QUALITY & STANDARDS

- ISO 9001:2015 CERTIFIED
- CANADIAN CONTROLLED GOODS
- ITAR CERTIFIED, US JOINT CERTIFICATION
- MIL-STD-810H, DO-160G FOR SHOCK & VIBRATION
- INGRESS PROTECTION
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**NOTE:** Specifications found in this guide are subject to change without notice.

WWW.CONNECTTECH.COM
**Anvil**

Ready to withstand the most compute intensive AI applications with its power-efficient and feature rich design. Seamlessly deploy your next generation autonomous vehicle, smart city application, or vision solution.

- 2x 10G Ethernet
- 8x GMSL2 or FPD-Link III camera inputs (optional)
- M.2, 2x M-Key, 1x B-Key, and 1x E-Key
- USB 3.2, External PCIe
- Wide Input Power Range +10 to +36V

**Polaris**

Harnessing the Jetson Orin NX and built for robotics, smart city and autonomous machines, the rugged Polaris system provides a wide range of IO in an IP67 rated rugged package.

- IP67 Rated, Actively Cooled
- Rugged M12: 2x GbE, 2x CAN, GPIO, Wide range isolated power input (+18V - +48V)
- 2x USB3.1, 4x GMSL2 via sealed FAKRA, 4G/5G/LTE, WiFi/BT, GNSS, M.2 2280 NVME M-Key

**Forge**

Full-featured Carrier Board for the NVIDIA® Jetson AGX Orin™. This carrier board is specifically designed for commercially deployable platforms.

- 2x 10G Ethernet
- M.2, 2x M-Key, 1x B-Key, and 1x E-Key
- USB 3.2, PCIe x4 Oculink connector
- Wide Input Power Range up to +36V

**Rogue for AGX Orin™**

Small Form Factor Carrier Board for the NVIDIA® Jetson AGX Orin™. Rogue for Orin is specifically designed for commercially deployable platforms, and has an extremely small footprint of 92 x 107mm.

- 2x 10G Ethernet
- Extremely small form-factor (Same size as AGX Orin module)
- 2x NVMe M.2 Key Slots, 3x USB 3.2
# JETSON ORIN COMPARISON CHART

<table>
<thead>
<tr>
<th></th>
<th>Orin Nano 4GB</th>
<th>Orin Nano 8GB</th>
<th>Orin NX 8GB</th>
<th>Orin NX 16GB</th>
<th>AGX Orin 32GB</th>
<th>AGX Orin 64GB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AI Performance</strong></td>
<td>20 TOPs</td>
<td>40 TOPs</td>
<td>70 TOPS</td>
<td>100 TOPS</td>
<td>200 TOPs</td>
<td>275 TOPs</td>
</tr>
<tr>
<td><strong>GPU</strong></td>
<td>512-core NVIDIA Ampere w/ 16 Tensor Cores</td>
<td>1024-core NVIDIA Ampere w/ 32 Tensor Cores</td>
<td>1792-core NVIDIA Ampere w/ 56 Tensor Cores</td>
<td>2048-core NVIDIA Ampere w/ 64 Tensor Cores</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>6-core Arm® Cortex®-A78AE v8.2 64-bit CPU</td>
<td>8-core Arm® Cortex®-A78AE v8.2 64-bit CPU</td>
<td>8-core Arm® Cortex®-A78AE v8.2 64-bit CPU</td>
<td>12-core Arm® Cortex®-A78AE v8.2 64-bit CPU</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>4GB 64-bit LPDDR5 34 GB/s</td>
<td>8GB 128-bit LPDDR5 68 GB/s</td>
<td>8GB 128-bit LPDDR5 102.4GB/s</td>
<td>16GB 128-bit LPDDR5 102.4GB/s</td>
<td>32GB 256-bit LPDDR5 204.8 GB/s</td>
<td>64GB 256-bit LPDDR5 204.8 GB/s</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>SUPPORTS EXTERNAL NVMe</td>
<td>SUPPORTS EXTERNAL NVMe</td>
<td>Supports External NVMe</td>
<td>64GB eMMC 5.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PCIE</strong></td>
<td>1 x4 + 3 x1</td>
<td>1 x4 + 3 x1</td>
<td>3 x1 + 1 x4 PCle Gen 4</td>
<td>Up to 2 x8, 1 x4, 2 x1 (PCie Gen4, Root Port &amp; Endpoint)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CSI Camera</strong></td>
<td>Up to 4 cameras (8 via virtual channels***))</td>
<td></td>
<td></td>
<td>Up to 6 cameras (16 via virtual channels**))</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DL Accelerator</strong></td>
<td>---</td>
<td>---</td>
<td>1x NVDLA v2.0</td>
<td>2x NVDLA v2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vision Accelerator</strong></td>
<td>---</td>
<td>---</td>
<td>PVA v2.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Networking</strong></td>
<td>1x GbE</td>
<td>1x GbE</td>
<td>1x GbE</td>
<td>1x GbE</td>
<td>2x 10GbE</td>
<td></td>
</tr>
<tr>
<td><strong>Mechanical</strong></td>
<td>69.6mm x 45mm</td>
<td>260-pin SO-DIMM connector</td>
<td>100 mm x 87 mm, 699-pin Molex Mirror Mezz Connector</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*For detailed specifications and features, visit [www.connecttech.com](http://www.connecttech.com).*
## JETSON COMPARISON CHART

