

# HIGH PERFORMANCE

# conga-QA3

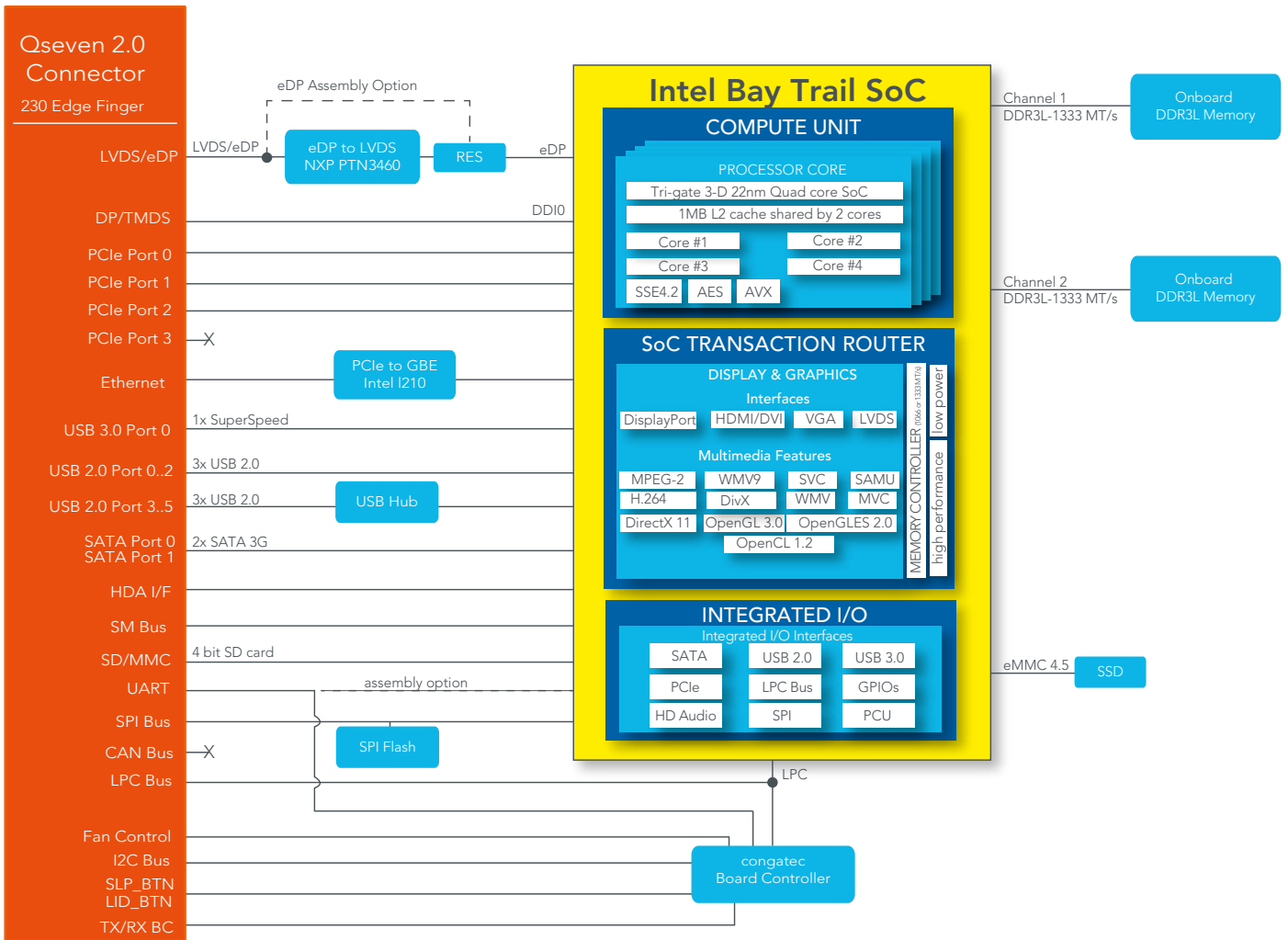


- 3<sup>rd</sup> Gen. Intel® Atom™ / Celeron® processors
- High resolution Intel® Gen. 7 graphics
- Temperature range up to -40°C .. +85°



