

VIA
AMOS-820

Fanless ultra-compact quad-core ARM system ruggedized for extreme environments



Features

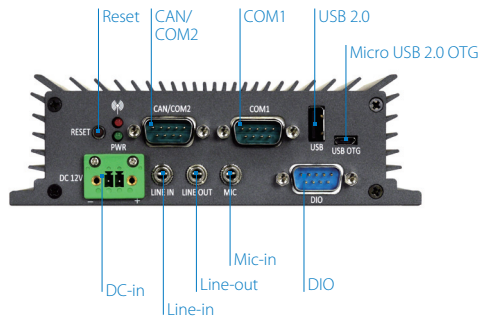
- 1.0GHz Freescale™ i.MX 6Quad Cortex-A9 quad-core SoC
- Power over Ethernet (PoE) option
- Wide operating temperature range, -20°C ~ 65°C
- Legacy I/O support including dual CAN bus, dual COM, and GPIO
- Android, Linux and WEC7 solution packs available

Specifications

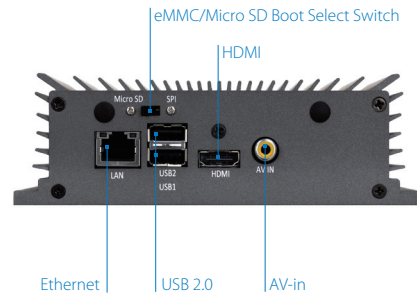
Model Name	AMOS-820
Processor	1.0GHz Freescale i.MX 6Quad Cortex-A9 quad-core SoC
System Memory	1GB DDR3 SDRAM onboard
Onboard Storage	4GB eMMC Flash memory
Boot Loader	512KB SPI Flash ROM
Graphics	Vivante GC2000 GPU 3 independent, integrated 3D/2D and video graphics processing units Graphics engine supporting OpenGL® ES 2.0, OpenCL and OpenVG™ 1.1 hardware acceleration Supports MPEG-2, VC-1 and H.264 video decoding up to 1080p Supports SD encoding
LAN	Micrel KSZ9031RNX Gigabit Ethernet transceiver with RGMII support
Audio	Freescale SGLT5000 low power stereo codec
HDMI	Integrated HDMI 1.4 transmitter
USB	SMSC USB2514 USB 2.0 high speed 4-port hub controllers
CAN	TI SN65HVD1050 EMC optimized CAN transceiver
Expansion I/O	1 miniPCIe slot
Front Panel I/O	1 USB 2.0 port 1 Micro USB 2.0 type B port supports OTG 1 COM (TX/RX) / 2 CAN bus port (supports CAN Protocol specification Version 2.0 B) 1 COM port supports 8-wire DTE mode 1 DIO port supports 8-bit GPIO (4 GPI + 4 GPO) 3 Audio jacks: Line-in, Line-out and Mic-in 1 Reset button 1 Power & WWAN/Wi-Fi LED 1 2-pole Phoenix DC jack
Back Panel I/O	2 USB 2.0 ports 1 HDMI port 1 Composite RCA jack 1 Gigabit Ethernet port (supports optional IEEE802.3 at type 2) 1 Micro SD/SPI boot switch
Watchdog Timer	Integrated watch dog timer supports two comparison points. Each comparison point can interrupt ARM core, 2nd comparison point capable of generating external interrupts on WDOG line.
Power Supply	12V DC-in (typical: 4.3W)
Operating System	Android 4.2.2, Linux Kernel 3.0.35, WEC7
Operating Temperature	-20°C ~ 65°C (3G & Wi-Fi not included)
Operating Humidity	0% ~ 90% @ 45° C (non-condensing)
Vibration Loading during Operation	With onboard eMMC 7Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1 Oct./min, 1hr/axis
Shock During Operation	With onboard eMMC 70G, IEC 60068-2-27, half size, 11ms duration
PoE Function	Supports IEEE802.3 at compliant (type2) PD (AMOS-820-P)
Bottom Opening Covers	Open window with removable door plate to access Micro SD and miniPCIe slots
Dimensions	150.5mm(W) x 48.1mm(H) x 103.3mm(D) (5.9" x 1.9" x 4.1")
Weight	0.673kg (1.48lbs)