<table>
<thead>
<tr>
<th></th>
<th>Nano</th>
<th>TX2 NX</th>
<th>Xavier NX</th>
<th>TX2i</th>
<th>AGX XAVIER</th>
<th>AGX XAVIER INDUSTRIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AI Performance</strong></td>
<td>0.5 TFLOPS</td>
<td>1.33 TFLOPs</td>
<td>6 TFLOPS</td>
<td>1.26 TFLOPs</td>
<td>11 TFLOPS</td>
<td>10 TFLOPS</td>
</tr>
<tr>
<td><strong>GPU</strong></td>
<td>128-core NVIDIA Maxwell™ GPU</td>
<td>256-core NVIDIA Pascal™ GPU</td>
<td>384-core NVIDIA Volta™ GPU with 48 Tensor Cores</td>
<td>256-core NVIDIA Pascal™ GPU</td>
<td>512-core NVIDIA Volta™ GPU with 64 Tensor Cores</td>
<td></td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Quad-Core ARM® Cortex®-A57 MPCore</td>
<td>Dual-Core NVIDIA Denver 2.64-Bit CPU and Quad-Core ARM® Cortex®-A57 MPCore</td>
<td>6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6MB L2 + 4MB L3</td>
<td>Dual-Core NVIDIA Denver 1.5 64-bit CPU Quad-Core ARM® Cortex®-A57 MPCore</td>
<td>8-core NVIDIA Carmel Arm®v8.2 64-bit CPU 8MB L2 + 4MB L3</td>
<td></td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>4 GB 64-bit LPDDR4 25.6GB/s</td>
<td>4 GB 128-bit LPDDR4 51.2GB/s</td>
<td>8 GB or 16GB 128-bit LPDDR4x 59.7GB/s</td>
<td>8 GB 128-bit LPDDR4x (ECC Support) 51.2GB/s</td>
<td>64GB or 32 GB 256-bit LPDDR4x 136.5GB/s</td>
<td>32GB 256-bit LPDDR4x 136.5GB/s</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>16 GB eMMC 5.1</td>
<td>32 GB eMMC 5.1</td>
<td>32 GB eMMC 5.1</td>
<td>64GB eMMC 5.1</td>
<td>64GB eMMC 5.1</td>
<td>64GB eMMC 5.1</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>5W / 10W</td>
<td>7.5W / 15W</td>
<td>10W / 15W / 20W</td>
<td>10W / 20W</td>
<td>10W / 15W / 30W</td>
<td>20W / 40W</td>
</tr>
<tr>
<td><strong>PCIE</strong></td>
<td>1 x 4 (PCIe Gen2)</td>
<td>1 x 1 + 1 x 2, total 300T/s (PCIe Gen2)</td>
<td>1 x 1 + 1 x 4 (PCIe Gen3, Root Port &amp; Endpoint)</td>
<td>1 x 1 + 1 x 4 OR 1 x 1 + 1 x 1 + 1 x 2 (PCIe Gen2)</td>
<td>1 x 8 + 1 x 4 + 1 x 2 + 2 x 1 (PCIe Gen4, Root Port &amp; Endpoint)</td>
<td></td>
</tr>
<tr>
<td><strong>CSI Camera</strong></td>
<td>Up to 4 cameras</td>
<td>Up to 5 cameras (12 via virtual channels)</td>
<td>Up to 6 cameras (24 via virtual channels)</td>
<td>Up to 6 cameras (12 via virtual channels)</td>
<td>Up to 6 cameras (24 via virtual channels)</td>
<td>Up to 6 cameras (36 via virtual channels)</td>
</tr>
<tr>
<td><strong>DL Accelerator</strong></td>
<td>---</td>
<td>---</td>
<td>2x NVDLA Engines</td>
<td>---</td>
<td>2x NVDLA Engines</td>
<td>---</td>
</tr>
<tr>
<td><strong>Vision Accelerator</strong></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>7-Way VLIW Vision Processor</td>
<td>2x 7-Way VLIW Vision Processor</td>
</tr>
<tr>
<td><strong>Networking</strong></td>
<td>10/100/1000 BASE-T Ethernet</td>
<td>10/100/1000 BASE-T Ethernet</td>
<td>10/100/1000 BASE-T Ethernet</td>
<td>10/100/1000 BASE-T Ethernet</td>
<td>10/100/1000 BASE-T Ethernet</td>
<td>10/100/1000 BASE-T Ethernet</td>
</tr>
<tr>
<td><strong>Mechanical</strong></td>
<td>69.6 mm x 45 mm, 260-pin SO-DIMM connector</td>
<td>87 mm x 50 mm, 400-pin connector</td>
<td>100mm x 87mm, 699-pin connector</td>
<td>100mm x 87mm, 699-pin connector</td>
<td>100mm x 87mm, 699-pin connector</td>
<td>100mm x 87mm, 699-pin connector</td>
</tr>
</tbody>
</table>

[WWW.CONNECTTECH.COM](http://WWW.CONNECTTECH.COM)
New! AGX Inference Server
The AGX Inference Server is a high performance AI workstation powered by 12X NVIDIA Jetson AGX Orin Modules. Running NVIDIA’s most powerful deep-learning software.
- 12x 200 TOPs, 1792-Core Ampere GPU and 56 Tensor Cores
- 2x 10G SFP+ 2x 1G SFP uplink capability
- Up to 2TB of NVMe Storage per module
- 2U ATX style redundant PSU

New! Sentry-X
Sentry-X is ideal for Aerospace, Defense and Heavy Machinery or for any market that can benefit from the Jetson AGX Xavier’s incredible performance in a rugged enclosure.
- 2x GbE, 3x USB 3.1, 2x HDMI, 2x CAN 2.0b, 4x GPI, 4x GPO, 2x RS-232/422/485
- Unique Docking Stations
- Tested to MIL-STD-810G, DO-160G for shock & vibration, ingress protection of IP67

New! Sentry-X 38999
Sentry-X now offers a fully sealed, 38999 docking sled option using Meritec Hercules rugged, circular MIL-DTL-38999L Series III shell connectors.
- 2x GbE, 3x USB 3.1, 2x HDMI, 2x CAN 2.0b, 4x GPI, 4x GPO, 2x RS-232/422/485
- Tested to MIL-STD-810G, DO-160G for shock & vibration, ingress protection of IP67
- ATX style redundant PSU

New! Anvil for AGX Orin™
Ready to withstand the most compute intensive AI applications with its power-efficient and feature rich design. Seamlessly deploy your next generation autonomous vehicle, smart city application, or vision solution.
- 2x 10G Ethernet
- 8x GMSL2 or FPD-Link III camera inputs (optional)
- M.2, 2x M-Key, 1x B-Key, and 1x E-Key
- USB 3.2, External PCIe
- Wide Input Power Range +10 to +36V
Rudi-AGX

Rudi-AGX unleashes the full potential of the NVIDIA® Jetson AGX Xavier™ module, capable of running AI programs at Maximum Performance (Max-N).

- Expandable storage via NVMe and/or SD card.
- Connect up to 8x GMSL cameras
- Quickly Integrate WiFi, Bluetooth, LTE, and a video capture card
- 2x HDMI outputs and 4x USB for robust and flexible deployment

ESG610

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Rudi-NX

Rudi-NX is the ultimate Edge AI computing device for state-of-the-art, compute-intensive applications. Rudi-NX is powered by NVIDIA® Jetson Xavier™ NX or Orin™ NX.

- Extremely small footprint: 135mm x 50mm x 109mm
- I/O: 4x GMSL, USB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-485, I2C, GPIO, SPI, PWM
- 1x NVMe (PCIe x4, 2280), 1x SD Card
- -20°C to +80°C Operating Temperature Range

ESG602

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Rudi-NX FPD-Link III

Rudi-NX FPD-Link III is the ultimate Edge AI computing device for state-of-the-art, compute-intensive applications. Rudi-NX is powered by NVIDIA® Jetson Orin NX™.

