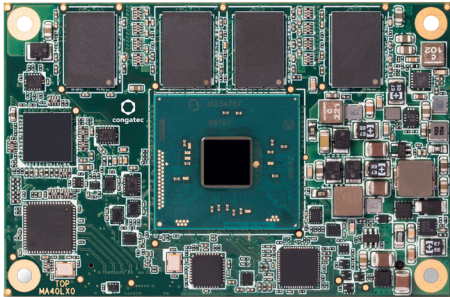


# POWERFUL AND SMALL

# conga-MA4

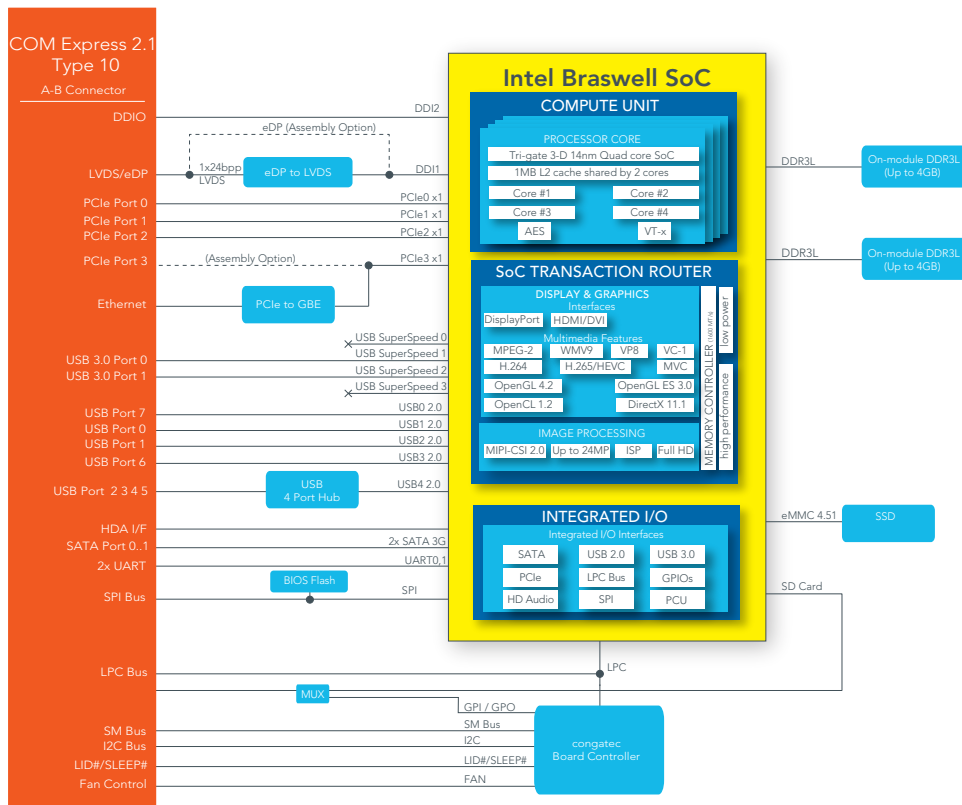


- 4<sup>th</sup> Gen. Intel® Atom™ processor family
- COM Express Mini Type 10 module
- High resolution Intel® Gen. 8 graphics



