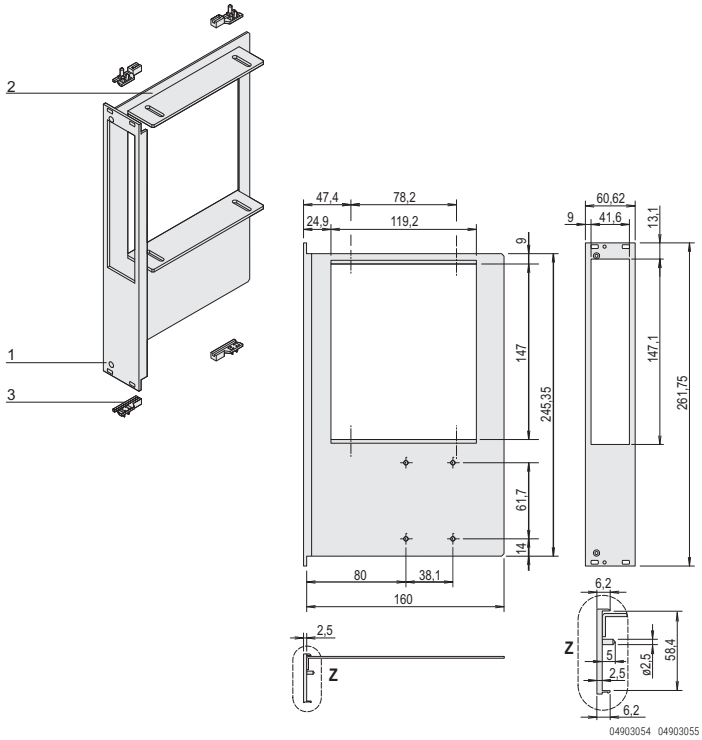
ORDER INFORMATION

Front panel dimensions		Part no.
Height H	Width B	
U	HP	
3	8	**24579-043**

NOTE

- Suitable for europacPRO, ratiopacPRO, CompactPCI, VMEbus and VME64xbus only
- Covers for drive unit cut-outs see page 8.110

MODULE TO MOUNT DRIVE UNIT, WITH FRONT PANEL, U PROFILE, SHIELDED, 1 X 5 1/4", HD 1 X 2.5", 6 U VERTICAL



DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	U profile front panel with drive unit cut-out, Al, 2.5 mm, front anodised, rear iridescent green chromated
2	1	Side panel, plug-in version, Al, 1.5 mm, passivated
3	4	Guide rail, PBT, UL 94 V-0, red
4	1	Assembly kit

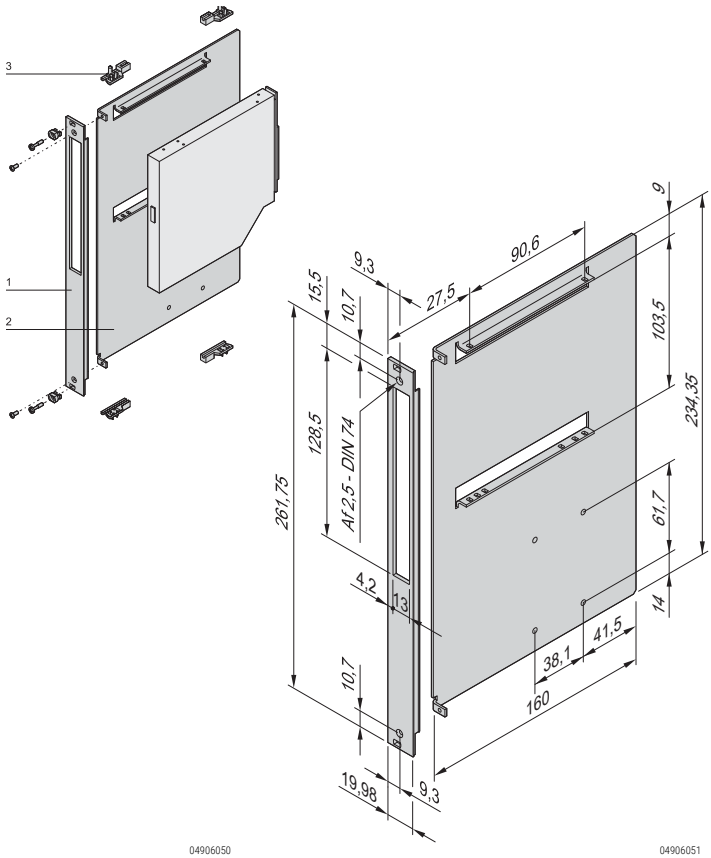
ORDER INFORMATION

Front panel dimensions		Part no.
Height	Width	
U	HP	
6	12	**24579-074**

NOTE

- Suitable for europacPRO, ratiopacPRO, CompactPCI, VMEbus and VME64xbus only
- Covers for drive unit cut-outs see page 8.110

