Connect Tech employs a team of professionally accredited Hardware, Software, and Mechanical Engineers, backed by years of experience in the field. From board level through to finished packaged goods, Connect Tech can provide an end to end solution.

**CUSTOM DESIGN PROCESS**
Our first step is to gain understanding of the Customers’ requirement; from there we create a preliminary hardware specification to relay our understanding and demonstrate our approach to meeting the design need. Once we have an agreed upon specification we clearly define a statement of work including schedule, deliverables, terms and conditions. We pride ourselves on providing our customers with quick time to market and on-time project completion. On average we are delivering fully verified, functional prototypes within an 8 week period.

**COMPLIANCE & CERTIFICATION**
All standard and custom designed products use a “design for certification” approach as we know that many of our products will require some level of certification for the various markets that we support. Connect Tech has tested and passed compliance with MIL-STD 810G, DO-160G, FCC, CE, UL, CSA and more. We are an ISO-9001 (2008) certified company.

**CONCEPT TO SOLUTION FACILITY**
Our facility is well equipped from Engineering through to Manufacturing. Our team has full access to current design tools and the required equipment to test and validate high speed signaling used in many of our circuit board designs. We are equipped with a thermal chamber, 3D printer, Multiple Dual In-line High Speed SMT with 7 + 2 zone oven, Aqueous Wash System, Selective Soldering Machine, AOI and X-ray and BGA replacement station.

**TECHNICAL SUPPORT**
Our technical support team is easily accessible and allows for direct contact with an Engineer. From pre-sales through to installation and troubleshooting our team will have you up and running in no time. Our team follows a strict escalation process to ensure all concerns are addressed in a timely fashion.

**CUSTOMER SERVICE**
We strive to provide quick and thorough responses to all current and potential clients and recognize that each of our customers has unique needs. In the case of highly technical sales inquiries we are quick to get our Engineering team involved, arranging for “Engineer-to-Engineer” conference calls and web based meetings. Quick access to inventory; whether it be for an order or an evaluation; is extremely important to us. We carry a large inventory of our popular products and fill most orders within a 2-5 day lead time.
### FORM FACTORS

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**Note:** Specifications found in this guide are subject to change without notice.
### COM Express® Type 6

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<th>Carrier Type</th>
<th>Features</th>
<th>Image</th>
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<tr>
<td><strong>COM Express® Type 6 Carrier</strong></td>
<td>Utilizes dual High Density connectors to rapidly advance project development. Use with off the shelf breakout boards for development while your custom breakout is designed to meet your needs.</td>
<td><img src="image" alt="COM Express® Type 6 Carrier" /></td>
</tr>
<tr>
<td><strong>COM Express® + GPU Carrier</strong></td>
<td>Bring exceptional desktop-level graphics and GPU processing power to the PCIe/104 and COM Express® form factors. Supports 6th Generation Intel® Core™ i7 Processors and high-end NVIDIA® Pascal™ and Maxwell™ GPU architectures.</td>
<td><img src="image" alt="COM Express® + GPU Carrier" /></td>
</tr>
<tr>
<td><strong>COM Express® Type 6 Rugged Ultra Lite Carrier</strong></td>
<td>A small carrier board, offering durability with locking, rugged pin headers.</td>
<td><img src="image" alt="COM Express® Type 6 Rugged Ultra Lite Carrier" /></td>
</tr>
<tr>
<td><strong>COM Express® Type 6 104e</strong></td>
<td>A compact carrier board matching the dimensions of a COM Express® Basic module with a PCIe/104 Expansion Bus.</td>
<td><img src="image" alt="COM Express® Type 6 104e" /></td>
</tr>
<tr>
<td><strong>COM Express Type 6 Carrier</strong></td>
<td>Utilizes dual High Density connectors to rapidly advance project development. Use with off the shelf breakout boards for development while your custom breakout is designed to meet your needs.</td>
<td><img src="image" alt="COM Express Type 6 Carrier" /></td>
</tr>
</tbody>
</table>

- **Features**
  - 95mm x 125mm (3.74” x 4.92”)
  - 3x Mini PCIe Modules
  - 4x GbE Ports with On-Board Magnetics
  - Rich I/O Feature Set
  - -40°C to +85°C
COM Express® Type 6 Ultra Lite Carrier

COM Express® Type 6 PMC/XMC Carrier

COM Express® Type 2 Carrier

COM Express® Type 6 Ultra Lite Carrier is ideal for space constrained applications. Supports multiple processor options.

Features
- 95mm x 125mm (3.74” x 4.92”)
- 4x USB 3.0, 2x GbE, 2x Mini PCIe/mSATA, 2x External SATA, LVDS (2x24), HDMI, DisplayPort
- -40°C to +85°C

COM Express® Type 6 PMC/XMC Carrier is a highly advanced, feature-rich carrier which offers PMC/XMC and Mini-PCIe expansion.

Features
- 381mm x 190mm (15” x 7.48”)
- Designed for 1U or 2U Rack Mount Chassis
- 2x PMC/XMC Expansion
- 4x Mini-PCIe, 8x RS-232/485
- -40°C to +85°C

COM Express® Type 2 Carrier is a full-featured, compact carrier board that is compatible with COM Express® Type 2 Basic and Compact modules.

Features
- 175mm x 115mm (6.89” x 4.52”)
- COM Express Type 2
- PCI-104 and PCIe/104 Expansion
- 4x RS-232, 4x RS-485
- -30°C to +80°C

COM Express® Type 7 Lite Carrier

Connect Tech’s COM Express® Type 7 Lite Carrier Board is based on the PICMG COM Express® COM.0 R3.0 specification. It includes 2x 10G Ethernet from SFP+ modules, 2x GbE ports (RJ45), 4x USB 3.0, 2x USB 2.0, full and half size Mini PCIe expansion slots, 1x USB 2.0 Micro-B Connector to FTDI USB UART, 4x 3.3V buffered GPIO, and 4-pin PWM controlled fan connector.

The carrier board is ideal for high-compute, enterprise level applications that have a need for a rugged solution providing high-speed interconnects and up to 32Gb memory.

Features
- COM Express Type 7 Module Support
- Dual 10GbE Ethernet
- Ultra High Speed Storage with M.2 NVMe SSD support
- Small Form Factor: 125 x 95mm
- Extended Temperature Range, -40°C to +85°C
<table>
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<tr>
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<th>COM Express® Ultra Lite Carrier Type 6</th>
<th>COM Express® Type 6 Rugged Ultra Lite Carrier</th>
<th>COM Express® Type 6 PMC/XMC Ultra Lite Carrier</th>
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<th>COM Express® Type 6 104e</th>
<th>COM Express® Type 6</th>
<th>COM Express® Type 6 104e</th>
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<td>Input Power Options</td>
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<td>125 x 95mm</td>
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<td>-40°C to +85°C -40°F to 185°F</td>
<td>-40°C to +85°C -40°F to 185°F</td>
<td>-40°C to +85°C -40°F to 185°F</td>
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<td>Rugged Locking Connectors</td>
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</tr>
</tbody>
</table>

* can be used as HDMI, DVI, or VGA via dongle  ** Available as High Density Connector
### COM Express® Type 10 Carrier Types