- Extremely small footprint: 135mm x 50mm x 109mm
- I/O: 4x FPD-Link III, USB3.0, USB 2.0, CAN 2.0b, USB OTG, RS-485, I2C, GPIO, SPI, PWM
- 1x NVMe (PCIe x4, 2280),

ESG603

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Orin™ NX Inference Server

The Jetson Orin™ NX Inference Server is a low wattage, high-performance deep learning inference server powered by the NVIDIA® Jetson Orin™ NX 16GB module.

- 24x 100 TOPS, 1024 GPU CUDA cores with NVIDIA® Ampere™ architecture
- 2x 10G SFP+, 2x 1G SFP uplink capability
- 0°C to +60°C Operating Temperature Range

UTX2AS

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NEW!

NEW!
Rogue-X NVMe Adapter
XBG018

Expand your Rogue-X with 2 - 2230, 2242, 2260 or 2280 NVMe PCI x4 modules.

Features:
- PCIe Gen3 x4 interface
- 1x NVMe M.2 Key M Slot
- Direct 12V power from an AGX103 or 2.1 external positive barrel jack
- 107.95 x 63.5 mm
### CARRIER BOARD COMPARISON CHART

<table>
<thead>
<tr>
<th></th>
<th>Rogue Carrier</th>
<th>Rogue-X Carrier</th>
<th>Rogue-X2 Carrier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part Number</strong></td>
<td>AGX101</td>
<td>AGX103</td>
<td>AGX108</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>92mm x 105mm</td>
<td>105mm x 105mm</td>
<td>119.5mm x 105mm</td>
</tr>
<tr>
<td></td>
<td>(3.62&quot; x 4.13&quot;)</td>
<td>(4.13&quot; x 4.13&quot;)</td>
<td>(4.70&quot; x 4.13&quot;)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>103g (3.63oz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Camera Inputs</strong></td>
<td>6 x2 Lane MIPI CSI-2 OR 4 x4 Lane MIPI CSI-2</td>
<td>2x PCIe Gen2 x4 Connections for ximea xiX cameras</td>
<td>6x two lane MIPI CSI-2 OR 4x four lane MIPI CSI-2</td>
</tr>
<tr>
<td><strong>User Expansion</strong></td>
<td>1x M.2 Key-E Slot with PCIe &amp; USB (WiFi + BT modules)</td>
<td>2x PCIe Gen2 x4 1x M.2 Key-E Slot with PCIe &amp; USB (WiFi + BT modules)</td>
<td>1x M.2 Key-E expansion slot (WiFi + BT modules) 1x PCIe x8 Edge Card Connector</td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td></td>
<td>3x USB 3.1, 1x USB OTG</td>
<td></td>
</tr>
<tr>
<td><strong>Networking</strong></td>
<td></td>
<td>2x Gigabit Ethernet</td>
<td></td>
</tr>
<tr>
<td><strong>Display Output</strong></td>
<td></td>
<td>2x HDMI 2.0</td>
<td></td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>1x Micro SD/UFS Card Slot</td>
<td>1x Micro SD/UFS Card Slot</td>
<td>1x NVMe M.2 Key M Slots</td>
</tr>
<tr>
<td><strong>UART</strong></td>
<td>2x @ 3.3V levels UART0 and UART1</td>
<td>2x 3.3V Logic Level UARTs</td>
<td>1x USB based Debug UART3</td>
</tr>
<tr>
<td><strong>I2C/SPI</strong></td>
<td>1x I2C Channel @ 3.3V IO</td>
<td>1x SPI Channel @ 3.3V IO</td>
<td></td>
</tr>
<tr>
<td><strong>CAN</strong></td>
<td>2x CAN 2.0b Port</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GPIO</strong></td>
<td>4 bits of 3.3V (level shifted GPIO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Input Power</strong></td>
<td>9-19V DC Wide Input Power (4 pin Mini-fit Jr Connector) 14-19V required for full camera support with GPU under load</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-40°C to +85°C</td>
<td>-40°F to +185°F</td>
<td></td>
</tr>
</tbody>
</table>
CAMERA BOARDS

Basler MIPI Camera Board
This expansion board allows up to 4 Basler Dart cameras to be connected to all AGX Xavier™ and AGX Orin™ Carrier Boards.
• 4x 28 pin Hirose FH41 series FFC connectors to interface with Basler Dart MIPI cameras
• Onboard power regulation
• Compact Size
• 2x GPIO and 2x GPO Per Camera
• GPIO on board to support camera synchronization

GMSL Camera Platform
This expansion board supports up to 8x GMSL1 or GMSL2 cameras to be connected to all AGX Xavier™ and AGX Orin™ Carrier Boards.
• GMSL1 or GMSL2 protocols
• Internal or External Camera power
• Allows longer length cabling as well as a direct path to the Jetson AGX Xavier ISPs
• Power over Coax; 4x mini coax connector
• Input voltage protection and Software power cycle

Allied Vision MIPI Camera Board
This Camera Board allows for direct connectivity for up to six MIPI sensors without the need of additional hardware components.
• Simple integration of Allied Vision MIPI CSI-2 sensors to the Jetson AGX Xavier™ and AGX Orin™ platforms.
• Connect up to 6x 2-lane or 4x 4-lane MIPI Cameras
• Seamless integration to Jetson AGX Xavier and AGX Orin Carrier Boards

