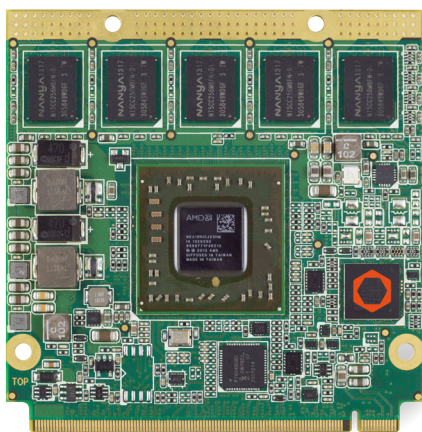


# ERROR PROTECTED RAM

## conga-QG

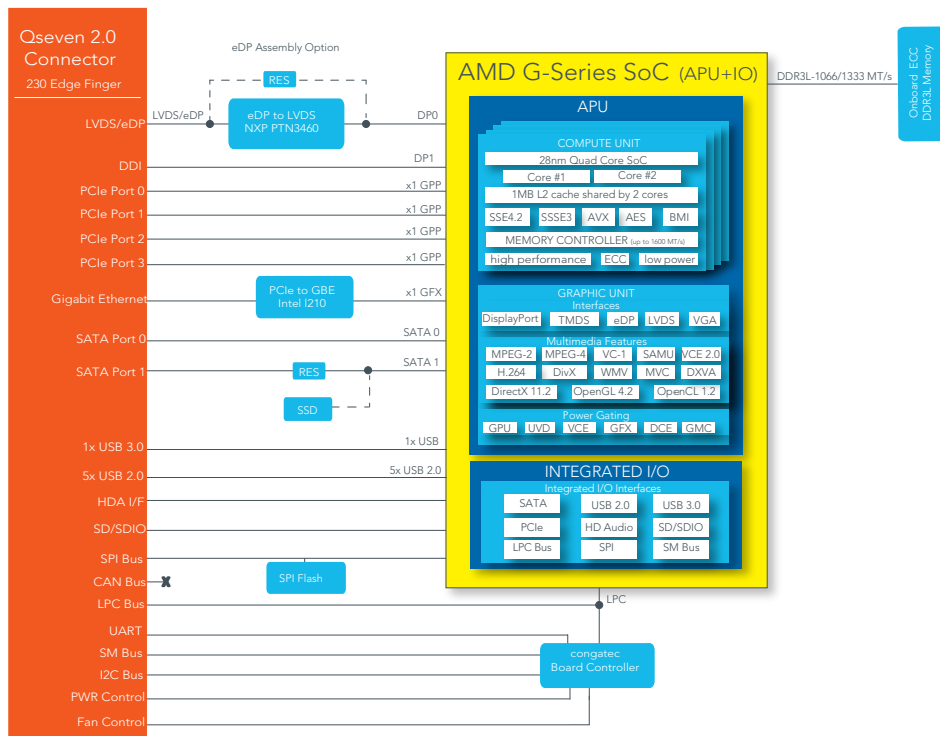


- AMD Embedded G-Series SOC APU
- ECC protected on module memory up to 8 GByte
- Power saving „Steppe Eagle“ processors
- High performance integrated graphics
- Temperature range up to -40°C .. +85°C