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Features</th>
<th>PC Connectors</th>
<th>COM Connectors Type 7 Carrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCG022</td>
<td>Mini Rugged Latching Carrier</td>
<td>Small carrier board featuring rugged, locking connectors and offers the ultimate durability.</td>
<td>2 slots</td>
<td>-</td>
</tr>
<tr>
<td>CCG070</td>
<td>Mini Rugged Latching Carrier</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CCG010, CCG020</td>
<td>I/O Stacking Carrier</td>
<td>Utilizes a high density connector to rapidly advance project development. Use with shelf breakout boards or easily design a custom breakout to meet your needs.</td>
<td>84mm x 75mm (3.307&quot; x 2.165&quot;)</td>
<td>-</td>
</tr>
<tr>
<td>CCG030</td>
<td>PC Connectors Carrier</td>
<td>-</td>
<td>8x 3.3 buffered GPIO</td>
<td>-</td>
</tr>
<tr>
<td>CCG022</td>
<td>COM Express® Type 10 Carrier</td>
<td>Small Form Factor: 95mm x 95mm (3.74&quot; x 3.74&quot;)</td>
<td>2x Mini PCIe, 1x M.2 NVMe</td>
<td>1x High Density Connector for Breakout Board Utilization</td>
</tr>
<tr>
<td>CMG601</td>
<td>COM Express® TK1</td>
<td>Small size 84mm x 73.415mm</td>
<td>2x MIPI CSI, 1x GbE, 1x SATA, 1x micro SD, 5x USB 2.0, 1x USB 3.0, 4x UARTS</td>
<td>15 watts max (+12VDC)</td>
</tr>
</tbody>
</table>

**Features**
- 84mm x 75mm (3.307" x 2.165")
- 2x Half Sized Mini PCIe
- +6V to +14V Input Power
- -40°C to +85°C
- +4x PCIe x1**
- 1x PCIe x16**
- 84mm x 73.415mm
- -4°C to +85°C
- -40°F to 185°F
- PC style and locking pin header
- Ubuntu 14.04 LTS Operating System
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.

**Features**

- 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 of 90mm x 96mm (3.550” x 3.775”)
- Conduction cooled Heatplate or Air cooled Heatsink Options
- -40°C to +85°C
1GbE and 10G Solutions

**Xtreme/GbE Managed Carrier Ethernet Switch** provides Carrier Grade Ethernet switching capabilities in an extremely small embedded form factor.

**Features**
- 8, 12, or 24 Port (10/100/1000 Mbps) Switch
- Conduction cooled or Air cooled
- Web GUI or CLI Management
- With RJ-45 or Rugged Locking connectors
- -40°C to +85°C

**LINQ/GbE** is a Rugged Managed Ethernet Switch Box. Offering 12 or 24 GbE Ports (10/100/1000 Mbps). The LINQ/GbE is ideal for Harsh and Rugged Environments.

**Features**
- 12 and 24 GbE Port (10/100/1000 Mbps) Switch Box
- IP68 Dust and Waterproof Solid Aluminum Enclosure
- Layer 2+ Carrier Ethernet Management
- -40°C to +85°C

**GraphiteVPX/GbE** provides Carrier Grade Ethernet switching capabilities in a small 3U embedded form factor.

**Features**
- Conduction cooled or Air cooled
- 20 x GbE (10/100/1000 Ethernet) Ports - 16 to VPX backplane, 4 to front panel IO
- Web GUI or CLI Management
- Available with RJ-45 Front panel
- Supports 3U OpenVPX profile: MOD3-SWH-16T-16.4.7-1
- -40°C to +85°C

**Xtreme/10G Managed Ethernet Switch** provides high-density, high port count Layer 2 switching and Layer 3 routing with 10 GbE uplinks.

**Features**
- 36 switchable ports (4x 10GbE; 8x 1GbE [SGMII]; 24x 1GbE)
- High-density board-to-board connector
- +4V to 14V input range
- 85mm x 85mm module
- -40°C to +85°C

**PCIe/104 10GbE Controller** provides dual-port 10 GbE connectivity for PCIe/104 platforms.

**Features**
- 10 GbE connectivity for PCIe/104
- Powered by Intel’s X710 Ethernet Controller
- Provides support for network and server virtualization
- LAN and SAN flexibility
- 0°C to +55°C
GraphiteVPX/CPU-TX2/TX1 is a VITA 65 compliant 3U VPX single board computer that brings the NVIDIA® Jetson™ TX2/TX1 embedded computing platform to the VPX form factor.

Features
- 1 TFLOP/s. 256 CUDA cores with NVIDIA® Pascal™ or Maxwell™ GPU Architecture
- The onboard PCIe Gen 3.0 switch supports two x4 port dataplane connections
- -40°C to +70°C

GraphiteVPX/CPU is a VITA 65 compliant 3U single board computer based on the Intel® Atom™ E3845 (Bay Trail) Quad Core processor.

Features
- Intel® Atom™ E3845 (Bay Trail) Quad Core processor
- Supports 3U VPX profiles: MOD3 PAY 2F2T-16.2.5-2.3 and MOD3-PAY-2F2U-16.2.3-2.3
- Operating Supply from VS1 or VS3 or both
- Wide Variety of IO Interfaces
- -40°C to +85°C

GraphiteVPX/XMC-PMC is a PCIe Gen 3.0 Solution XMC or PMC 64bit 133MHz PCIX capable carrier.

Features
- Conduction Cooled or Air-Cooled options available
- The onboard PCIe Gen 3.0 switch supports multiple Dataplane options: one x8 or two x4 ports with NT capabilities
- I/O options: PMC I/O p64s or XMC I/O x12d+x8d+x38s
- -40°C to +85°C

GraphiteVPX/GPU is a 20 port Managed Carrier Ethernet Switch.

Features
- Conduction cooled or Air cooled Heatsink option
- Web GUI or CLI Management
- Carrier Grade Ethernet Switching Available with RJ-45 Front panel for easy interfacing
- Supports 3U OpenVPX profile: MOD3-SWH-16T-16.4.7-1
- -40°C to +85°C

GraphiteVPX/CPU-TX2/TX1
GraphiteVPX/CPU
GraphiteVPX/XMC-PMC
GraphiteVPX/GPU
GraphiteVPX/GbE

RTMs available for Graphite CPU-TX2/TX1, CPU, GPU, and GbE options.
Mini PCI Express/M.2

**Mini PCIe GbE** series boards are rugged, low cost Gigabit Ethernet Mini PCIe modules, ideal for adding extra Ethernet capabilities to a system without great increase to overall size/power consumption.

**Features**
- Single or Dual Channel options
- Compatibility with a variety of operating systems
- -40°C to +85°C

**Mini PCIe GPS** is a ruggedized GPS module based on the very small industry standard PCIe “Full” module format.

**Features**
- Used in any Mini PCIe socket that supports USB
- Compatibility with Windows & Linux operating systems
- -40°C to +85°C

**Mini PCIe Serial** series are rugged Mini PCIe modules that are ideal for adding extra serial port capabilities to any system.

**Features**
- PCI Express x1 Lane or USB-2 Host Bus Interface
- 2 ports, optional isolation, switchable RS-232/422/485
- Supports full duplex (4 wire), half duplex (2 wire) with auto TxD echo cancellation modes in RS-422/485
- -40°C to +85°C

**Mini PCIe ADC** is an analog to digital converter peripheral board for the embedded marketplace. Ideal for data acquisition, measurement, and control applications.