FPD-Link III Camera Platform
This expansion board allows for the connection of FPD-Link III Deserializers to be connected to Jetson AGX Xavier and AGX Orin Carrier Boards
• 8x FPD-Link III camera inputs, 2x per deserializer
• 16-lane MIPI output; single 4-lane MIPI CSI-2 per deserializer
• Power over Coax
• Internal or External Camera power
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Basler MIPI Camera Board</th>
<th>Allied Vision MIPI Board</th>
<th>GMSL Camera Platform</th>
<th>FPD-Link III Camera Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCB001</td>
<td>JCB005</td>
<td>JCB002</td>
<td>JCB006</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>75mm x 40.2mm (2.95” x 1.58”)</td>
<td>75mm x 40.2mm (2.95” x 1.58”)</td>
<td>75mm x 57mm (2.95” x 2.24”)</td>
<td>75mm x 57mm (2.95” x 2.24”)</td>
</tr>
<tr>
<td>Weight</td>
<td>25g</td>
<td>19g</td>
<td>50g</td>
<td>37g</td>
</tr>
<tr>
<td>Connector</td>
<td>1x High Density Connector</td>
<td>Camera Board will mate to the Camera Expansion Header on the Rogue, Rogue-X, Forge and Rogue or Orin Carrier Boards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camera Inputs</td>
<td>Up to 4 MIPI CSI-2 (4x 4-lane)</td>
<td>Up to 6x MIPI CSI-2 (4x 4-lane or 6x 2-lane)</td>
<td>8x Total (GMSL2/GMSL1)</td>
<td>8x Total</td>
</tr>
<tr>
<td>Deserializer</td>
<td>N/A</td>
<td>Maxim MAX9296A</td>
<td>Texas Instruments D590UB954</td>
<td></td>
</tr>
<tr>
<td>MIPI Output</td>
<td>N/A</td>
<td>A single 4-lane MIPI CSI-2 v1.3 output from each Deserializer (16-lanes total)</td>
<td>A single 4-lane MIPI CSI-2 v1.3 output from each Deserializer (16-lanes total)</td>
<td></td>
</tr>
<tr>
<td>Camera Input Connectors</td>
<td>4x 4-lane MIPI CSI-2 Connections to interface to Basler MIPI Cameras</td>
<td>6x MIPI CSI-2 connectors to interface to Allied Vision Alvium cameras</td>
<td>2x MATE-AX Quad Coax Connectors Breakout cables to FAKRA available</td>
<td>2x MATE-AX Quad Coax Connectors Breakout cables to FAKRA available</td>
</tr>
<tr>
<td>PoC (Power-over-Coax)</td>
<td>N/A</td>
<td>All 8 cameras will be sourced Power-Over-COAX from JCB002</td>
<td>All 8 cameras will be sourced Power-Over-COAX from JCB006</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note: While Boson, Quark, and Photon are compatible with NVIDIA Jetson Nano, TX2, and Xavier SoMs, some I/O availability will change across modules.
<table>
<thead>
<tr>
<th>Name</th>
<th>Hadron Carrier</th>
<th>Quark Carrier</th>
<th>Photon Carrier</th>
<th>Boson Carrier for FRAMOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>NGX012</td>
<td>NGX004</td>
<td>NGX002</td>
<td>NGX007</td>
</tr>
<tr>
<td>Dimensions</td>
<td>82.6mm x 58.8mm (3.25” x 2.31”)</td>
<td>82.6mm x 58.8mm (3.25” x 2.31”)</td>
<td>145mm x 64.5mm (5.7” x 2.53”)</td>
<td>90mm x 75mm (3.54” x 2.95”)</td>
</tr>
<tr>
<td>Ethernet</td>
<td>1x 1000BASE-T Ports</td>
<td>2x 1000BASE-T Ports</td>
<td>1x 1000BASE-T Uplink</td>
<td>2x 1000BASE-T Ethernet Ports</td>
</tr>
<tr>
<td></td>
<td>• 1x GBE from Jetson GBE Port</td>
<td>• 1x GBE from Jetson GBE Port</td>
<td>• PoE IEEE 802.3af-2003 (15.4W) PD</td>
<td>• 1 Port sourced directly from NX</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1x GBE from PCIe x1 i210 PHY</td>
<td>• PoE+ IEEE 802.3at-2009 (25.5W) PD</td>
<td>• 1 Port sourced from i210</td>
</tr>
<tr>
<td>USB + OTG</td>
<td>2x USB 3.1</td>
<td>1x USB 3.1</td>
<td>1x USB 3.1, 1x USB 2.0 OTG</td>
<td>1x USB 3.0 Gen 2 w/ OTG capability (Type C)</td>
</tr>
<tr>
<td></td>
<td>1x USB 2.0 (OTG)</td>
<td></td>
<td>1x USB FTDI UART</td>
<td>1x USB 2.0 (Type A)</td>
</tr>
<tr>
<td>MIPI Cameras</td>
<td>1x 4-lane MIPI CSI-2, 22-pin FPC Connector</td>
<td>2x 2-lane MIPI CSI-2</td>
<td>2x 2-lane MIPI CSI-2</td>
<td>Up to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 4x 2-lane MIPI FRAMOS Sensor Modules, or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 3x 4-lane FRAMOS Sensor Modules</td>
</tr>
<tr>
<td>Misc Interfaces</td>
<td>1x 3.3V TTL UART, 2x RS-232 Serial Ports, 4x PWM capable GPIO 1x 3.3V I2C, 1x 3.3V SPI</td>
<td>3x UARTs, 8x GPIO, 2x I2C 3.3V, 1x CAN 2.0b, 1x SPI</td>
<td>1x I2C, 4x GPIO, 1x Power Output</td>
<td>3x 3.3V TTL UARTs (1x CONSOLE), 8 GPIOs 3.3V TTL (2x PWM Capable), 2x I2C 3.3V, 1x CAN 2.0b, 2x SPI, 3x 3.3V, 2x 5V, 8x GND</td>
</tr>
<tr>
<td>Storage</td>
<td>1x 2242/2230 NVMe (M-Key)</td>
<td>1x Micro SD Card Slot</td>
<td>1x SD Card Slot</td>
<td>1x M.2 M-Key (2280) NVMe PCIe x4</td>
</tr>
<tr>
<td>Display Output</td>
<td>None (Headless Operation only)</td>
<td>None (Headless Operation only)</td>
<td>1x HDMI 2.0</td>
<td>1x Micro SD Card</td>
</tr>
<tr>
<td>Wireless Expansion</td>
<td>1x 2230 E-Key Expansion for WiFi/Bluetooth</td>
<td>N/A</td>
<td>1x 2230 E-Key Expansion for WiFi/Bluetooth 1x 2230 B-Key Expansion for LTE/GNSS</td>
<td>1x PCIe x1 + USB 2.0</td>
</tr>
<tr>
<td>Power Input</td>
<td>+9V to +60V DC</td>
<td>+5V DC Input (Positive Locking MiniTek Connector)</td>
<td>1x 2mm DC Barrel Jack +12V DC +/- 5%</td>
<td>+9V to +36V Input Voltage Range Auto-ON operation by default</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-25°C to +85°C (-13°F to +185°F)</td>
<td>-25°C to +85°C (-13°F to +185°F)</td>
<td>-25°C to +85°C (-13°F to +185°F)</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
</tr>
<tr>
<td>Weight</td>
<td>33g (1.16oz)</td>
<td>33g (1.16oz)</td>
<td>76g (2.68oz)</td>
<td>80g (2.82oz)</td>
</tr>
</tbody>
</table>

Hadron, Photon and Boson are compatible with Jetson Orin™ NX, Xavier™ NX, TX2™ NX, Orin™ Nano and Nano™. While Quark is only compatible with Jetson Nano™, TX2™ NX, and Xavier™ NX SoMs, some I/O availability will change across modules.
Jetson™ Thermal Solutions & Accessories

**THERMAL SOLUTIONS**

**ACTIVE HEAT SINKS**
- Jetson Orin NX/Nano XHG325
- Jetson Xavier NX & Nano XHG312, XHG314, XHG309
- Jetson TX2-NX XHG318

**PASSIVE HEAT SINKS**
- Jetson Orin NX/Nano XHG324
- Jetson Xavier NX & Nano XHG311, XHG308
- Jetson TX2 NX - XHG317

**THERMAL PLATES**
- Jetson Orin NX/Nano XHG323
- Jetson Xavier NX & Nano XHG313, XHG310
- Jetson TX2 NX - XHG316

Jetson Accessories: Connect Tech carrier boards and system level solutions offer a wide variety of expansion options and accessories.

