### Formfactor
Qseven Form Factor Rev. 2.0 compliant, 70x70 mm

### CPU
- **AMD Embedded G-Series SOC 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-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 (Boost)
    - 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
- 2x USB 2.0
- LPC bus
- SMBus
- 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
- Video Compression Engine 2.0
- Security Asset Management Unit 2.1
- 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

### 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 | Order Information

<table>
<thead>
<tr>
<th>Article</th>
<th>PN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>conga-QG/210HA-2GECC</td>
<td>015600</td>
<td>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.</td>
</tr>
<tr>
<td>conga-QG/210JA-2GECC</td>
<td>015601</td>
<td>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.</td>
</tr>
<tr>
<td>conga-QG/210HA-2GECC SSD4</td>
<td>015602</td>
<td>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.</td>
</tr>
<tr>
<td>conga-QG/412HC-4GECC</td>
<td>015620</td>
<td>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.</td>
</tr>
<tr>
<td>conga-QG/212JC-2GECC</td>
<td>015621</td>
<td>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.</td>
</tr>
<tr>
<td>QG/HSP-T</td>
<td>015650</td>
<td>Standard heatspreader for Qseven module conga-QG. All standoffs are M2.5mm thread.</td>
</tr>
<tr>
<td>QG/HSP-B</td>
<td>015651</td>
<td>Standard heatspreader for Qseven module conga-QG. All standoffs are with 2.7mm bore hole.</td>
</tr>
<tr>
<td>QG/CSP-T</td>
<td>015652</td>
<td>Passive cooling solution for Qseven module conga-QG. All standoffs are M2.5mm threaded.</td>
</tr>
<tr>
<td>QG/CSP-B</td>
<td>015653</td>
<td>Passive cooling solution for Qseven module conga-QG. All standoffs are with 2.7mm bore hole.</td>
</tr>
</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Article</th>
<th>PN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>conga-QEVAL 2.0</td>
<td>007003</td>
<td>Evaluation platform for Qseven 2.0 modules</td>
</tr>
<tr>
<td>conga-QKIT</td>
<td>077455</td>
<td>Starterkit for Qseven including conga-QEVAL, conga-LDVI/EPI, conga-FPA2, Dual DVI D ADD2 Card, ATX power supply.</td>
</tr>
<tr>
<td>conga-Qseven/SB3M</td>
<td>025485</td>
<td>Mobility Starter Kit</td>
</tr>
<tr>
<td>Qseven MXM connector Foxconn</td>
<td>400017</td>
<td>Socket for Qseven Carrier Boards. 10pcs package. Foxconn standard type, SMT, lead free, 230 positions, 0.50mm pitch, 7.8mm height.</td>
</tr>
<tr>
<td>Qseven MXM Connector Aces</td>
<td>400018</td>
<td>Socket for Qseven Carrier Boards. 10pcs package. ACES standard type, SMT, lead free, 230 positions, 0.50mm pitch, 7.8mm height.</td>
</tr>
<tr>
<td>conga-LDVI/EPI</td>
<td>011115</td>
<td>LVDS to DVI converter board for digital flat panels with onboard EEPROM</td>
</tr>
</tbody>
</table>

© 2014 congatec AG. All rights reserved.

All data is for information purposes only. Although all the information contained within this document is carefully checked, no guarantee of correctness is implied or expressed. Product names, logos, brands, and other trademarks featured or referred are the property of their respective trademark holders. These trademark holders are not affiliated with congatec AG. Rev. October 11, 2017 MR