**Features**
- 16 ADC input channels
- 500KSPS
- 16-bit resolution
- -40°C to +85°C

**M.2 GPS** is a GNSS receiver based on the very small industry standard M.2 Type-2242-S3-B form factor.

**Features**
- Provides global positioning and time-stamp information
- Uses little space and power within a system
- Easily integrated into any existing system
- -40°C to +85°C

**Mini PCIe GbE**
- MPG101, MPG102, MPG104

**Mini PCIe GPS**
- MPG201, MPG202, MPG203, MPG204

**Mini PCIe Serial**
- MPG001, MPG002, MPG003, MPG004

**Mini PCIe ADC**
- MPG101

**M.2 GPS**
- M2G201
**Embedded Systems**

**NEW**

**Rudi**

Embedded System holds a lot of power in a small package. Rudi is pre-integrated with the NVIDIA® Jetson™ TX2 or TX1.

**Features**
- 1 TFLOP/s, 256 CUDA cores with NVIDIA® Pascal™ and Maxwell™ GPU Architecture
- Extremely small footprint 135mm x 50mm x 105mm
- -20°C to +80°C

**ESG503**

**Rosie**

is a small form factor, rugged embedded system based on the NVIDIA® Jetson™ TX2 and TX1.

**Features**
- 163.6mm x 108.0mm x 96.3mm (6.438” x 4.250” x 3.790”)
- 1x HDMI, 2x GbE, 2x USB 2.0, 1x RS-232, 1x RS-232, 4x SMA Video Inputs
- +9V to +36V Power Input
- Designed to MIL-STD 810g, DO-160G shock and vibration
- Designed to IP68 ingress rating

**ESG501**

**Kube**

is a small form factor rugged processor system based on the Intel® Atom E3845. With a design rating of IP67/68, DO-160, and MIL-810, it can withstand harsh climates.

**Features**
- 163.6mm x 108.0mm x 96.3mm (6.438” x 4.250” x 3.790”)
- 1x HDMI, 2x GbE, 2x USB 2.0, 802.11 ac, 1x RS-232, 4x SMA Video Inputs
- +9V to +36V Power Input
- -40°C to +85°C

**ESG401**

**LINQ/GbE**

is a Rugged Managed Ethernet Switch Box. Offering 12 or 24 GbE Ports (10/100/1000 Mbps). The LINQ/GbE is ideal for harsh and rugged environments.

**Features**
- 12 or 24 GbE Port (10/100/1000 Mbps) Switch Box
- IP68 Dust and Waterproof Solid Aluminum Enclosure
- Layer 2+ Carrier Ethernet Mngt
- MIL-STD-810G and DO-160 compliance
- -40°C to +85°C

**ESG301, ESG302**

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- Extremely small footprint 135mm x 50mm x 105mm
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- Designed to MIL-STD 810g, DO-160G shock and vibration
- Designed to IP68 ingress rating

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- Layer 2+ Carrier Ethernet Mngt
- MIL-STD-810G and DO-160 compliance
- -40°C to +85°C

**ESG301, ESG302**

Engineered solutions are designed to MIL-STD-810G ratings for Vibration, Shock, Immersion, Sand & Dust and Acceleration and an operating temperature of -40°C to +85°C.

**Processor Options:**
- High Performance Intel® Core i3/i5/i7 Series
- Low Power Intel Atom Series

**Optional:**
- Wide range MIL-STD Input Power +16V to 50V DC
- Transient Protection to MIL-STD-704
- EMI Filtering to MIL-STD-461
Graphics Processing Solutions

COM Express® + GPU

Introducing...
A whole product line designed to work with the NVIDIA® Jetson™ TX2 and Jetson™ TX1.
Connect Tech continues to add new products to its specially designed NVIDIA® Jetson™ TX2 and TX1 driven solutions for any system, application and environment! (See page 12, 13 and 14)

Xtreme/GPU

Embedded MXM GPU Modules
The most compact, thinnest COTS solutions, provide access to the latest GeForce technology from NVIDIA. Supporting industry standard MXM 3.0/3.1 in both Type A and Type B footprints and variety of temperature ranges.

Features
• GbE, USB 3.0 & 2.0, DisplayPort++, VGA, LVDS, SATA III, GPIO, I2C, mSATA, miniPCIe, PCIe/104, and SD Card Expansion
• Uses all locking ruggedized positive latching connectors
• Unified Thermal Extraction Baseplate

Options
• GeForce® GTX1050
• GeForce® GTX1060
• GeForce® GTX1070
• GeForce® GTX1080

MXM Graphics Module

WWW.CONNECTTECH.COM

VXG101

Don’t see what you need?
NO PROBLEM!
We do custom design as well!

XGG001, XGG002, XGG003

NEW

- USES Integrated UTX1AS Cluster Server -

Bring your ideas to the table and we'll take it from there.
# NVIDIA® Jetson™ TX2 & TX1 Solutions

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Features</th>
<th>ASG</th>
</tr>
</thead>
</table>
| **Spacely** | Carrier for NVIDIA® Jetson™ TX2 and TX1 is an ideal product for unmanned vehicle applications, or any application where situational awareness is critical.  
**Features**  
- Up to 6 MIPI CSI-2 Camera Inputs  
- Tailored IO for easy connection to Pixhawk Autopilot  
- 2x UART, I2C, SPI, 14 GPIO at +3.3V IO, CAN, 2x USB 3.0, 2x USB 2.0  
- -40°C to +85°C | ASG006 |
| **Cogswell** | Carrier for NVIDIA® Jetson™ TX2 and TX1 is designed to match the NVIDIA Jetson module form factor.  
**Features Low Cost!**  
- Lowest height profile, all components fit “under” TX2/TX1 module  
- Small Size: 87mm x 50mm (3.425” x 1.968”)  
- 1x USB OTG, 1x4 lane MIPI CSI-2, 2x RS-232, 1x miniPCIe, 1x mSATA  
- +9V to +16V DC Input Range  
- -40°C to +85°C | ASG007 |
| **Sprocket** | Carrier for NVIDIA® Jetson™ TX2 and TX1 is designed to match the NVIDIA Jetson™ TX2 and TX1 module form factor.  
**Features**  
- Extremely Small Size: 87mm x 50mm (3.425” x 1.968”)  
- 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)  
- -40°C to +85°C | ASG008 |
| **Orbitty** | Carrier is designed to match the NVIDIA® Jetson™ TX2 and TX1 module form factor. Ideal for robotics and unmanned applications.  
**Features**  
- 5 x Gigabit Ethernet Ports 4 x PoE, 2 x PoE+ PSE Gigabit Ports  
- +9V to +14V DC Nominal (19V Peak)  
- -40°C to +85°C | ASG003 |
| **Elroy** | Carrier for NVIDIA® Jetson™ TX2 and TX1 brings a low cost deployable Jetson TX2 and TX1 Solution to the market. Designed for use in a small form factor rugged environment.  
**Features**  
- Extremely Small Size: 87mm x 50mm (3.425” x 1.968”)  
- Head-to-Head Dual Mini-PCIe  
- Dual x2 MIPI CSI-2 Video Inputs  
- Mini-PCIe/mSATA expansion, HDMI Video, USB 3.0 and 2.0, and two Serial Ports for RS-232/485 | ASG002 |
**NVIDIA® Jetson™ TX2 & TX1 Solutions**

**Astro**
Carrier for NVIDIA® Jetson™ TX2/TX1 is specifically designed to work with the Jetson™ TX2/TX1 supercomputer-on-module.