Accessories include: Cables, antennas, power supplies, camera adapters, camera expansions, enclosures, thermals, WiFi modules, 5G & LTE Modules, frame grabbers, storage, bluetooth modules, and more.
Superior thermal management, keeping your NVIDIA® Jetson AGX™ module cool under heavy loads for maximum performance.

- Industrial grade Liquid Cooling solution
- Ideal for space constrained or limited airflow applications
- 8 customizable side ports where inlet/outlet flow can be directed
- Incredibly quiet, high-performance heat dissipation solution

Liquid Cooling Block

Efficiently dissipates heat from your NVIDIA® Jetson AGX Orin™ and AGX Xavier™ modules, ensuring optimal performance and longevity.

- Specifically designed to fit the NVIDIA® AGX Orin. Also compatible with Jetson AGX Xavier™ modules
- Dissipates the heat produced by the module through convection
- Dimensions: 100x87x26.7

Passive Heat Sink

This active heat sink features a built-in fan for enhanced cooling, ensuring optimal performance and longevity of your NVIDIA® Jetson AGX™ module.

- Specifically designed to fit the NVIDIA® AGX Orin. Also compatible with Jetson AGX Xavier™ modules
- Dissipates the heat produced by the module through a fan
- Dimensions: 100mm x 87mm x 36.7mm

Active Heat Sink

Efficiently dissipates heat from your NVIDIA® Jetson AGX Orin™ and AGX Xavier™ modules, ensuring optimal performance and longevity.

- Specifically designed to fit the NVIDIA® AGX Orin. Also compatible with Jetson AGX Xavier™ modules
- Dissipates the heat produced by the module through convection
- Dimensions: 100x87x26.7

NEW!

XHG319

XHG320

XHG307

NEW!

XHG307

Passive Heat Sink

XHG320

Liquid Cooling Block

NEW!

XHG319

Active Heat Sink

NEW!

XHG320

Liquid Cooling Block

NEW!

XHG307

Connector Saver

The NVIDIA® Jetson AGX Xavier™ Connector Saver attaches directly to the AGX Xavier production module to save your connector from wear.

- Minimizes contact damage
- Protects connectors from mating and unmating wear
- Dimensions: 92mm x 105mm (3.62” x 4.13”)
- Compatibility: NVIDIA Jetson AGX Xavier, Connect Tech Rogue Carrier

NEW!

ADG110

Connector Saver

NEW!

ADG110

Connector Saver
Jetson™ TX2/TX2i

EMBEDDED SYSTEMS

Cogswell Vision System
Cogswell Vision System is integrated with the NVIDIA® Jetson™ TX2. It comes in an anodized metal enclosure and is both fanless and cable free.
- Specifically designed for use with GigE Vision Cameras
- 5 x Gigabit Ethernet Channels – 4 x PoE, 2 x PoE+ PSE Gigabit Ports
- Only a single +12V input required; No external 48V PoE power required
- 1 x USB 3.0, 1x USB 2.0, 1x USB OTG, 2x RS-232, 1x miniPCIe, 1x mSATA

Rosie Embedded System
Rosie is a small form factor, rugged embedded system pre-integrated with the NVIDIA Jetson TX2 or TX2i. It is housed in a rugged compact enclosure.
- 163.6mm x 108.0mm x 96.3mm (6.438” x 4.250” x 3.790”)
- 1x HDMI, 2x GbE, 2x USB 2.0, IEEE 802.11 ac, 1x RS-232
- +9V to +36V Power Input
- Designed to MIL-STD 810G and DO 160G for shock and vibration
- Designed to IP68 ingress protection

Rudi Embedded System
Rudi holds a lot of power in a small package and is pre-integrated with NVIDIA Jetson TX2, providing 256 CUDA® Cores.
- 1 TFLOP/s, 256 CUDA cores with NVIDIA Pascal GPU Architecture
- Extremely small footprint 135mm x 50mm x 105mm
- USB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-232, I2C, GPIO, WiFi, Bluetooth
- 1 x miniPCIe Slot with PCIe & USB Connectivity

TX2 Inference Server
The TX2 Inference Server is a low wattage, high performance deep learning inference server powered by the NVIDIA Jetson.
- 24x 1 TFLOP/s, 6,144 GPU CUDA cores with NVIDIA Pascal architecture
- 2x 10G SFP+, 2x 1G SFP Uplink Capability
- 3x 2.5” SATA drives
- 1U ATX style redundant power supply
Jetson™ TX2/TX2i

**CARRIER BOARDS**

**Orbitty Carrier**
Orbitty Carrier is designed to match the NVIDIA® Jetson™ TX2/TX2i module form factor. Orbitty is our best selling solution due to its combination of features, price point, and size.

- Ideal for robotics and unmanned applications or any small form factor rugged environment
- Extremely Small Size: 87mm x 50mm (3.42” x 1.96”)
- 1x GbE, USB 3.0, USB 2.0, 1x HDMI, 1x MicroSD, 2x 3.3V UART, I2C, 4x GPIO
- +9V to +14V DC Nominal (+19V Peak)

**Elroy Carrier**
Designed to match the NVIDIA Jetson TX2 or TX2i form factor. With locking pin-header connectors and industrial temperature range components, the Elroy is ideal for use in drones.

- Extremely Small Size: 87mm x 50mm (3.42” x 1.96”)
- Head-to-head dual Mini-PCIe
- Dual x2 MIPI CSI-2 Video Inputs
- Locking pin-connectors
- Operating Temperature -40°C to +85°C (-40°F to +185°F)

**Astro Carrier**
Astro is specifically designed to work with the NVIDIA Jetson TX2 or TX2i. The Astro Carrier provides access to features found on the Jetson TX2/TX2i

- 2x 1GbE (10/100/1000) Ports
- USB & HDMI Ports
- Use with COTS or custom breakout boards
- Extended Temperature Range -40°C to +85°C (Astro Carrier)
- Video Inputs: MIPI, GMSL (ASG012)

**Sprocket Carrier**
Sprocket Carrier is designed to match the NVIDIA Jetson TX2/TX2i module form factor. The Sprocket is our lowest price entry level product.