Front System I/O



Rear System I/O



Ordering Information

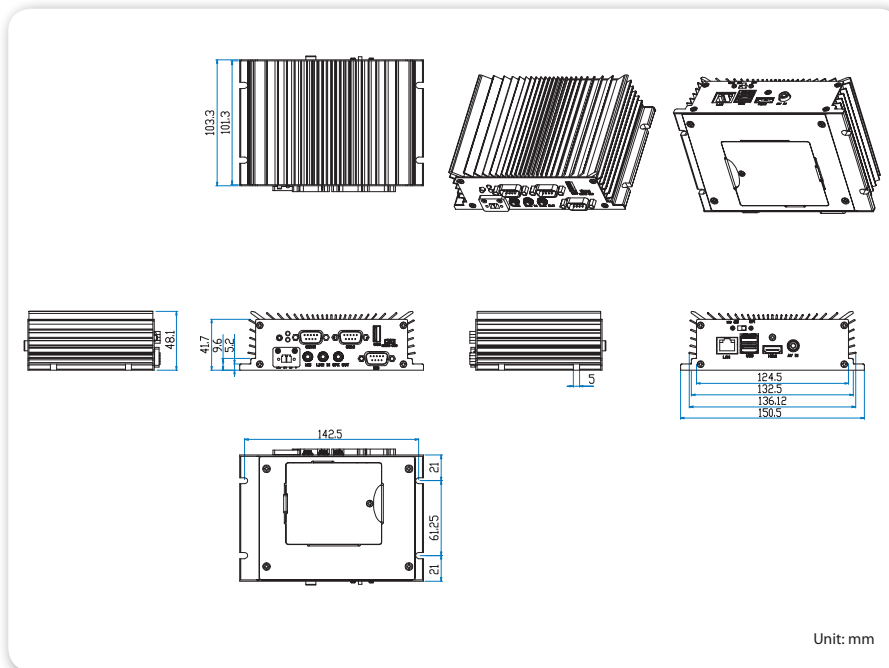
Part Number	System Built-in CPU	Description
AMOS-820-1Q10A1	1.0GHz Freescale i.MX 6Quad Cortex-A9 quad-core SoC	Fanless embedded system with 1GB DDR3 RAM, 4GB eMMC, 512KB SPI Flash ROM, HDMI, 3 USB 2.0, Micro USB 2.0 OTG port, 2 CAN bus, 2 COM, GPIO, Gigabit Ethernet, miniPCIe, RCA-in, 5V DC-in
AMOS-820-2Q1QA1	1.0GHz Freescale i.MX 6Quad Cortex-A9 quad-core SoC	Fanless embedded system with 1GB DDR3 RAM, 4GB eMMC, 512KB SPI Serial Flash, HDMI, 3 USB 2.0, Micro USB 2.0 OTG port, 2 CAN bus, 2 COM, Gigabit Ethernet, miniPCIe, RCA-in, PoE function, 5V DC-in

Optional Accessories

Wireless Accessories

Part Number	Description
00GO27100B62T050	VNT9271 IEEE 802.11b/g/n USB Wi-Fi module
00GO48500BE200C2	VNT9485 IEEE 802.11b/g/n miniPCIe Wi-Fi module
EMIO-2550-00A1	Ublox 3.75G HSPA/UMTS mobile broadband full size miniPCIe module with GPS combo
EMIO-2550-01A1	Ublox 3.75G HSPA/UMTS mobile broadband full size miniPCIe module

Dimensions



Packing List

- AMOS-820 system
- AC-to-DC adapter, 2-pole phoenix plug to DC jack
- Screw pack for mounting
- Washer rubbers pack
- Screw pack for Mini PCI-e card
- COM/CAN conversion cable