MODULE TO MOUNT DRIVE UNIT, WITH FRONT PANEL, U PROFILE, SHIELDED, FOR SLIM LINE CD/DVD, HD 1 X 2.5", 6 U VERTICAL



DELIVERY COMPRISES

Item	Qty	Description
1	1	U profile front panel, 6 U, 4 HP, with drive unit cut-out, Al, 2.5 mm, front anodised, rear iridescent green chromated
2	1	Side panel, plug-in version, Al, 1.5 mm, passivated
3	4	Guide rail, PBT, UL 94 V-0, red
4	1	Assembly kit

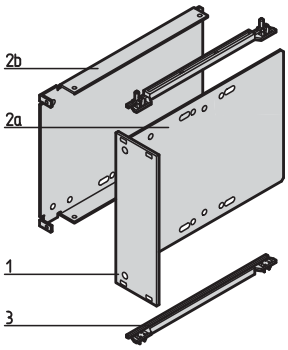
ORDER INFORMATION

Front panel dimensions		Part no.
Height	Width	
U	HP	
6	4	**24579-230**

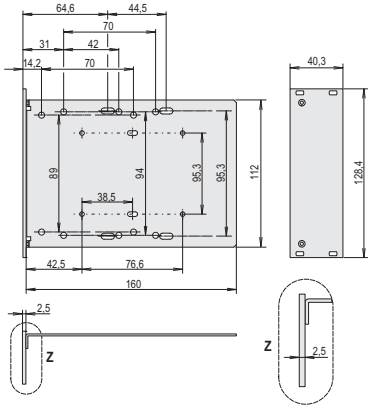
NOTE

- Suitable for europacPRO, ratiopacPRO, CompactPCI, VMEbus and VME64xbus only
- Covers for drive unit cut-outs see page 8.110

MODULE TO MOUNT DRIVE UNIT HD 1 X 3 1/2", 3 U VERTICAL

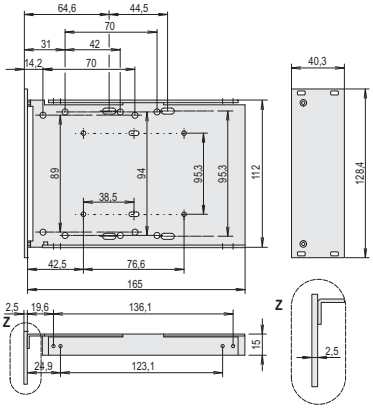


KAA44896



04909050

Plug-in version



04909051

Screw-fixed version

DELIVERY COMPRISES (kit)

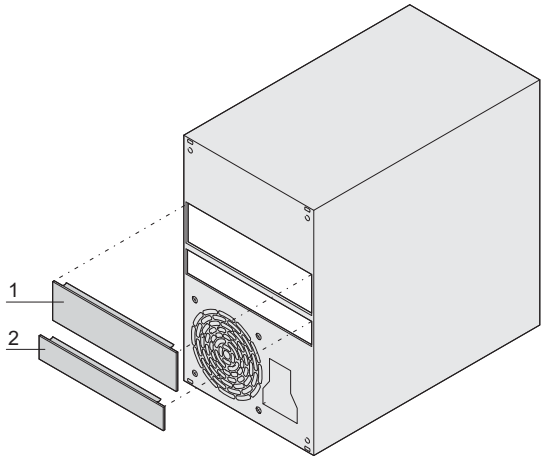
Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, front anodised, rear irisdescent green chromated
2a	2	Side panel, plug-in version, Al, 1.5 mm, passivated
2b	2	Side panel, screw-fixed version, Al, 2.0 mm, passivated
3	2	Guide rail, PPE, UL 94 V-0, black; only for plug-in version
4	1	Assembly kit

ORDER INFORMATION

Front panel dimensions		Plug-in version	Screw-fixed version
Height	Width		
U	HP	Part no.	Part no.
3	8	**20810-611**	**20810-605**

- Please order assembly parts for drive units and guide rails for europacPRO and ratiopacPRO separately, see chapter Subracks - europacPRO
- Covers for drive unit cut-outs see page 8.110