- Slimmest design possible in Z-axis
- All components fit "under" TX2/TX2i
- Extremely Small Size: 87mm x 50mm (3.42” x 1.96”)
- 1x USB OTG, 1x4 lane MIPI CSI-2, 2x 3.3V UART, I2C, 4x GPIO
- +12V to +16V DC Input Range
Jetson™ TX2/TX2i

CARRIER BOARDS

Cogswell Carrier
Cogswell Carrier for NVIDIA® Jetson™ TX2 and TX2i is ideal for use in Gigabit Ethernet Vision applications. Provides Gigabit Ethernet channels with built-in Power over Ethernet (PoE).
- Specifically designed for use with GigE Vision Cameras
- 5 x Gigabit Ethernet Channels – 4 x PoE, 2 x PoE+ PSE Gigabit Ports
- Only a single +12V input required; No external 48V PoE power required
- 1 x USB 3.0, 1x USB 2.0, 1x USB OTG, 2x RS-232, 1x miniPCIe, 1x mSATA

Spacely Carrier
Spacely Carrier for NVIDIA Jetson TX2/TX2i is an ideal product for unmanned vehicle applications, or any application where situational awareness is critical.
- Built-in expansion for a GPS/GNSS module
- Connect up to 6 MIPI CSI-2 Camera Inputs
- Tailored I/O for easy connection to Pixhawk Autopilot
- 2x GbE, 1x uHDMI, 2x USB 3.0, 2x USB 2.0, 1x USB CLIENT, 1x miniPCIe Slot

Quasar Carrier
Very similar to the popular Orbitty Carrier, the Quasar brings in a few new features while maintaining the small 87mm x 50mm footprint.
- Additions*: 2x USB 3.0, 1x 4-lane MIPI (I-PEX), 1x CAN, SATA 7-pin connector for storage
- Updated 1x HDMI 2.0 connector
- +9V – +14V DC Nominal (+19V Peak)

NVIDIA TX2 Dev Kit Carrier
The NVIDIA TX2 Dev. Kit Carrier features 12 lanes MIPI CSI-2, D-PHY 1.2, HDMI 2.0, GPIO, I2C, I2S, SPI, UART. This Carrier contains the same footprint and IO placements as TX2 Dev Kit.
- NVIDIA TX2 Dev Kit Replacement (drop-in)
- Additional USB 3.0 Ports (5x Ports Total)
- +9V – +14V DC Nominal (+19V Peak)
<table>
<thead>
<tr>
<th></th>
<th>Orbitty</th>
<th>Quasar</th>
<th>Elroy</th>
<th>Astro</th>
<th>Sprocket</th>
<th>Cogswell</th>
<th>Spacely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part Number</strong></td>
<td>ASG003</td>
<td>ASG016</td>
<td>ASG002</td>
<td>ASG001 w/ XB0206</td>
<td>ASG008</td>
<td>ASG007</td>
<td>ASG006</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>87mm x 50mm (3.425&quot; x 1.968&quot;)</td>
<td>87mm x 50mm (3.425&quot; x 1.968&quot;)</td>
<td>87mm x 50mm (3.425&quot; x 1.968&quot;)</td>
<td>87mm x 57mm (3.43&quot; x 2.24&quot;)</td>
<td>87mm x 50mm (3.425&quot; x 1.968&quot;)</td>
<td>178mm x 147.5mm (7.008&quot; x 5.81&quot;)</td>
<td>125mm x 95mm (4.92&quot; x 3.74&quot;)</td>
</tr>
<tr>
<td><strong>Mini-PCIe/ mSATA</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>1x Mini-PCIe/mSATA half or full size (use of full size removes secondary Mini PCIe slot)</td>
<td>1x half size card or 1x full size card PCIe and USB signalling (Mini PCIe)</td>
<td>N/A</td>
<td>1 x miniPCIe Slot with PCIe &amp; USB, x mSATA Full Size Slot</td>
<td>1 x miniPCIe Slot with PCIe, USB + SIM; 1x mSATA Full Size Slot</td>
</tr>
<tr>
<td><strong>SATA</strong></td>
<td>N/A</td>
<td>1x SATA (7-pin Data Connector)</td>
<td>1x mSATA half or full size (use of full size removes secondary Mini PCIe slot)</td>
<td>1x SATA Link</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>1x HDMI</td>
<td>1x HDMI</td>
<td>1x HDMI</td>
<td>1x HDMI</td>
<td>2x 3.3V from TX2 UART0 + UART1</td>
<td>2x 3.3V from TX2 UART0 and UART1</td>
<td>1x HDMI</td>
</tr>
<tr>
<td><strong>Serial</strong></td>
<td>2x 3.3V UART through discreet connector</td>
<td>2x 3.3V UART through discreet connector</td>
<td>2x RS-232/RS-485</td>
<td>2x RS-232/RS-485</td>
<td>2x 3.3V from TX2 UART0 + UART1</td>
<td>2x RS-232</td>
<td>2x 3.3V from TX2 UART0 and UART1</td>
</tr>
<tr>
<td><strong>CAN</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1x CAN 2.0b Port</td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td>1x USB 3.0, 1x USB 2.0 OTG</td>
<td>2x USB 3.0</td>
<td>1x USB 3.0 (Integrated USB 2.0), 1x USB 2.0</td>
<td>1x USB 3.0, 2x USB 2.0</td>
<td>1x USB OTG</td>
<td>1 x USB 3.0, 1x USB OTG (Micro-AB), 1x USB 2.0, 1 x USB, 2.0 to miniPCIe</td>
<td></td>
</tr>
<tr>
<td><strong>Ethernet</strong></td>
<td>1x GbE</td>
<td>1x GbE</td>
<td>1x GbE</td>
<td>2x GbE</td>
<td>N/A</td>
<td>5 x GbE (4x PoE, 2x PoE+)</td>
<td>1x GbE</td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td>HDMI Integrated Audio</td>
<td>HDMI Integrated Audio</td>
<td>HDMI Integrated Audio</td>
<td>HDMI Integrated Audio</td>
<td>N/A</td>
<td>N/A</td>
<td>HDMI Integrated Audio</td>
</tr>
<tr>
<td><strong>SD Card</strong></td>
<td>1x microSD Card Slot</td>
<td>1x microSD Card Slot</td>
<td>1x microSD Card Slot</td>
<td>1x microSD Card Slot</td>
<td>N/A</td>
<td>1x microSD Card Slot</td>
<td>1x microSD Card Slot</td>
</tr>
<tr>
<td><strong>Video Inputs</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>2x 2-Lane (2x) MIPI CSI 2.0</td>
<td>1 x 2 Lane MIPI CSI-2</td>
<td>1 x 4 lane MIPI CSI-2</td>
<td>5x capable GbE ports</td>
<td>6 x 2 Lane MIPI CSI-2 OR 3 x 4 Lane MIPI CSI-2</td>
</tr>
<tr>
<td><strong>Misc</strong></td>
<td>I2C, 4x GPIO</td>
<td>2x 3.3V UART, I2C, 4x GPIO, 1x CAN</td>
<td>1x I2C Link, 1x SPI Link, 1x System Control, 1x RTC Battery Input, 4x GPIO</td>
<td>1x I2C Link, 1x System Control, 1x RTC Battery Input, 4x GPIO</td>
<td>1x USB OTG, I2C, 4x GPIO</td>
<td>1x USB OTG, I2C, CAN, GPIO, 1x GPS/GNSS (optional), SPI Channel (3.3V IO)</td>
<td></td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td>+9V to +14V DC Nominal (+19V Peak)</td>
<td>+9V - +14V DC Nominal (+19V Peak)</td>
<td>DC Input Range +12V DC Nominal Input</td>
<td>+9V to +36V Input</td>
<td>+9V to +16V DC</td>
<td>+12 DC Only</td>
<td>+12V to +22V DC</td>
</tr>
</tbody>
</table>
CONNECT TECH