|                             |  |                           |                       |          |
|-----------------------------|--|---------------------------|-----------------------|----------|
| Formfactor                  | Qseven Form Factor Rev. 2.0 compliant   70x70 mm   |                           |                       |          |
| CPU                         | Intel® Atom™ E3845   | 1.91 GHz QuadCore         | L2 cache 2MB          | 10W TDP  |
|                             | Intel® Atom™ E3827   | 1.75 GHz Dual Core        | L2 cache 1MB          | 8W TDP   |
|                             | Intel® Atom™ E3826   | 1.46 GHz Dual Core        | L2 cache 1MB          | 7W TDP   |
|                             | Intel® Atom™ E3825   | 1.33 GHz Dual Core        | L2 cache 1MB          | 6W TDP   |
|                             | Intel® Atom™ E3815   | 1.46 GHz Single Core      | L2 cache 512kB        | 5W TDP   |
|                             | Intel® Atom™ E3805   | 1.33 GHz Dual Core        | L2 cache 1MB          | 3W TDP   |
|                             | Intel® Celeron J1900   | 2.0 GHz Quad Core         | L2 cache 2MB          | 10W TDP  |
|                             | Intel® Celeron N2930   | 1.83 GHz Quad Core        | L2 cache 2MB          | 7.5W TDP |
|                             | Intel® Celeron N2807   | 1.58 GHz Dual Core        | L2 cache 1MB          | 4.5W TDP |
| DRAM                        | Dual Channel   up to 8GB onboard DDR3L with 1333 MT/s  |                           |                       |          |
| Chipset                     | Integrated in SoC  |                           |                       |          |
| Ethernet                    | Intel® I210 Gigabit Ethernet controller  |                           |                       |          |
| I/O Interfaces              | 6x USB 2.0 or 1x USB 3.0 and 5x USB 2.0   2x SATA   1x SDIO   3x PCIe   I <sup>2</sup> C Bus   LPC bus   1x SPI  |                           |                       |          |
| Mass Storage                | eMMC 5.0 onboard flash up to 64 GByte (optional only for Intel® Atom™)   |                           |                       |          |
| Sound                       | Intel® High Definition Audio (Intel® HD Audio)   |                           |                       |          |
| Graphics                    | Intel® HD Graphics with support for DirectX11   OpenGL 3.0   OpenCL 1.2   OpenGLES 2.0   full HW acceleration for decode/encode of MPEG2, H.264   MVC and dual simultaneous display support      |                           |                       |          |
| LVDS                        | Dual channel LVDS transmitter   support for flat panels with 2x24 bit data mapping up to a resolution of 1920x1200@60Hz  |                           |                       |          |
| DisplayPort Interface (DDI) | DisplayPort 1.1 up to 2560x1600 or HDMI 1.4a up to 1920x1200   |                           |                       |          |
| congatec Board controller   | Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information   Board Statistics<br>I <sup>2</sup> C bus (fast mode   400 kHz   multi-master)   Power Loss Control |                           |                       |          |
| Embedded BIOS Features      | AMI Aptio® UEFI 2.x firmware; 8 MByte serial SPI with congatec Embedded BIOS features (OEM Logo   OEM CMOS Defaults   LD Control<br>Display Auto Detection   Backlight Control   Flash Update)   |                           |                       |          |
| Power Management            | ACPI 5.0 compliant   Smart Battery Management  |                           |                       |          |
| Operating Systems           | Microsoft® Windows 8   Microsoft® Windows 8 embedded   Microsoft® Windows 7   Microsoft® Windows 7 embedded compact   Linux  |                           |                       |          |
| Power Consumption           | Typ. application 4.5W...12W  |                           |                       |          |
| Temperature                 | Commercial :   | Operating: 0 to +60°C     | Storage: -20 to +80°C |          |
|                             | Industrial :   | Operating: -40 to +85°C   | Storage: -45 to +85°C |          |
| Humidity                    | Operating:   | 10 to 90% r. H. non cond. |                       |          |
|                             | Storage:   | 5 to 95% r. H. non cond.  |                       |          |
| Size                        | 70 x 70 mm (2¾" x 2¾")   |                           |                       |          |