COVERS FOR DRIVE UNIT CUT-OUTS



12106050

- Front panel is clipped into drive unit cut-out with clamping device

DELIVERY COMPRISES (assembled)

Item	Qty	Description
1	1	Front panel, Al, 2 mm, anodised
2	1	Clamping device to clip-on, stainless steel

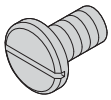
ORDER INFORMATION

Item	Description	Part no.
1	Cover for 5.25" (CD/DVD)	24496-120
2	Cover for Slim Line drive (CD/DVD)	24496-122

NOTE

- Covers for 3.5" drive units available on request

SCREWS FOR DRIVE UNITS

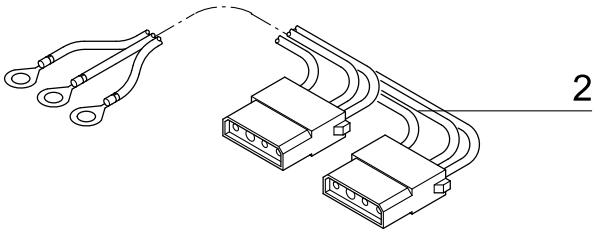


06706053

ORDER INFORMATION

Description	Qty/PU	Part no.
Slotted flathead screws, M 3 x 6	100	**21100-711**
Pozidrive flathead screws, M 4 x 6	100	**21100-574**
Slotted flathead screw, 6-32 UNC x 6	100	**21100-712**

CABLE FOR DRIVE UNIT



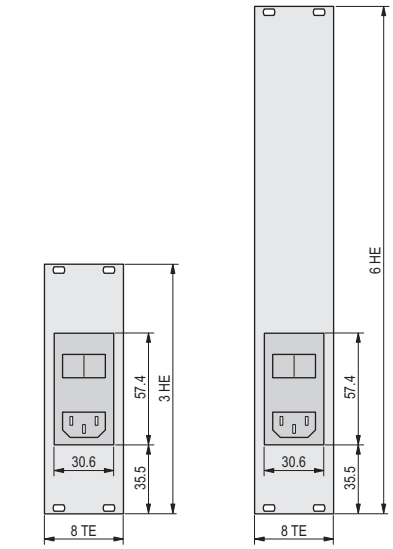
09802054

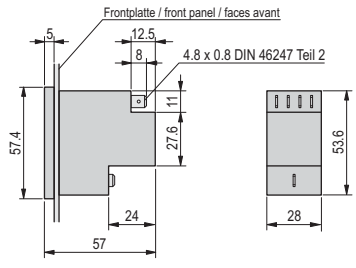
- The cable connects commercially available drive units with the power supply

ORDER INFORMATION

Item	Description	Qty/PU	Part no.
2	Drive unit cable for 2 x 5 1/4", ring tag Ø M4, length 560 mm, connector AMP/Tyco 1-171822-4	1	**20835-188**

AC INPUT MODULE WITH FILTER





12303050

- Front panel (U front panel) for shielding with EMC textile gasket
- Voltage 110 V_{AC} ... 250 V_{AC}, 50 Hz ... 60 Hz
- Max. current 10 A at 40°C

DELIVERY COMPRISES

Item	Qty	Description
1	1	U front panel, 2.5 mm, front anodised, rear colourless chromated

ORDER INFORMATION

Height H U	Width B HP	Part no.
3	8	**24579-058**
6	8	**24579-059**
Textile EMC seals 3 U, PU 10 pieces		**21101-853**
Textile EMC seals 3 U, PU 100 pieces		**21101-854**
Textile EMC seals 6 U, PU 10 pieces		**21101-855**
Textile EMC seals 6 U, PU 100 pieces		**21101-856**

NOTE

- EMC profile seals are required to shield the front panels

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

Systems – ServicePLUS

APPLICATION EXAMPLES

12908007

- Hybrid system, modification of a MicroTCA single-module board cage into a 3 U chassis to DIN EN 60297

12908005

- MicroTCA system, 1 U for 6 single mid-size AMC modules; power supply, increased air inlet and exhaust area with inwardly curved side panels

12909001

- MicroTCA chassis with hot-swap fan unit and power supply

12309002

- CompactPCI chassis with hot-swap fan unit and custom finishing

12309001

- CompactPCI chassis with 48 V_{DC} power supply

12709003

- 2 slot, 2 U AdvancedTCA chassis with custom colour

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