**Features**
- Extremely Small Size: 87mm x 57mm (3.425" x 2.24")
- 2 Gigabit (10/100/1000) Ports
- USB and HDMI Ports
- Multiple Video Input Channels
- Use with COTS or custom breakout boards
- -40°C to +85°C

**Rudi**
Embedded System holds a lot of power in a small package. Rudi is pre-integrated with the NVIDIA® Jetson™ TX2 or TX1.

**Features**
- 1 TFLOP/s, 256 CUDA cores with NVIDIA® Pascal™ or Maxwell™ GPU Architecture
- Fanless system
- Extremely small footprint 135mm x 50mm x 105mm
- -20°C to +80°C

**Rosie**
Embedded system based on the NVIDIA® Jetson™ TX2 and TX1.

**Features**
- 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, 4x SMA Video Inputs
- +9V to +36V Power Input
- Designed with MIL-STD 810g, DO-160G shock and vibration
- Designed to IP68 ingress rating
- -40°C to +80°C

**GraphiteVPX/CPU-TX2/TX1**
is a VITA 65 compliant 3U VPX single board computer that brings the NVIDIA® Jetson™ TX2/TX1 embedded computing platform to the VPX form factor.

**Features**
- 1 TFLOP/s, 256 CUDA cores with NVIDIA® Pascal™ or Maxwell™ GPU Architecture
- The onboard PCIe Gen 3.0 switch supports two x4 port dataplane connections
- -40°C to +70°C

Accelerate your development process and reduce time to market with our standard off-the-shelf Enclosure solutions, or let Connect Tech’s engineering experts develop your custom solution.
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<thead>
<tr>
<th>Name</th>
<th>Astro Carrier</th>
<th>Elroy Carrier</th>
<th>Orbitty Carrier</th>
<th>Spacely</th>
<th>Cogswell</th>
<th>Sprocket</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>ASG001 w/ XBG201</td>
<td>ASG002</td>
<td>ASG003</td>
<td>ASG006</td>
<td>ASG007</td>
<td>ASG008</td>
</tr>
<tr>
<td>Dimensions</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>87mm x 50mm (3.425&quot; x 1.968&quot;)</td>
<td>125mm x 95mm (4.92&quot; x 3.74&quot;)</td>
<td>178mm x 147.5mm (7.008&quot; x 5.81&quot;)</td>
<td>87mm x 50mm (3.425&quot; x 1.968&quot;)</td>
</tr>
<tr>
<td>Mini-PCIe/ mSATA</td>
<td>1x Mini-PCIe/mSATA half or full size (use of full size removes secondary Mini-PCIe slot)</td>
<td>1x Mini-PCIe/mSATA half or full size (use of full size removes secondary Mini-PCIe slot)</td>
<td>1x miniPCIe Slot, mSATA Slot</td>
<td>1 x miniPCIe Slot with PCIe, USB + SIM, 1 x mSATA Full Sized Slot</td>
<td>1 x miniPCIe Slot with PCIe &amp; USB, x mSATA Full Sized Slot</td>
<td>N/A</td>
</tr>
<tr>
<td>SATA</td>
<td>1x SATA Link</td>
<td>1x mSATA half or full size (use of full size removes secondary Mini-PCIe slot)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Display</td>
<td>1x HDMI</td>
<td>1x HDMI</td>
<td>1x HDMI</td>
<td>1x HDMI</td>
<td>1x HDMI</td>
<td>N/A</td>
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<tr>
<td>Serial</td>
<td>2x RS-232/RS-485</td>
<td>2x RS-232/RS-485</td>
<td>2x 3.3V UART through discreet connector</td>
<td>2x 3.3V from TX2/TX1 UART0 and UART1</td>
<td>2x RS-232</td>
<td>2 x 3.3V from TX2/TX1 UART0 and UART1</td>
</tr>
<tr>
<td>USB</td>
<td>1x USB 3.0, 2x USB 2.0</td>
<td>1x USB 3.0 (Integrated USB 2.0, 1x USB 2.0)</td>
<td>1x USB 3.0, 1x USB 2.0 OTG</td>
<td>2x USB 3.0 Ports, 1x USB OTG, 2x USB 2.0, 1x USB 2.0 to miniPCIe Slot</td>
<td>1 x USB 3.0 Part (Type-A), 1 x USB OTG (Micro-AB), 1 x USB 2.0 (Type-A), 1 x USB 2.0 to miniPCIe Slot</td>
<td>1 x USB OTG (Micro-AB)</td>
</tr>
<tr>
<td>Ethernet</td>
<td>2x GbE</td>
<td>1x GbE</td>
<td>1x GbE</td>
<td>2x GbE</td>
<td>5 x GbE (4 PoE, 2 PoE+)</td>
<td>N/A</td>
</tr>
<tr>
<td>Audio</td>
<td>HD Audio Link: 1x Output</td>
<td>1x HDMI Integrated Audio</td>
<td>1x HDMI Integrated Audio</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SD Card</td>
<td>1x microSD Card Slot</td>
<td>1x microSD Card Slot</td>
<td>1x microSD Card Slot</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Video Inputs</td>
<td>1x CSI-2 (x2) interface, 2x CSI-2 (x4) interfaces via U.FL connector accepting GMSL signalling</td>
<td>2x 2-Lane (2x) MIPI CSI 2.0</td>
<td>N/A</td>
<td>6 x 2 Lane MIPI CSI-2 OR 3 x 4 Lane MIPI CSI-2</td>
<td>5x capable ports</td>
<td>1 x 4 lane MIPI CSI-2</td>
</tr>
<tr>
<td>Misc</td>
<td>1x 12C Link, 1x System Control (PWR and RST buttons, etc.), 1x RTC Battery Input, 4x GPIO</td>
<td>1x 12C Link, 1x SPI Link, 1x System Control (PWR and RST buttons, etc.), 1x RTC Battery Input, 4x GPIO</td>
<td>I2C, 4x GPIO</td>
<td>1x USB OTG, I2C, CAN, GPIO, 1x GPIO/CSI (optional), SPI <a href="mailto:Channel@3.3V">Channel@3.3V</a> IO</td>
<td>1x USB OTG, I2C, CAN 2.0, GPIO</td>
<td>1x USB OTG, I2C, 4x GPIO</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>+9V to +36V Input</td>
<td>+9V to +14V DC Nominal Input (+ 19V Peak)</td>
<td>Wide Input +12V to +22V DC</td>
<td>+12 DC Only</td>
<td>+9V to +16V DC</td>
<td>N/A</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
</tr>
</tbody>
</table>
SMARC/SL ideal for low power applications in a small footprint (10 x 5.75cm/3.94” x 2.26”), the SMARC/SL offers extreme flexibility.

**Features**
- Super Small Form Factor
- Feature Packed (HDMI, SATA, 2-Lane MIPI CSI Camera)
- External SATA/mSATA Switching Circuitry
- Single Wide Range Input Voltage +6V to +36V DC
- -40°C to +85°C

SMARC 2.0 is a small SMARC carrier ideal for low power applications, enabling latest gen. SMARC 2.0 modules using Apollo Lake and beyond.

**Features**
- 105.8 x 82.4mm (4.165” x 3.244”)
- Feature Packed (HDMI, SATA, 2x MIPI CSI-2 Camera Interfaces)
- 2x USB 3.0, 2x USB 2.0, 2x USB 2.0 to miniPCIe
- External SATA/mSATA Switching
- Input Voltage +5V DC only
- -40°C to +85°C

Don't see what you need? NO PROBLEM! We do custom design as well!

