COM EXPRESS® COMPACT TYPE 6 MODULE
conga-TCA

- COM Express Type 6 Entry-Level-Module
- Intel® Atom™ Dual Core Generation on 32nm
- Only 3.5 Watt TDP on Intel® Atom™ Processor N2600
- HD video performance 2D/3D
- Up to 4 GB DDR3 memory

Formfactor
- Formfactor COM Express™ Compact | (95 x 95 mm) | Type 6 Connector Layout

CPU
- Intel® Atom™ Processors
  - Intel® Atom™ D2550 1.86 GHz Dual Core 4 threads L2 Cache 1MB 10W TDP
  - Intel® Atom™ N2800 1.86 GHz Dual Core 4 threads L2 Cache 1MB 6.5W TDP
  - Intel® Atom™ N2600 1.6 GHz Single Core 4 threads L2 Cache 1MB 3.5W TDP

DRAM
- 1 Socket SO-DIMM DDR3 up to 1066MT/s and 4 GByte

Chipset
- Intel® NM10 Express Chipset CG82NM10 PCH | TDP 2.1W

Ethernet
- GBE Realtek 8111E

I/O Interfaces
- up to 5x PCIe | 2x Serial ATA II with 3 Gb/s
- 8x USB 2.0 | 2x USB 3.0 (optional) | uses 1x PCIe lane | LPC bus | PC bus (fast mode) | 400 kHz | multi-master

Sound
- Digital High Definition Audio Interface with support for multiple audio codecs

Graphics
- Integrated Graphics | supporting DirectX 9 | Pixel Shader v3.0 and OGL 3.0
- Two independent display pipes
- Support full MPEG2 (VLD/DCT/MC) | WMV | Fast video Composing | HW decode/acceleration for MPEG4 (AVC/H.264) & VC-1; 720p60 | 1080i60
- 1080p@24 up to 20 Mps
- Video image enhancements

LVDS
- 1x24 Bit LVDS (D2550) max. Resolution 1440x900
- 1x18 Bit LVDS (N2000 Series) max. Resolution 1366x768
- Automatic Panel Detection via EDID/EPI

Digital Display Interface (DDI)
- 2x DisplayPort 1.1 / TMDS (DVI | HDMI 1.3a)

CRT Interface
- 350 MHz RAMDAC | resolutions up to 1920x1200

congatec Board Controller
- Multi Stage Watchdog | non-volatile User Data Storage | Manufacturing and Board Information | Board Statistics | BIOS Setup Data Backup
- PC bus (fast mode) | 400 kHz | multi-master | Power Loss Control

Embedded BIOS Features
- AMI Aptio® UEFI 2.x firmware | 4 MByte serial SPI firmware flash

Security
- Trusted Platform Module (TPM) optional.
- Hash and RSA algorithms | key lengths up to 2,048 bits | real random number generator

Power Management
- ACPI 3.0 with battery support

Operating Systems
- Microsoft® Windows 8 | Microsoft® Windows 7 | Linux | Microsoft® Windows® embedded Standard

Power Consumption
- Typ. application: tbd | see manual for full details | CMOS Battery Backup

Temperature
- Operating: 0 - +60°C Storage: -20 - +80°C

Humidity
- Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.

Size
- 95 x 95 mm (3.74" x 3.74")
**conga-TCA** | **Block diagram**

![Block diagram of conga-TCA](image)

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**conga-TCA** | **Order Information**

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<th>Description</th>
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<tr>
<td>TCA/N2600</td>
<td>47001</td>
<td>COM Express Type 6 Compact module with Intel® Atom™ N2600 dual core processor with 1.6GHz, 1MB L2 cache and 800 MT/s DDR3 memory interface.</td>
</tr>
<tr>
<td>TCA/N2800</td>
<td>47002</td>
<td>COM Express Type 6 Compact module with Intel® Atom™ N2800 dual core processor with 1.86GHz, 1MB L2 cache and 1066MT/s DDR3 memory interface.</td>
</tr>
<tr>
<td>TCA/D2550</td>
<td>47003</td>
<td>COM Express Type 6 Compact module with Intel® Atom™ D2550 dual core processor with 1.86GHz, 1MB L2 cache and 1066MT/s DDR3 memory interface.</td>
</tr>
<tr>
<td>TCA/D2550 xHCI</td>
<td>47004</td>
<td>COM Express Type 6 Compact module with Intel® Atom™ D2550 dual core processor with 1.86GHz, 1MB L2 cache and 1066MT/s DDR3 memory interface. PCI Express to dual port USB 3.0 onboard controller.</td>
</tr>
<tr>
<td>TCA/HSP-T</td>
<td>47032</td>
<td>Standard heatspreader for COM Express modules conga-TCA and CCA. All standoffs are M2.5 thread.</td>
</tr>
<tr>
<td>TCA/HSP-B</td>
<td>47033</td>
<td>Standard heatspreader for COM Express modules conga-TCA and CCA. All standoffs are M2.5 thread.</td>
</tr>
<tr>
<td>TCA/CSP-T-LF</td>
<td>47030</td>
<td>Standard passive cooling solution for COM Express modules conga-TCA and CCA with 3mm fins. All standoffs are M2.5mm thread.</td>
</tr>
<tr>
<td>TCA/CSP-B-LF</td>
<td>47031</td>
<td>Standard passive cooling solution for COM Express modules conga-TCA and CCA with 3mm fins. All standoffs are M2.5mm thread.</td>
</tr>
<tr>
<td>TCA/CSP-T-HF</td>
<td>47034</td>
<td>Standard passive cooling solution for COM Express module conga-TCA and CCA with 10mm fins. All standoffs are M2.5mm thread.</td>
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<tr>
<td>TCA/CSP-B-HF</td>
<td>47035</td>
<td>Standard passive cooling solution for COM Express module conga-TCA and CCA with 10mm fins. All standoffs are M2.5mm thread.</td>
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<tr>
<td>DDR3-SODIMM-1066 (1GB)</td>
<td>68750</td>
<td>DDR3 SODIMM memory module with 1066MT/s and 1GB RAM.</td>
</tr>
<tr>
<td>DDR3-SODIMM-1066 (2GB)</td>
<td>68760</td>
<td>DDR3 SODIMM memory module with 1066MT/s and 2GB RAM.</td>
</tr>
<tr>
<td>DDR3-SODIMM-1066 (4GB)</td>
<td>68765</td>
<td>DDR3 SODIMM memory module with 1066MT/s and 4GB RAM.</td>
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**Accessories**

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<tr>
<td>conga-TEVAL</td>
<td>065800</td>
<td>Evaluation carrier board for Type 6 COM Express modules.</td>
</tr>
<tr>
<td>conga-LDVS/EPI</td>
<td>011115</td>
<td>LVDS to DVI converter board for digital flat panels with onboard EEPROM.</td>
</tr>
<tr>
<td>COM-Express-carrier-board-Socket-5</td>
<td>400007</td>
<td>Connector for COM Express carrier boards. Height 5mm. Packing unit 4 pieces.</td>
</tr>
<tr>
<td>COM-Express-carrier-board-Socket-8</td>
<td>400004</td>
<td>Connector for COM Express carrier boards. Height 8mm. Packing unit 4 pieces.</td>
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