NVIDIA® Ampere™ MXM Solutions

COM Express Type 6 + GPU Embedded System
The COM Express® Type 6 + GPU Embedded System combines High-End NVIDIA GPUs with latest generation x86 processors into a ruggedized small form factor embedded system.

- GPUs can be targeted for independent display outputs OR for a headless GPU processing system utilizing CUDA® cores
- CPU: Intel Raptor Lake (13th Gen), Alder Lake (12th Gen) and Tiger Lake (11th Gen) options available
- GPU: NVIDIA RTX A4500, A2000, A1000 & A500 (Ampere) & RTX 5000, RTX 3000 and T1000 (Turing) Options Available

VXG SERIES

COM Express Type 7 + GPU Embedded System
The COM Express Type 7 + GPU Embedded System combines 2x 10 Gbe with Intel Xeon® D (Server Class) processors with high-end NVIDIA GPUs all into a small form factor embedded system.

- GPUs can be targeted for independent display outputs OR for a headless GPGPU processing system using CUDA® cores
- CPU: Intel Ice Lake D, Broadwell D and Denverton Server Class Options Available
- GPU: NVIDIA RTX A4500, A2000, A1000 & A500 (Ampere) & RTX 5000, RTX 3000 and T1000 (Turing) Options Available

V7G SERIES

E7G GPU System
The V7G GPU System combines Intel Xeon D (Server Class) and Intel Atom C3000 x86 processors with high-end NVIDIA Quadro GPUs in a black aluminum enclosure. Half-rack rail mount or Standalone mounting brackets available.

- Ideal for highend encode/decode video applications or GPGPU CUDA processing, Deep Learning and AI applications.
- CPU: Intel Ice Lake D, Broadwell D and Denverton Server Class Options Available
- GPU: NVIDIA RTX A4500, A2000, A1000 & A500 (Ampere) & RTX 5000, RTX 3000 and T1000 (Turing) Options Available

ESG7 SERIES

Connect Tech is a leader in high-end compute platforms for the embedded market. Choose from the latest NVIDIA GPUs paired with Xeon D (Server Class) and Intel Atom C3000 x86 processors in a compact system designed to be highly portable. Available in a fully enclosed system as well as a non-enclosed version for customer designed thermal solutions.
CHAT WITH THE JETSON EXPERTS

Our technical support team is easily accessible and allows for direct Engineer to Engineer communication. Our NVIDIA Jetson Support page has Board Support Packages, User Manuals, Videos, and Articles on Flashing, Storage, and Integration.

Skilled & Expert Technical Staff Ready to Help
Visit connecttech.com/support
**COM-HPC Carrier Board**

Our first Carrier Board for the new COM-HPC platform. This carrier board features high-speed PC style connectors and locking pin header connectors.

- 2 x 2.5-Gigabit Ethernet
- 3 x USB4 via USB type C
- 1 x 3042 M.2 B-Key, 1 x 2230 M.2 E-Key, 1 x 16-Lane PCIe Expansion
- Dimensions: 160mm x 120mm
- Extended Temperature Range: -40°C to +85°C

**Type 7 Carrier Board**

This Type 7 Carrier Board is ideal for high-compute, enterprise level applications needing access to high-end Intel® Xeon® D class and Intel® Atom® C3000 processors.

- Dual 10-Gigabit Ethernet
- Ultra High Speed Storage with M.2 NVMe SSD support
- Extremely Small Form Factor: 125 x 95mm
- Extended Temperature Range: -40°C to +85°C

**Type 10 Carrier Board**

CCG030 provides high density board to board connectors for use with either off-the-shelf or custom breakout boards, dramatically reducing the need for cabling.

- Extremely small size: 84mm x 55mm
- Support for the latest generation of low-powered CPUs
- 2x USB 2.0 (Mini-PCIe), 2x USB 3.0, 4x USB 2.0, 1x SATA 2.0 Port, 1x Mini PCIe Half Size with SIM Card Slot, 1x Mini-PCIe/mSATA

**Type 10 Stacking Carrier**

The Type 10 Mini Carrier Board is an extremely small carrier board featuring rugged, locking connectors and offers the ultimate in durability.