Bring your ideas to the table and we'll take it from there.
## Qseven Carrier Boards

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<tr>
<th>Specifications</th>
<th>Gen 2.0</th>
<th>Ultra Lite</th>
<th>Lite</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>QCG201</td>
<td>QCG005</td>
<td>QCG011</td>
</tr>
<tr>
<td></td>
<td>NanoITX, 120 x 120mm</td>
<td>PicoITX, 72x100mm</td>
<td>PicoITX, 72x100mm</td>
</tr>
<tr>
<td><strong>Mini-PCIe Connector</strong></td>
<td>2 (MiniPCIe/mSATA)</td>
<td>1</td>
<td>1</td>
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<tr>
<td><strong>mSATA</strong></td>
<td>2 (MiniPCIe/mSATA)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>SIM Card Connector</strong></td>
<td>2</td>
<td>1</td>
<td>1</td>
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<tr>
<td><strong>LVDS Video &amp; Back Light Controls</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td><strong>HDMI Video/Audio</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>With Adapter</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Power Connectors:</strong></td>
<td>Optional*</td>
<td>Optional*</td>
<td>Optional*</td>
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<tr>
<td>• Molex Power</td>
<td>Yes</td>
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<td>Yes</td>
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<tr>
<td>• 2 PC Screw Term Connector</td>
<td>-</td>
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<td><strong>USB 2.0 Ports</strong></td>
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<td><strong>USB 3.0 Ports</strong></td>
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<td><strong>USB Client Port</strong></td>
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<td><strong>Gigabit Ethernet</strong></td>
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<td><strong>RS-232/RS-485</strong></td>
<td>1 RS-232</td>
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<tr>
<td><strong>CAN</strong></td>
<td>Yes</td>
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<tr>
<td><strong>SATA Ports</strong></td>
<td>Up to 2x SATA</td>
<td>1</td>
<td>1</td>
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<tr>
<td><strong>microSD Card</strong></td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>RTC Battery</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-40°C to 85°C (0°C to 185°F)</td>
<td>-40°C to 85°C (-40°F to 185°F)</td>
<td>-40°C to 85°C (-40°F to 185°F)</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td>+5V Input</td>
<td>+5V 6A, +12V 200mA</td>
<td>+5V 6A, +12V 200mA</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>Optional Cable Kit*</td>
<td>Optional Cable Kit*</td>
<td>Optional Cable Kit*</td>
</tr>
</tbody>
</table>
Qseven Carrier Boards

Qseven Gen 2.0 Carrier Board
is a compact ruggedized carrier that integrates with any industry standard Qseven Gen 2.0 module.

Features
- NanoITX 170mm x 170mm (6.69” x 6.69”)
- 1x DisplayPort/HDMI (On-Board Switching)
- 2x Mini PCIe/mSATA with External SATA Switching
- -40°C to +85°C

PCI-104 Qseven Carrier Board
is a small embedded carrier board that allows complete integration of PCI-104 with any industry standard Qseven Gen 1.0 module.

Features
- PCI-104 Compliant
- Allows for up to 4x PCI-104 Board Expansion
- Feature Set and Temperature Range Dependant upon Processor Selection

PCIe/104 Qseven Carrier Board
is a small embedded carrier board that allows complete integration of PCIe/104 with any industry standard Qseven Gen 1.0 module.

Features
- PCIe/104 Compliant
- Allows for up to 4x PCIe/104 Board Expansion
- Feature Set and Temperature Range Dependant upon Processor Selection

Lite Qseven Carrier Board
is a low cost, feature rich design that integrates with any industry standard Qseven Gen 1.0 module.

Features
- 128mm x 100mm (5.04” x 3.93”)
- 1x HDMI, 8x USB 2.0, 2x External SATA
- -40°C to +85°C

Ultra Lite Qseven Carrier Board
in the Pico-ITX form factor, integrates with any industry standard Qseven Gen 1.0 module.

Features
- PicoITX 72mm x 100mm (2.83” x 3.93”)
- 1x LVDS, 4x USB 2.0, 1x HDMI (QCG015), 1x External SATA
- -40°C to +85°C
### Custom FPGA Design

Need assistance with a custom FPGA design?

**We can help at any stage of a project!**

Connect Tech’s Engineering Team would be happy to discuss your unique requirements. Our team of highly skilled engineers are dedicated, knowledgeable, and experienced. We offer several years of experience in custom FPGA designs and will work with you to implement a solution that will meet your needs.

---

**FPGAs**

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<th>FreeForm/PCI-104</th>
<th>FreeForm/104</th>
<th>FreeForm/104 Daughter Board</th>
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<tbody>
<tr>
<td>Form Factor</td>
<td>PCI Express Card</td>
<td>PCI-104 or PC/104-Plus</td>
<td>PCI-104</td>
<td>PC/104</td>
<td>PC/104</td>
</tr>
<tr>
<td>Ports</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FPGA</td>
<td>Xilinx Spartan-6</td>
<td>Actel ProASIC3</td>
<td>Xilinx Virtex-5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LX45T</td>
<td>(PCI IP Core)</td>
<td>LX30T, LX50T &amp; FX30T</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bus Interface</td>
<td>Spartan-6 PCIe Gen 1 Endpoint</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Interface</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RS-232, RS-422, RS-449</td>
</tr>
<tr>
<td>Mezzanine Card</td>
<td>1x low pin count</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LPC FMC</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Connectors</td>
<td>-</td>
<td>2 x 25 (50 position) 0.1&quot; (DIL) pin headers</td>
<td>-</td>
<td>PC/104 pass-through 2 x 50 pin connector 2 x 26 pin header connectors</td>
<td>-</td>
</tr>
<tr>
<td>Control Signals</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>TxD, RxD, DTR, RTS, CTS, DCD, TxCk, RxCk</td>
</tr>
<tr>
<td>Power</td>
<td>+3.3V DC and +12V DC</td>
<td>+5V DC</td>
<td>+5V DC</td>
<td>+5V DC (± 5%)</td>
<td>-</td>
</tr>
<tr>
<td>Temperature</td>
<td>-40°C to 85°C</td>
<td>-40°C to 85°C</td>
<td>-40°C to 85°C</td>
<td>-40°C to 85°C</td>
<td>-40°C to 85°F</td>
</tr>
<tr>
<td></td>
<td>-40°F to 185°F</td>
<td>-40°F to 185°F</td>
<td>-40°F to 185°F</td>
<td>-40°F to 185°F</td>
<td>-40°F to 185°F</td>
</tr>
<tr>
<td>Dimensions</td>
<td>16.76 x 11.11cm</td>
<td>9.5885 x 9.017cm</td>
<td>9.5885 x 9.0805cm</td>
<td>9.5885 x 9.017cm</td>
<td>9.5885 x 9.017cm</td>
</tr>
<tr>
<td></td>
<td>6.6” x 4.375”</td>
<td>3.775” x 3.55”</td>
<td>3.775” x 3.575”</td>
<td>3.775” x 3.55”</td>
<td>3.775” x 3.55”</td>
</tr>
</tbody>
</table>
FreeForm/Express S6 is a reconfigurable Xilinx Spartan-6 LX45T FPGA.

Features
- Allows for 1 FMC LPC Module to be installed
- Integrated PCI Express Blocks
- 3.125 Gbps Low-Power Transceivers with 128MB DDR3
- 2x GbE, 1x RS-232

Xtreme I/O Opto is a 48-bit PCI-104 isolated digital I/O board.

