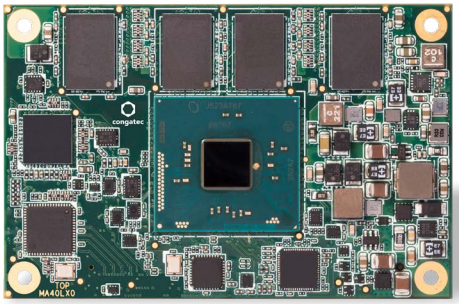
POWERFUL AND SMALL

conga-MA4

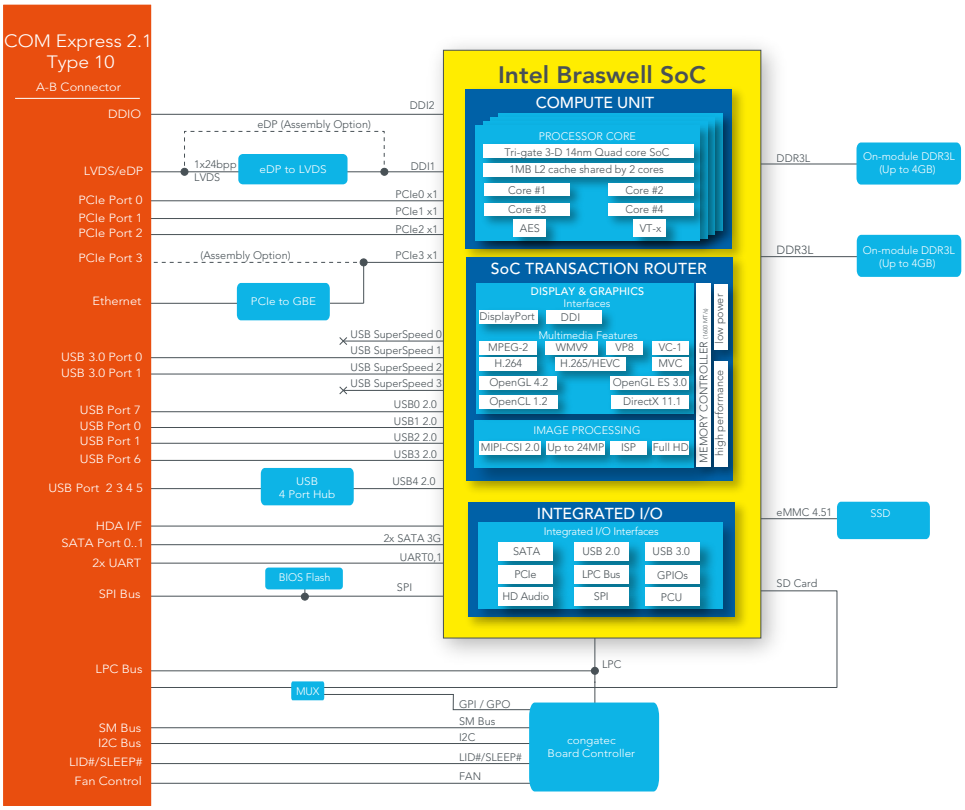


- 4th Gen. Intel® Atom™ processor family
- COM Express Mini Type 10 module
- High resolution Intel® Gen. 8 graphics

COM Express®

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 | I²C 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 DDI / 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 I²C 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.

Accessories		
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

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