



COM Express® Type 7 + GPU Embedded System

The **COM Express Type 7 + GPU Embedded System** from Connect Tech combines Intel® Xeon® D (Server Class) and Intel® Atom™ C3000 x86 processors with high-end NVIDIA® Quadro® and Tesla® Graphics Processing Units (GPU) all into a small form factor embedded system. Choose from highest-end, highest-performance models or from low-powered models all ideal for high-end encode/decode video applications or GPGPU CUDA® processing, Deep Learning and Artificial Intelligence applications.

This embedded system exposes all of the latest generation interconnect including: 10GbE and Gigabit Ethernet, USB 3.0 and 2.0, HDMI, SATA III, GPIO, I2C, M.2, miniPCIe. This embedded system uses PC-style connectors for ease of cabling and packaging.



Product Name:

COM Express® Type 7 + GPU Embedded System

Part Numbers: V7G001, V7G002, V7G003, V7G004, V7G005, V7G006, D7G001, D7G002, D7G003, D7G004, D7G005, D7G006

Specifications

| | |
|---------------------------------------|--|
| COM Express CPU Module Options | <ul style="list-style-type: none"> • Intel® Xeon® D1577 (16 x 1.3 / 2.1 GHz, 24MB cache, 45 W) • Intel® Xeon® D1559 (12 x 1.5 / 2.1 GHz, 18MB cache, 45 W) • Intel® Atom™ C3958 (16 x 2.0 / 2.0 GHz, 16MB cache, 31W) Memory: 48GB DDR4 2400 MT/s ECC |
| GPU Module Options | <ul style="list-style-type: none"> • NVIDIA® Quadro® P5000 – (Pascal, 2048 CUDA Cores, 100W) • NVIDIA® Quadro® P3000 – (Pascal, 1280 CUDA Cores, 75W) • NVIDIA® Tesla® P6 – (Pascal, 2048 CUDA Cores, 90W, ECC) |
| COM Express Compatibility | COM Express® Type 7 (PICMG COM Express® COM.0 R3.0) |
| MXM Module Compatibility | MXM Specification 3.1 Type-B and Type-A Form Factors |
| 1 Gigabit Ethernet | 4x 1000BASE-T GbE Ports (RJ-45) |
| 10 Gigabit Ethernet | 2x 10GBASE-SR/LR From Dual Inphi CS4223E (Quad SFP+) Future path to 4x 10GBASE-SR/LR From Dual Inphi CS4223E (Quad SFP+) |
| Display Output | 4x HDMI Type-A |
| Storage | 2x SATA (7-pin Standard) 2x M.2 M-KEY 2280 NvME |
| USB | 4x USB 3.0 Ports (Type-A) 4x USB 2.0 Ports (20-pin T1M header) |
| Expansion | 2x mini PCIe Slot (USB + PCIe) 2x M.2 2280 Slots (PCIe x4 Gen3) |
| Serial Interfaces | CPU Console via FTDI USB UART (USB Micro B) |
| GPIO | 4 inputs (3.3V/5V selectable) 4 outputs (3.3V/5V selectable) (20-pin T1M header) |
| Misc / System IO | 1 x I2C, 1 x SMBus, Power Control Signals S3, S5 Reset/Power Button, Hard Drive / Power Status LEDs 5V output, 12V output, GND, BATLOW (20-pin T1M header) |
| Input Power | +12V Input Only |
| Fans | 4x FAN Connections |
| Dimensions | 216mm x 164mm (8.500" x 6.450") |

FEATURES

- ✓ High-End GPUs with Intel® Xeon® D Server Class and Intel® Atom™ C3000 x86 Processors
- ✓ GPUs can be targeted for 4 independent display outputs
OR
a headless GPGPU processing system using CUDA cores
- ✓ 10 GbE interconnect: 2x 10GBASE-SR/LR From Dual Inphi CS4223E (Quad SFP+)
- ✓ Ideal for high-end encode/decode video applications or GPGPU CUDA® processing, Deep Learning and Artificial Intelligence applications
- ✓ Uses PC-style connectors for ease of cabling and packaging