Features
- 24 optically isolated inputs
- 24 optically isolated outputs
- 3kV of Isolation on all I/O
- +0 to +40V DC Output voltage range

FreeForm/PCI-104 is a reconfigurable FPGA development board.

Features
- Based on the Xilinx Virtex-5 FPGA (LX30T, LX50T & FX30T)
- 32-Bit/33MHz PCI-104 interface
- 8MB Flash, 128MB DDR2-400 memory, 2x Ethernet (10/100), 2x RS-485, 4x Rocket I/O

FreeForm/104 is a PC/104 based card that features a reconfigurable FPGA through JTAG or SPI flash (4Mb).

Features
- Based on the Xilinx Spartan-3E
- External 5V power connection
- Four user configurable LEDs
- Eight position rotary switch

FreeForm/104 Daughter Board is an adapter for Connect Tech’s FreeForm/104 board.

Features
- Enables users to capture and process synchronous and asynchronous RS-232 or RS-422/485 serial data with customizable FPGA implementations
## Specifications

<table>
<thead>
<tr>
<th></th>
<th>CANpro/104 Opto</th>
<th>CANpro/104-Plus Opto</th>
<th>Xtreme/Multi-I/O</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part #</strong></td>
<td>CNG001</td>
<td>CRG001</td>
<td>XMG001</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>PC/104</td>
<td>PCI-104</td>
<td>PC/104</td>
</tr>
<tr>
<td><strong>CAN Controller</strong></td>
<td>x2 NXP SJA1000</td>
<td>x2 NXP SJA1000</td>
<td>x2 NXP SJA1000 J1708</td>
</tr>
<tr>
<td><strong>BasicCAN &amp; PeliCAN Modes (SJA1000)</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>SJA1000 Input Clock</strong></td>
<td>16MHz</td>
<td>16MHz</td>
<td>16 or 24MHz</td>
</tr>
<tr>
<td><strong>Isolated CAN Interface</strong></td>
<td>3kV TI ISO1050</td>
<td>3kV TI SN65HVD251</td>
<td>ADM3053</td>
</tr>
<tr>
<td><strong>Memory Mapped Addressing</strong></td>
<td>-</td>
<td>✓</td>
<td>✓ Jumperless</td>
</tr>
<tr>
<td><strong>General Purpose I/O</strong></td>
<td>-</td>
<td>8-bit 3.3V I/O Header</td>
<td>-</td>
</tr>
<tr>
<td><strong>Supports 1Mbps Operation</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-40°C to 85°C</td>
<td>-40°C to 85°C</td>
<td>-40°C to 85°C</td>
</tr>
<tr>
<td><strong>I/O &amp; Memory Space Selectable</strong></td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Single or Dual Interrupts</strong></td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Free Technical Support</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
FieldTab7 is a rugged built tablet for use in the most extreme environmental conditions.

**Features**
- IP65, MIL-STD-810G
- Up to 9 hours of battery life
- 2MP and 5MP cameras, with auto focus and LED flash
- Optional MSR and barcode reader 2-in-1 module
- Compact vehicle dock with wide range voltage power

FieldTab7B is a 7” full rugged Windows Tablet, with built-in multiple interfaces and a wide variety of accessories to meet different deployment needs.

**Features**
- IP65, MIL-STD-810G
- Sunlight readable solution
- Seamless communication, optional 4G
- 2MP and 8MP cameras with auto focus and LED flash
- Windows 10 IoT Enterprise for Small Tablet option

FieldTab10/VM is an ultra rugged vehicle mount computer providing rugged performance and functionality for demanding vehicle environments.

**Features**
- 0.1 nits hyper dimming to 1,000 nits sunlight readable screen
- 70,000 hours long life LED backlight
- Seamless communications – GNSS, Bluetooth, 802.11 ac
- Built-in backup battery

FieldTab10B is an ultra-rugged tablet powered by an Intel E3827 1.75 GHz dual-core processor. Tested to MIL-STD-810g for shock, vibration, and temperature.

**Features**
- IP65, MIL-STD-810G, 6 feet drop resistance
- Programable function keys
- Supports glove touch
- 2 Mega-pixel camera (front); 5 Mega-pixel camera with LED flash light (back)

FieldTab10R has an ultra bright, 1,000 nit optically-bonded display, high-speed 802.11ac connectivity, hot swappable dual battery design, and glove touch capability.

**Features**
- Sunlight readability, critical for working outdoors
- Bluetooth 4.0 and 4G LTE, mobile
- Dual pass through port to connect via vehicle dock for improved GNSS, WLAN, or WWAN reception
**Xtreme/104** offers four or eight asynchronous RS-232 and/or RS-422/485 serial ports.

<table>
<thead>
<tr>
<th>Feature</th>
<th>RS-232/422/485</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ports</strong></td>
<td>4/8</td>
<td></td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>RS-232</td>
<td></td>
</tr>
<tr>
<td><strong>Control Signals</strong></td>
<td>Rx, RTS, CTS, RI, DTR, DSR, DCD</td>
<td></td>
</tr>
<tr>
<td><strong>Baud</strong></td>
<td>50 bps to 230 Kbps/Custom</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>0°C to 70°C/32°F to 158°F</td>
<td>Optional -40°C to +85°C</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>9.60 x 10.41 x 1.12cm</td>
<td>3.77” x 4.09” x 0.44”</td>
</tr>
</tbody>
</table>

**Xtreme/104 RS-232** offers four or eight asynchronous RS-232 serial ports.

<table>
<thead>
<tr>
<th>Feature</th>
<th>RS-232</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ports</strong></td>
<td>4/8</td>
<td></td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>RS-232</td>
<td></td>
</tr>
<tr>
<td><strong>Control Signals</strong></td>
<td>Rx, RTS, CTS, RI, DTR, DSR, DCD</td>
<td></td>
</tr>
<tr>
<td><strong>Baud</strong></td>
<td>50 bps to 230 Kbps/Custom</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>0°C to 70°C/32°F to 158°F</td>
<td>Optional -40°C to +85°C</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>9.60 x 10.41 x 1.12cm</td>
<td>3.77” x 4.09” x 0.44”</td>
</tr>
</tbody>
</table>

**Xtreme/104 Opto** offers two or four asynchronous serial ports with 3kV optical isolation on all signals and ports.

<table>
<thead>
<tr>
<th>Feature</th>
<th>RS-232/422/485</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ports</strong></td>
<td>2/4</td>
<td></td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>RS-232</td>
<td></td>
</tr>
<tr>
<td><strong>Control Signals</strong></td>
<td>Rx, RTS, CTS, RI, DTR, DSR, DCD</td>
<td></td>
</tr>
<tr>
<td><strong>Baud</strong></td>
<td>50 bps to 230 Kbps/Custom</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>0°C to 70°C/32°F to 158°F</td>
<td>Optional -40°C to +85°C</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>9.60 x 10.41 x 1.12cm</td>
<td>3.77” x 4.09” x 0.44”</td>
</tr>
</tbody>
</table>

**ComSync/104** offers two synchronous/asynchronous RS-232, RS-422, RS-449, EIA-530, EIA-530/A, V.35 and X.21 serial channels.