# conga-QA3 | Block diagram



# conga-QA3 | Order Information

| Article                    | PN     | Description  |
|----------------------------|--------|--|
| conga-QA3/E3845-2G eMMC4   | 015100 | Intel® Atom™ E3845 quad core processor, 1.91 GHz, 2MB L2 cache, 2GB 1333MT/s DDR3L onboard dual channel memory and 4GB eMMC onboard flash  |
| conga-QA3/E3827-2G eMMC4   | 015101 | Intel® Atom™ E3827 dual core processor, 1.75 GHz, 1MB L2 cache, 2GB 1333MT/s DDR3L onboard dual channel memory and 4GB eMMC onboard flash  |
| conga-QA3/E3826-2G eMMC4   | 015102 | Intel® Atom™ E3826 dual core processor, 1.46 GHz, 1MB L2 cache, 2GB 1066MT/s DDR3L onboard dual channel memory and 4GB eMMC onboard flash  |
| conga-QA3/E3825-2G eMMC4   | 015103 | Intel® Atom™ E3825 dual core processor, 1.33 GHz, 1MB L2 cache, 2GB 1066MT/s DDR3L onboard single channel memory and 4GB eMMC onboard flash  |
| conga-QA3/E3815-2G eMMC4   | 015104 | Intel® Atom™ E3815 single core processor, 1.46GHz, 512kB L2 cache, 2GB 1066MT/s DDR3L onboard single channel memory and 4GB eMMC onboard flash   |
| conga-QA3/E3845-4G eMMC8   | 015105 | Intel® Atom™ E3845 quad core processor, 1.91GHz, 2MB L2 cache, 4GB 1333MT/s DDR3L onboard dual channel memory and 8GB eMMC onboard flash   |
| conga-QA3/E3815-1G         | 015106 | Intel® Atom™ E3815 single core processor, 1.46GHz, 512kB L2 cache, 1GB 1066MT/s DDR3L onboard single channel memory  |
| conga-QA3/E3845-4G         | 015107 | Intel® Atom™ E3845 quad core processor with 1.91GHz, 2MB L2 cache, 4GB 1333MT/s DDR3L onboard dual channel memory. No onboard eMMC   |
| conga-QA3/E3827-4G         | 015108 | Intel® Atom™ E3827 dual core processor with 1.75GHz, 1MB L2 cache, 4GB 1333MT/s DDR3L onboard dual channel memory. No onboard eMMC   |
| conga-QA3/E3845-2G         | 015109 | Intel® Atom™ E3845 quad core processor with 1.91GHz, 2MB L2 cache, 2GB 1333MT/s DDR3L onboard memory. No onboard eMMC.   |
| conga-QA3/E3805-2G eMMC4   | 015130 | Intel® Atom™ E3805 dual core processor, 1.33GHz, 1MB L2 cache, 2GB 1067MT/s DDR3L onboard single channel memory and 4GB eMMC onboard flash   |
| conga-QA3/i-E3845-2G eMMC4 | 015120 | Intel® Atom™ E3845 quad core processor, 1.91GHz, 2MB L2 cache, 2GB 1333MT/s DDR3L onboard dual channel memory and 4GB eMMC onboard flash Industrial grade temperature range from -40°C to 85°C       |
| conga-QA3/i-E3827-2G eMMC4 | 015121 | Intel® Atom™ E3827 dual core processor, 1.75GHz, 1MB L2 cache, 2GB 1333MT/s DDR3L onboard dual channel memory and 4GB eMMC onboard flash Industrial grade temperature range from -40°C to 85°C       |
| conga-QA3/i-E3825-2G eMMC4 | 015123 | Intel® Atom™ E3825 dual core processor, 1.33GHz, 1MB L2 cache, 2GB 1066MT/s DDR3L onboard single channel memory and 4GB eMMC onboard flash Industrial grade temperature range from -40°C to 85°C     |
| conga-QA3/i-E3815-2G eMMC4 | 015124 | Intel® Atom™ E3815 single core processor, 1.46GHz, 512kB L2 cache, 2GB 1066MT/s DDR3L onboard single channel memory and 4GB eMMC onboard flash Industrial grade temperature range from -40°C to 85°C |
| conga-QA3/i-E3845-4G eMMC8 | 015125 | Intel® Atom™ E3845 quad core processor, 1.91GHz, 2MB L2 cache, 4GB 1333MT/s DDR3L onboard dual channel memory and 8GB eMMC onboard flash Industrial grade temperature range from -40°C to 85°C       |
| conga-QA3/i-E3805-2G eMMC4 | 015126 | Intel® Atom™ E3805 dual core processor, 1.33GHz, 1MB L2 cache, 2GB 1067MT/s DDR3L onboard single channel memory and 4GB eMMC onboard flash Industrial grade temperature range from -40°C to 85°C     |
| conga-QA3/J1900-2G         | 015111 | Intel® Celeron J1900 quad core processor, 2.0 GHz, 2MB L2 cache, 2GB 1333MT/s DDR3L onboard dual channel memory.   |
| conga-QA3/N2930-2G         | 015112 | Intel® Celeron® N2930 quad core processor, 1.83GHz up to 2.16GHz, 2MB L2 cache and 2GB 1333MT/s DDR3L onboard dual channel memory. Low power consumption with 7.5W TD                                |
| conga-QA3/N2807-2G         | 015113 | Intel® Celeron® N2807 dual core processor, 1.58GHz up to 2.16GHz, 2MB L2 cache and 2GB 1333MT/s DDR3L onboard single channel memory. Ultra-low power consumption with 4.5W TDP                       |
| conga-QA3/HSP-T            | 015190 | Standard heatspreader for Qseven module conga-QA3. Standoff with 2.5mm thread  |
| conga-QA3/HSP-B            | 015191 | Standard heatspreader for Qseven module conga-QA3. All standoffs are with 2.7mm bore hole  |
| conga-QA3/CSP-T            | 015192 | Passive cooling solution for Qseven module conga-QA3. All standoffs are M2.5mm thread.   |
| conga-QA3/CSP-B            | 015193 | Passive cooling solution for Qseven module conga-QG. All standoffs are with 2.7mm bore hole.   |