|                                 |  |           |                                    |                  |                  |
|---------------------------------|--|-----------|------------------------------------|------------------|------------------|
| Formfactor                      | Qseven Form Factor Rev. 2.0 compliant, 70x70 mm  |           |                                    |                  |                  |
| CPU                             | AMD Embedded GX-Series processors  |           |                                    |                  |                  |
|                                 | AMD Embedded GX-210HA SOC  | Dual Core | CPU freq. 1.0 GHz                  | GPU freq. 300MHz | 9W TDP           |
|                                 | AMD Embedded GX-210JA SOC  | Dual Core | CPU freq. 1.0 GHz                  | GPU freq. 255MHz | 6W TDP           |
|                                 | AMD Embedded GX-209HA SOC  | Dual Core | CPU freq. 1.0 GHz                  | GPU freq. 255MHz | 9W TDP Ext. Temp |
|                                 | AMD Embedded GX-412HC SOC  | Quad Core | CPU freq. 1.2 GHz / 1.6GHz (Boost) |                  | 7W TDP           |
|                                 | AMD Embedded GX-212JC SOC  | Dual Core | CPU freq. 1.2 GHz / 1.4GHz (Boos)  |                  | 6W TDP           |
| DRAM                            | Up to 8GB ECC DDR3L-1333   |           |                                    |                  |                  |
| Chipset                         | Integrated in SOC (single-chip)  |           |                                    |                  |                  |
| Ethernet                        | Gigabit Ethernet   |           |                                    |                  |                  |
| I/O Interfaces                  | up to 4x PCI Express™ 2.0 lanes, 2x SATA® 3Gb/s, 1x USB 3.0, 5x USB2.0, LPC bus, SMBus, I²C bus (fast mode, 400 kHz, multi-master), SD Card or SDIO, UART  |           |                                    |                  |                  |
| Mass Storage                    | Silicon Motion FerriSSD® up to 64GB  |           |                                    |                  |                  |
| Sound                           | High Definition Audio Interface  |           |                                    |                  |                  |
| Graphics                        | integrated AMD Radeon™ HD 8000E Graphics, High Performance Video, DirectX 11.1 GPU supports two simultaneous displays, Unified Video Decoder 4.2 (H.264, MPEG-2, VC-1, MPEG4 and WMV), Video Compression Engine 2.0 (Video conferencing, wireless display, H.264, SVC), Security Asset Management Unit 2.1 (DRM offloaded from CPU, HDCP2) |           |                                    |                  |                  |
| LVDS                            | 18/24-bit Single/Dual Channel LVDS Interface, resolutions up to 1920X1200@60Hz, VESA standard or JEIDA data mapping, Automatic Panel Detection via EDID/EPI  |           |                                    |                  |                  |
| Digital Display Interface (DDI) | One DisplayPort 1.2 / HDMI 1.4a  |           |                                    |                  |                  |
| 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, Backlight   |           |                                    |                  |                  |
| Embedded BIOS Features          | AMI Aptio® UEFI firmware with congatec Embedded BIOS features  |           |                                    |                  |                  |
| Power Management                | ACPI 3.0 with battery support  |           |                                    |                  |                  |
| Operating Systems               | Microsoft® Windows 8, Microsoft® Windows 7, Linux, Microsoft® Windows 7/8 embedded Standard, Microsoft® Windows 7 Embedded Compact   |           |                                    |                  |                  |
| Power Consumption               | Typ. application: tbd., see manual for full details  |           |                                    |                  |                  |
| Temperature                     | Operating: 0 .. +60°C Storage: -20 .. +80°C Industrial : Operating: -40 to +85°C Storage: -45 to +85°C   |           |                                    |                  |                  |
| Humidity                        | Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.   |           |                                    |                  |                  |
| Size                            | 70 x 70 mm (2¾" x 2¾")   |           |                                    |                  |                  |

# conga-QG | Block diagram



# conga-QG | Order Information

| Article                   | PN     | Description   |
|---------------------------|--------|---|
| conga-QG/210HA-2GECC      | 015600 | Qseven 2.0 module based on AMD Embedded G-Series GX-210HA SOC dual core processor with 9W TDP, 1.0GHz, 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8210E graphics.  |
| conga-QG/210JA-2GECC      | 015601 | Qseven 2.0 module based on AMD Embedded G-Series SOC GX-210JA dual core processor with 6W TDP, 1.0GHz, 1MB L2 cache and 2GB 1066MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8200E graphics.  |
| conga-QG/210HA-2GECC SSD4 | 015602 | Qseven 2.0 module based on AMD Embedded G-Series SOC GX-210HA dual core processor with 9W TDP, 1.0GHz, 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8210E Graphics and 4GB onboard SATA SSD.                               |
| conga-QG/i-209HA-2GECC    | 015610 | Qseven 2.0 module based on AMD Embedded G-Series SOC GX-209HA dual core processor with 9W TDP, 1.0GHz, 1MB L2 cache and 2GB 1066MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8000E Graphics. Industrial grade temperature range from -40°C to 85°C. |
| conga-QG/412HC-4GECC      | 015620 | Qseven 2.0 module based on AMD Embedded G-Series SOC GX-412HC quad core processor with 7W TDP, 1.2GHz, 2MB L2 cache and 4GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ graphics with 300MHz GPU frequency.                                       |
| conga-QG/212JC-2GECC      | 015621 | Qseven 2.0 module based on AMD Embedded G-Series SOC GX-212JC dual core processor with 6W TDP, 1.2GHz, 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ graphics with 300MHz GPU frequency.                                       |
| QG/HSP-T                  | 015650 | Standard heatspreader for Qseven module conga-QG. All standoffs are M2.5mm thread.  |
| QG/HSP-B                  | 015651 | Standard heatspreader for Qseven module conga-QG. All standoffs are with 2.7mm bore hole.   |
| QG/CSP-T                  | 015652 | Passive cooling solution for Qseven module conga-QG. All standoffs are M2.5mm thread.   |
| QG/CSP-B                  | 015653 | Passive cooling solution for Qseven module conga-QG. All standoffs are with 2.7mm bore hole.  |

| Accessories                  | PN     | Description  |
|------------------------------|--------|--|
| conga-QEVAL 2.0              | 007003 | Evaluation platform for Qseven 2.0 modules   |
| conga-QKIT                   | 077455 | Starterkit for Qseven including conga-QEVAL, conga-LDVI/EPI, conga-FPA2, Dual DVI-D ADD2 Card, ATX power supply...                 |
| conga-Qseven/SBM3            | 025485 | Mobility Starter Kit   |
| 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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- Экспресс доставка в любую точку России;
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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