<table>
<thead>
<tr>
<th>Feature</th>
<th>RS-232/422/449/A/V.35 &amp; X.21</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ports</strong></td>
<td>2</td>
<td>Synchronous/Asynchronous Serial Channels</td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>RS-232, RS-422, RS-449, EIA-530, EIA-530/A, V.35 &amp; X.21</td>
<td></td>
</tr>
<tr>
<td><strong>Control Signals</strong></td>
<td>Rx±, RTS±, DTR±, DSR±, DCD±, CTS±, RI±, DTR±, DSR±, DCD±, CTS±, RI±, DTR±, DSR±, DCD±, CTS±, RI±, DTR±, DSR±, DCD±, CTS±, RI±</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>0°C to 70°C/32°F to 158°F</td>
<td></td>
</tr>
</tbody>
</table>
FreeForm/104 Daughter Board is a FreeForm/104 adapter board that enables users to capture and process synchronous and asynchronous RS-232 or RS-422/485 serial data with customizable FPGA implementations.

- **Ports**: 2
- **Interface**: RS-232, RS-422, RS-449
- **Control Signals**: TxD, RxD, DTR, RTS, CTS, DCD, TxClk, RxClk
- **Connectors**: PC/104 pass-through 2x50 pin connector to connect to FreeForm 2x26 pin header connectors
- **Temperature**: -40°C to 85°C/-40°F to 185°F

Xtreme/104 Isolated 12 Port is a high density adapter which offers 12 asynchronous serial ports and complies with PC/104 form factor standards. It features eight jumper selectable RS-232/422/485 ports with support for all three RS-485 modes, and includes four dedicated RS-232 ports.

- **Ports**: 12
- **Control Signals**: RS-232: TxD, RxD, RTS, CTS, ISOGND RS-422/485: (TxD, RxD, CTS, RTS) ±, ISOGND
- **Temperature**: -40°C to 85°C/-40°F to 185°F
- **Power**: +5V DC 500mA (typical), 1A (maximum)

FreeForm/104 is a PC/104 based FPGA development board for digital I/O and control applications.

- **FPGA**: Xilinx Spartan-3E FPGA, 500,000 gates
- **Connector**: 2 x 50 pin headers, 1 x 26 pin header
- **Frequency**: 66 MHz, internally scalable
- **Temperature**: -40°C to 85°C/-40°F to 185°F
- **Power**: +5V DC (± 5%)

Xtreme/PSU-UC
- Wide input range, +8 to 36V DC, Total power output 115W (+12V and +5V Standby) Ultracaps for uninterrupted power supply

Xtreme/PSU-UPS
- SMART battery charging for uninterrupted power supply
- 125W+ output power (+5V, +12V, -12V, +3.3V, +5V standby)

Xtreme/PSU-XP
- 160W total output power (+5V @ 10A, +3.3V @10A, +12V @ 5A, -12V @ 1A and +5V standby @ 1A), and +6V to +36V DC input voltage

Xtreme/PSU Isolated
- 195W total output power (+5V @ up to 15A, +3.3V @ up to 20A and +12V @ up to 10A), +9V to +36V DC input voltage, and up to 2.25kV of isolation

Xtreme/PSU Low Cost!
- 115W total output power (+5V @ 10A, +12V @ 5A, and +5V standby @ 1A), and +6V to +36V DC input voltage
**Xtreme/104-Plus** offers 4 or 8 high speed asynchronous RS-232/422/485 ports, 8 selectable RS-232/422/485/TTL ports, or 2/4 dedicated RS-423 ports.

<table>
<thead>
<tr>
<th>Form Factor</th>
<th>PC/104-Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>2/4/8</td>
</tr>
</tbody>
</table>
| Control Signals | RS-232: TxD, RxD, RTS, CTS, RI, DTR, DSR, DCD and SG  
                  RS-422/485: (TxD, RxD, RTS, CTS)± and SR  
                  RS-423: TxD±, TxDRef, RxD±, RTS±, RTSRef, CTS± |
| Temperature   | -40°C to 85°C/−40°F to 185°F |
| Power         | +5V DC 500mA (maximum) VI/O of +5V or 3.3V DC |

**Xtreme/104-Plus** 16 Port offers 16 ports of switchable RS-232/422/485 on a single PC/104-Plus card. This provides the highest port density and most flexible PC/104-Plus serial port solution available.

<table>
<thead>
<tr>
<th>Form Factor</th>
<th>PC/104-Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>16</td>
</tr>
<tr>
<td>Interfaces</td>
<td>RS-232/422/485</td>
</tr>
</tbody>
</table>
| Power       | 5V bus power required. On-board regulator makes its own 3.3V +5V  
                  400mA maximum |
| Temperature | -40°C to 85°C/−40°F to 185°F |

**Xtreme/104-Plus** 16 Port offers 16 ports of switchable RS-232/422/485 on a single PC/104-Plus card. This provides the highest port density and most flexible PC/104-Plus serial port solution available.

**Xtreme/104-Plus Opto** provides the added protection of 3kV optical isolation on a rugged and compact form factor for critical embedded applications.

<table>
<thead>
<tr>
<th>Form Factor</th>
<th>PC/104-Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>2/4</td>
</tr>
</tbody>
</table>
| Control Signals | RS-232: TxD, RxD, RTS, CTS and SG  
                   RS-422/485: (TxD, RxD, RTS)± and SR |
| Temperature | -40°C to 85°C/−40°F to 185°F |
| Power       | +5V DC (±5%) @ 500mA (maximum) |

**Xtreme I/O Opto** is a 48-bit isolated digital input/output board with 24 optically isolated inputs and 24 optically isolated outputs.

<table>
<thead>
<tr>
<th>Form Factor</th>
<th>PCI-104 or PC/104-Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors</td>
<td>2 x 25 (50 position) 0.1”(DIL) pin headers</td>
</tr>
<tr>
<td>Isolation</td>
<td>3KV isolation on all channels</td>
</tr>
</tbody>
</table>
| Inputs/Outputs | 24 optically isolated I/O (24-bits)  
                      I/O voltage range: +0 up to +40V DC |
| Temperature   | -40°C to 85°C/−40°F to 185°F |

**ALL PCI-104 and PC/104-Plus** boards are now available with a **22mm Connector** to extend the stack height of your application!
**Xtreme I/O ADC-DAC** is an analog data acquisition board for the small form factor embedded market place.

**Form Factor**
- PCI-104

**Analog Inputs**
- 32 Single Ended/16 Differential Channels, 12/14/16 bit 100kps, Software-Programmable Input Ranges

**Analog Outputs**
- 4 Channels, 12/14/16 bit resolution, 6 programmable output ranges

**Digital I/O**
- 16 bit Bi-directional I/O

**Temperature**
- -40°C to 85°C/-40°F to 185°F

---

**FreeForm/PCI-104** is a reconfigurable FPGA development board with high speed digital I/O that combines a user programmable FPGA with a 32-Bit, 33MHz PCI-104 interface.

**Form Factor**
- PCI-104

**FPGA**
- Virtex-5 FPGA options include LX30T, LX50T and FX30T

**Power**
- 5 V DC (+/- 5%). May vary by application.

**Temperature**
- -40°C to 85°C/-40°F to 185°F

**Dimensions**
- PCI-104 1.0 Compliant

---

**PCI-104 Qseven Carrier Board** is a small embedded carrier board that allows complete integration with any industry standard Qseven module. This carrier board utilizes the PC/104 form factor and the PCI-104 bus, and allows installation of up to 4 PCI-104 boards.