## Accessories

|                                |          |  |
|--------------------------------|----------|--|
| conga-QEVAL 2.0                | 007003   | Evaluation platform for Qseven 2.0   |
| conga-QKIT                     | 077455   | Starterkit for Qseven including conga-QEVAL, conga-LDVI/EPI, conga-FPA2, Dual DVI-D ADD2 Card, ATX power supply...                         |
| conga-HDMI/DisplayPort adapter | 500014   | The conga-HDMI/DisplayPort adapter is used to convert the graphic ports Port-B, Port-C and Port-D of to the HDMI or DisplayPort interface. |
| conga-Qseven/SBM3              | 025485   | Mobility Starter Kit   |
| conga-MCB/Qseven Cable Kit     | 14000041 | Complete cable kit for Qseven mini carrier board   |
| Qseven MXM connector Foxconn   | 400017   | Socket for Qseven Carrier Boards. 10pcs package. Foxconn standard type, SMT, lead free, 230 positions, 0.50mm pitch, 7.8mm height.         |
| Qseven MXM Connector Aces      | 400018   | Socket for Qseven Carrier Boards. 10pcs package. ACES standard type, SMT, lead free, 230 positions, 0.50mm pitch, 7.8mm height.            |
| conga-LDVI/EPI                 | 011115   | LVDS to DVI converter board for digital flat panels with onboard EEPROM  |



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