Formfactor	Formfactor COM Express® Mini   (55 x 84 mm)   Type 10					
CPU	Intel® Pentium® N3710	Quad Core 1.60 GHz	Burst 2.56 GHz	L2 cache 2MB	6W TDP	4W SDP
	Intel® Celeron® N3160	Quad Core 1.60 GHz	Burst 2.24 GHz	L2 cache 2MB	6W TDP	4W SDP
	Intel® Celeron® N3060	Dual Core 1.60 GHz	Burst 2.48 GHz	L2 cache 1MB	6W TDP	4W SDP
	Intel® Celeron® N3010	Dual Core 1.04 GHz	Burst 2.24 GHz	L2 cache 1MB	4W TDP	3W SDP
	Intel® Atom™ X5-E8000	Quad Core 1.04 GHz	Burst 2.00 GHz	L2 cache 2MB	5W TDP	4W SDP
DRAM	Onboard DDR3L memory support for up to 4 GByte at 1600MT/s					
Chipset	Integrated in SoC					
Onboard storage	eMMC 4.51 interface up to 32GB					
Ethernet	Intel I211 Gigabit Ethernet					
I/O Interfaces	3x PCIe x1 lanes with 5 Gb/s PCI Express 2.0   2x SATA 3.0   8x USB 2.0   2x USB 3.0   LPC   SPI   I <sup>2</sup> C bus (fast mode 400 kHz, multi-master)   SDIO multiplexed with GPIO   2x UART   SM Bus					
Sound	Digital High Definition Audio Interface					
Graphics	Intel® HD Graphics Gen 8 Full hardware acceleration for MPEG2   H.264   DirectX11.1   Direct X12 for Windows 10   OCL 1.2   OGL 4.2   WMV9   VC-1					
LVDS	Single channel LVDS transmitter   support for flat panels with 1x18 bit/1x24 bit data mapping up to a resolution of 1400x1050@60Hz.					
Digital Display Interface	2x DisplayPort 1.1a or HDMI 1.4b / DVI up to up to 2560x1600@60Hz/3840x2160@30Hz; eDP 1.4 up to 2560x1440@60Hz					
congatec Board Controller	Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information   Board Statistics   BIOS Setup Data Backup I <sup>2</sup> C bus (fast mode, 400 kHz, multi-master)   Power Loss Control					
Embedded BIOS Features	OEM Logo   OEM CMOS Defaults   LCD Control   Display Auto Detection   Backlight Control   Flash Update   based on AMI Aptio UEFI					
Power Management	ACPI 5.0 with battery support					
Operating Systems	Microsoft® Windows® 10   Microsoft® Windows 10 IoT Enterprise   Microsoft® Windows® 8   Microsoft® Windows® 7   Linux   Microsoft® Windows® Embedded Standard   Yocto					
Power Consumption	Typ. application: see user's guide for full details					
Temperature	Commercial : Operating: 0 to +60°C   Storage: -20 to +80°C					
Humidity	Operating: 10 - 90% r. H. non cond.   Storage: 5 - 95% r. H. non cond.					
Size	55 x 84 mm (2.17" x 3.31")					

# conga-MA4 | Block diagram



# conga-MA4 | Order Information

Article	PN	Description
conga-MA4/N3710-4G eMMC16	047904	Intel® Pentium® N3710 quad core processor with 1.6 GHz   2 MB L2 cache 4 GB 1600MT/s DDR3L onboard memory   16 GB eMMC onboard flash
conga-MA4/N3160-2G eMMC16	047905	Intel® Celeron® N3160 quad core processor with 1.6 GHz   2 MB L2 cache 2 GB 1600MT/s DDR3L onboard memory   16 GB eMMC onboard flash
conga-MA4/N3060-2G eMMC16	047906	Intel® Celeron® N3060 dual core processor with 1.6 GHz   1 MB L2 cache 2 GB 1600MT/s DDR3L onboard memory   16 GB eMMC onboard flash
conga-MA4/N3010-2G eMMC16	047907	Intel® Celeron® N3010 dual core processor with 1.04 GHz   1 MB L2 cache 2 GB 1600MT/s DDR3L onboard memory   16 GB eMMC onboard flash
conga-MA4/E8000-2G eMMC8	047908	Intel® Atom™ X5-E8000 quad core processor with 1.04GHz   2 MB L2 cache 2GB 1600MT/s DDR3L onboard memory   8GB eMMC onboard flash
conga-MA3/HSP-T	047450	Standard heatspreader for COM Express Type 10 module conga-MA3, conga-MA3E and conga-MA4. All standoffs are M2.5 thread.
conga-MA3/HSP-B	047451	Standard heatspreader for COM Express Type 10 module conga-MA3, conga-MA3E and conga-MA4. All standoffs are 2.7 mm bore hole.
conga-MA3/CSP-T	047452	Standard passive cooling solution for COM Express Type 10 module conga-MA3, conga-MA3E and conga-MA4 with fins. All standoffs are M2.5 thread.
conga-MA3/CSP-B	047453	Standard passive cooling solution for COM Express Type 10 module conga-MA3, conga-MA3E and conga-MA4 with fins. All standoffs are 2.7 mm bore hole.
<b>Accessories</b>		
conga-MEVAL	065400	Evaluation carrier board for Type 10 COM Express modules
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM
COM-Express-carrier-board-Socket-5	400007	Connector for COM-Express carrier boards   height 5mm   packing unit 4 pieces
COM-Express-carrier-board-Socket-8	400004	Connector for COM-Express carrier boards   height 8mm   packing unit 4 pieces

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