- Extremely small size: 84mm x 55mm
- Now supporting USB 3.0 on CCG020 model
- 2 x mini PCIe, mSATA, SATA, 2 x GBE, 6 x USB, LVDS, DisplayPort HDMI/DVI/VGA, HD Audio, 2x RS 232/422/485
COM Express Carrier Boards

**TYPE 6**

**Type 6 104e**
This is a compact carrier board which matches the dimensions of a COM Express® Basic module and offers the ultimate durability with rugged, locking pin header connectors.
- 4x USB 3.0, 2x GbE, 2x RS-232/485, LVDS (2x24), VGA
- PCIe/104 Type 1 (CCG018) or PCIe/104 Type 2 (CCG017)
- On-Board DisplayPort/HDMI/DVI display switching
- Extended temperature range -40°C to +85°C

**CCG017/CCG018**

**Type 6 Rugged Ultra Lite Carrier Board**
The Type 6 Rugged Ultra Lite Carrier Board is compact. It offers the ultimate durability with locking, rugged pin headers. CCG011 supports only USB 2.0 and CCG012 supports USB 3.0.
- Mini-PCIe Expansion, USB 2.0, DisplayPort++
- Small size, 95mm x 125mm
- Supports latest Intel® processor sets
- Extended temperature range -40°C to +85°C

**CCG011/CCG012**

**Type 6 Ultra Lite Carrier Board**
The Type 6 Ultra Lite Carrier Board is a compact carrier board with standard PC connectors and is ideal for space constrained applications.
- COM Express® Type 6 Compatibility
- Mini-PCIe Expansion
- Supports latest Intel® processor sets
- Extended temperature range -40°C to +85°C

**CCG008**

**SMARC**

**SMARC 2.0 Carrier**
Connect Tech’s SMARC 2.0 carrier is an extremely small SMARC carrier board ideal for low power IoT applications. Users can take advantage of the integrated on-board wireless capabilities.
- Feature Packed (HDMI, SATA, 2x MIPI CSI-2 Camera Interfaces)
- 2x USB 3.0, 2x USB 2.0, 2x USB 2.0 to miniPCIe
- Input Voltage +5V DC only
- Extended temperature range -40°C to +85°C

**SRG004**
Embedded Ethernet Devices

10GbE

**Xtreme/10G Managed Ethernet Switch /Router**

Xtreme/10G Managed Ethernet Switch/Router provides high density, high port count Layer 2 switching and Layer 3 routing with 10G uplinks. A total of 36 switchable ports, with 12x 10G/5G/2.5G and 24x 2.5G/1GbE copper ports in an extremely small form factor 85mm x 85mm (3.35” x 3.35”).

XDG205 features 1588 PTP support!

**LINQ/GbE**

LINQ/GbE is a Rugged Managed Ethernet Switch Box. LINQ/GbE series of products offers 12 or 24 Ethernet ports of 10/100/1000 Mbps.

- 12 and 24 Port 10/100/1000 Mbps Managed Switch Box
- Ruggedized Sealed RJ-45 Acclimate Connector Series
- IP68 Dust and Waterproof Solid Aluminum Enclosure
- Layer 2+ Carrier Ethernet Management
- Low Power Passively Cooled Construction

**Xtreme/GbE Managed Carrier Ethernet Switch**

This 8 or 12 port Ethernet Switch is available with either standard RJ45 or rugged latching connectors, conduction cooled heatplates, and PC/104, PCIe/104 or standalone options.

- Conduction cooled Heatplate or Air cooled
- 8 or 12 Port 10/100/1000 Mbps Switch
- Carrier Grade Ethernet Switching
- Available with RJ-45 or Rugged Locking connectors
- PC/104 Compliant: 4.550” x 4.393” (115.57mm x 111.58mm)
- Extended Temperature Range -40°C to +85°C (-40°F to +185°F)

Software Packages for Managed Ethernet Switches

Connect Tech’s software design team builds support for our line of managed ethernet switches using industry-leading firmware.

IStaX

### Xtreme/GbE Managed Carrier Ethernet Switch

[XDG004-XDG010, XDG012 XDG013, XDG016-XDG023

**XDG205**

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IStaX

**XDG004-XDG010, XDG012 XDG013, XDG016-XDG023**
1GbE

Xtreme/GbE 24-Port Managed Carrier Ethernet Switch

Xtreme/GbE 24-Port Managed Carrier Ethernet Switch provides high density, high port count, Carrier Grade Ethernet switching capabilities in an extremely small embedded form factor. Excellent for any space constrained, mission-critical application needing an embedded high-density/high-port count managed Ethernet Switch.

XDG024/XDG025

The XDG025 is designed for standalone applications, with all thermal extraction on one layer and connector/cabling on the opposite layer. Where as the XDG024 is intended to stack directly into a PCIe/104 stack.

- 24 Port Gigabit Ethernet (10/100/1000 Mbps) Switch
- All 24 Port Magnetics Integrated on-board
- High-Density Ruggedized Board-to-Board/Board-to-Cable Port Breakout
- Extremely Small Footprint 90 × 96 mm (3.550 × 3.775 inches)
- Conduction cooled Heatplate or Air cooled Heatsink Options
- Extended Temperature Range -40°C to +85°C

Breakout Boards

XBG001 XBG002 XBG003

Xtreme/GbE 24-Port Managed Carrier Ethernet Switch provides high density, high port count, Carrier Grade Ethernet switching capabilities in an extremely small embedded form factor. Excellent for any space constrained, mission-critical application needing an embedded high-density/high-port count managed Ethernet Switch.

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- All 24 Port Magnetics Integrated on-board
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- Extended Temperature Range -40°C to +85°C

XDG025 (flipped)

Conduction Cooled Heatplate
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We’re proud to offer a convenient way for our customers to stay up-to-date with the latest BSP software updates. Our web page allows users to subscribe to updates for their purchased hardware, ensuring that they have access to the latest features and improvements. We’ve made it easy for our customers to receive them directly through their inbox.

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Consider the following when starting your Jetson project:

- Developer Kits vs. Production Modules - Offer different storage capabilities
- On-board eMMC vs. External SD card vs. NVMe SSD
- Carrier Board or System Solutions - Provide additional capabilities, including SD or NVMe storage. Review Connect Tech’s lineup within this Product Guide

READ THE FULL ARTICLE AT CONNECTTECH.COM/NEWS

JETSON ORIN NX PERFORMANCE

Connect Tech compares NVIDIA Jetson Orin NX to Xavier NX. See performance gains over multiple models on various sensor and vision sources. Scan to watch the
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Connect Tech Inc. is NVIDIA’s largest global embedded hardware partner offering a wide array of NVIDIA® Jetson™ solutions, as well as embedded products for a variety of industry standards including COM Express, SMARC, and more. With over 38 years of embedded computing experience, Connect Tech’s range of proven technology includes complete embedded systems, carrier boards, and thermal solutions, just to name a few. With in-house design and manufacturing services, Connect Tech can provide fast turn-around of custom design services, taking you from development to deployment in record time.

Connect Tech Inc. - ISO 9001:2015 Certified

Serving customers around the globe

Tel: 519.836.1291
Toll Free: 800.426.8979 (North America)
sales@connecttech.com
www.connecttech.com

489 Clair Road West, Guelph, ON, Canada, N1L 0H7