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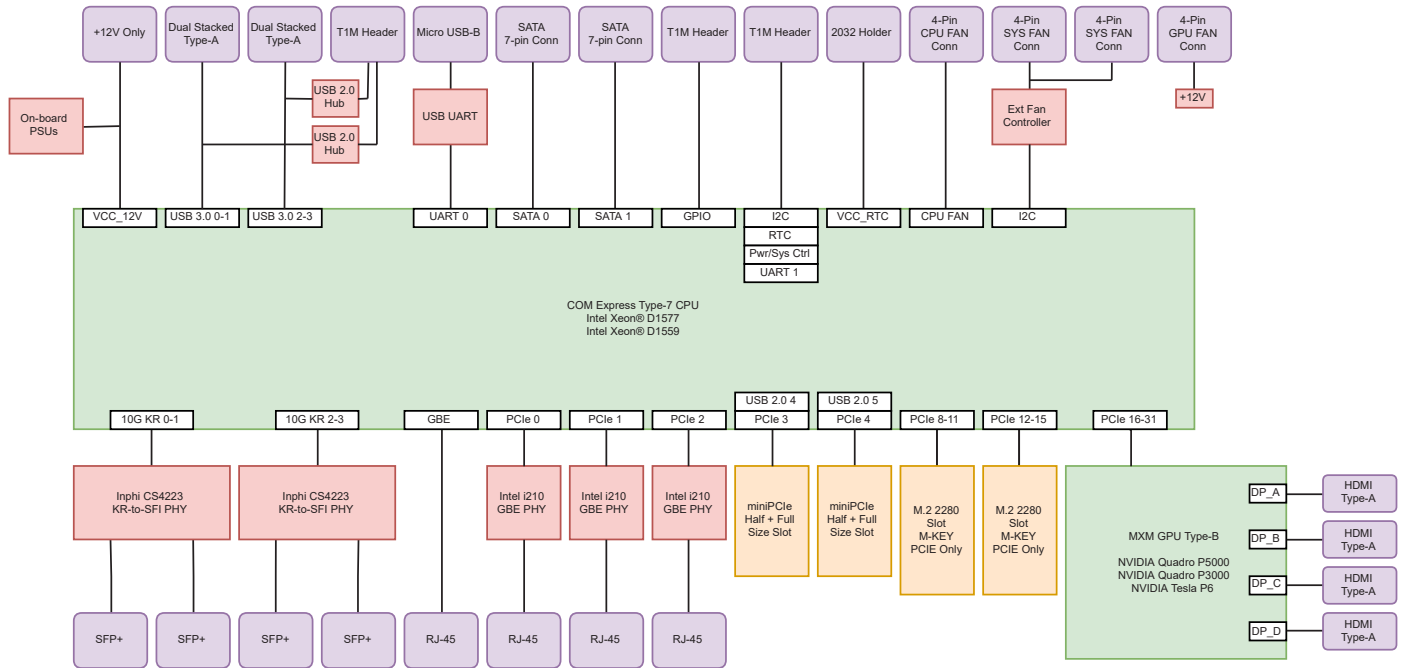
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Block Diagram



Ordering Information

| Part Number | CPU | GPU | Thermal Solution | Display Output |
|-------------|--------------------|-----------------------|---|---------------------------|
| V7G001 | Intel® Xeon® D1577 | NVIDIA® Quadro® P5000 | With Passive Heat Spreaders (Customer Designed End Thermal Solution) | 4x HDMI Variant |
| V7G002 | Intel® Xeon® D1577 | NVIDIA® Quadro® P3000 | | 4x HDMI Variant |
| V7G003 | Intel® Xeon® D1577 | NVIDIA® Tesla® P6 | | No Display Output Variant |
| V7G004 | Intel® Xeon® D1559 | NVIDIA® Quadro® P5000 | | 4x HDMI Variant |
| V7G005 | Intel® Xeon® D1559 | NVIDIA® Quadro® P3000 | | 4x HDMI Variant |
| V7G006 | Intel® Xeon® D1559 | NVIDIA® Tesla® P6 | | |
| V7G010 | Intel® Atom™ C3958 | NVIDIA® Quadro® P5000 | With Active Cooling Solution | |
| V7G011 | Intel® Atom™ C3958 | NVIDIA® Quadro® P3000 | | |
| V7G012 | Intel® Atom™ C3958 | NVIDIA® Tesla® P6 | | |
| D7G001 | Intel® Xeon® D1577 | NVIDIA® Quadro® P5000 | | 4x HDMI Variant |
| D7G002 | Intel® Xeon® D1577 | NVIDIA® Quadro® P3000 | | 4x HDMI Variant |
| D7G003 | Intel® Xeon® D1577 | NVIDIA® Tesla® P6 | | No Display Output Variant |
| D7G004 | Intel® Xeon® D1559 | NVIDIA® Quadro® P5000 | 4x HDMI Variant | |
| D7G005 | Intel® Xeon® D1559 | NVIDIA® Quadro® P3000 | 4x HDMI Variant | |
| D7G006 | Intel® Xeon® D1559 | NVIDIA® Tesla® P6 | No Display Output Variant | |



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Note: Other CPU and memory options available upon request