**Form Factor**
- PCI-104

**Interfaces**
- 2x SATA, 4x USB 2.0, 1x Gigabit Ethernet, LVDS & VGA Video, 2x RS-232, 2x RS-422/485

**Power**
- ATX or +5V/+12V only

**Temperature**
- -20°C to 70°C/-4°F to 158°F

---

**Xtreme/SBC PCI-104** utilizes the PCI-104 form factor, supporting four peripheral boards. Instantly access a variety of features using the SBCs on-board connectors. Embedded processor options include AMD Fusion/G-Series, Intel® Atom™ Z500 & E600, Freescale i.MX51 & i.MX6, Texas Instruments OMAP, NVIDIA Tegra and VIA Nano E-Series.

**Form Factor**
- PCI-104

**Interfaces**
- 2x SATA, 4x USB 2.0, 1x Gigabit Ethernet, LVDS & VGA Video, 2x RS-232, 2x RS-422/485

**Power**
- ATX Supply Input or +5V/+12V only

**Temperature**
- -20°C to 70°C/-4°F to 158°F

---

**FreeForm/PCI-104** is a reconfigurable FPGA development board with high speed digital I/O that combines a user programmable FPGA with a 32-Bit, 33MHz PCI-104 interface.

**Form Factor**
- PCI-104

**FPGA**
- Virtex-5 FPGA options include LX30T, LX50T and FX30T

**Power**
- 5 V DC (+/- 5%). May vary by application.

**Temperature**
- -40°C to 85°C/-40°F to 185°F

**Dimensions**
- PCI-104 1.0 Compliant

---

**PC/104-Plus & PCI-104**
**Xtreme/PCI-104 Opto**
- Form Factor: PCI-104
- Interfaces: RS-232/422/485
- Temperature: -40°C to 85°C/-40°F to 185°F
- Power: +5V DC 750mA to 950mA
- Dimensions: 9.5885 x 9.017 cm/3.775" x 3.550"

**ComSync/PCI-104**
- Form Factor: PCI-104
- Modes: NRX: NRZI, NRZI-B, NRZI-Mark, NRZI-Space
  BiPhase: BiPhase-Space, BiPhase Level, Differential BiPhase
- Temperature: -40°C to 85°C/-40°F to 185°F
- Power: 5V DC @ 1 Amp (maximum)

**Xtreme/PSU-UC**
- Wide input range, +8 to 36V DC, Total power output 115W (+12V and +5V Standby) Ultracaps for uninterrupted power supply

**Xtreme/PSU-UPS**
- SMART battery charging for uninterrupted power supply
- 125W+ output power (+5V, +12V, -12V, +3.3V, +5V standby)

**Xtreme/PSU-XP**
- 160W total output power (+5V @ 10A, +3.3V @10A, +12V @ 5A, -12V @ 1A and +5V standby @ 1A), and +6V to +36V DC input voltage

**Xtreme/PSU Isolated**
- 195W total output power (+5V @ up to 15A, +3.3V @ up to 20A and +12V @ up to 10A), +9V to +36V DC input voltage, and up to 2.25kV of isolation

**Xtreme/PSU Low Cost**
- 115W total output power (+5V @ 10A, +12V @ 5A, and +5V standby @ 1A), and +6V to +36V DC input voltage

**Xtreme/PCI-104 Opto 12 Port**
- 12 Port offers 12 ports on a PCI-104 card, with the added protection of 1kV optical isolation on a rugged and compact form factor.

**ComSync/PCI-104** which is based on the PCI bus, is a two-channel, multi-protocol serial adapter which offers high performance, reliable, synchronous or asynchronous serial communications.

**Xtreme I/O Express ADC-DAC** is an analog and digital peripheral board for the PCIe/104 small form factor embedded marketplace, ideal for data acquisition, measurement, and control applications.

**Power Supplies**
Connect Tech’s Power Supplies power all of the PC/104 family expansion buses including PC/104, PC/104-Plus, PCI-104, PCI/104-Express, and PCIe/104.
### Xtreme/104-Express

**Form Factor**
PCI/104-Express

**Ports**
8

**Line Interface**
RS-232/422/485, RS-232 or RS-422/485

**Control Signals**
RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,SG
RS-422/485: TxD±,RxD±,CTS±,RTS±,SR

**Baud**
- RS-232: 50 bps to 921.6 Kbps
- RS-422/485: up to 15.625 Mbps

**UART**
Octal PCI Express, 128 Byte FIFO

**Temperature**
-40°C to 85°C/-40°F to 185°F

Xtreme/104-Express is a PCI/104-Express multi-port serial board which provides a PCI-104 pass-through connector. Fully PCI/104-Express compliant.

### Xtreme/SBC PCIe/104 Single Board Computer

**Form Factor**
PCIe/104, 4x PCIe Lanes

**Interfaces**
2x SATA, 4x USB 2.0, 1x Gigabit Ethernet, LVDS & VGA Video, 2x RS-232, 2x RS-422/485

**Power**
ATX Supply Input or +5V/+12V only

**Temperature**
-20°C to 70°C/-4°F to 158°F

Xtreme/SBC PCIe/104 Single Board Computer utilizes the PCIe/104 form factor with 4 x1 PCIe lanes. Instantly access a variety of features using the SBCs on-board connectors. Embedded processor options include AMD Fusion/G-Series, Intel® Atom™ Z500 & E600, Freescale i.MX51 & i.MX6, Texas Instruments OMAP, NVIDIA Tegra and VIA Nano E-Series.

### PCIe/104 Qseven Carrier Board

**Form Factor**
PCI/104, 4x PCIe Lanes

**Interfaces**
2x SATA, 4x USB 2.0, 1x Gigabit Ethernet, LVDS & VGA Video, 2x RS-232, 2x RS-422/485

**Power**
ATX Supply Input or +5V/+12V only

**Temperature**
-20°C to 70°C/-4°F to 158°F

PCle/104 Qseven Carrier Board is a small embedded carrier board that allows complete integration with any industry standard Qseven module. This carrier board utilizes the PC/104 form factor with 4 x1 PCIe lanes and the PCIe/104 bus.

### Xtreme/104-Express Opto

**Form Factor**
PCIe/104

**Ports**
4/8

**Line Interface**
RS-232/422/485, RS-232 or RS-422/485

**Control Signals**
RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,SG
RS-422/485: TxD±,RxD±,CTS±,RTS±,SR

**Baud**
- RS-232: 50 bps to 1 Mbps
- RS-422/485: up to 7.8125 Mbps

**UART**
Quad/Octal PCI Express, 256 Byte FIFO

**Temperature**
-40°C to 85°C/-40°F to 185°F

Xtreme/104-Express Opto is a PCIe/104 serial card with 3 kV optical isolation for rapid data transfer and high reliability.
PCI Express to PCIe/104 Adapter

PCI Express to PCIe/104 Adapter allows a PCIe/104 or PCI/104-Express card to be installed into a standard PCI Express system slot.

 PCI Express to PCIe/104 Adapter - Bottom Stacking

PCI Express to PCIe/104 Adapter - Bottom Stacking model allows a PCI Express card to be installed into a PCIe/104 or PCI/104-Express single board computer system in a stack down configuration.

 PCI/104 to PCI Express Adapter - Top Stacking

PCI/104 to PCI Express Adapter - Top Stacking model allows a PCI Express card to be installed into a PCIe/104 or PCI/104-Express single board computer system in a stack up configuration.

 Power Supplies

Connect Tech’s Power Supplies power all of the PC/104 family expansion buses including PC/104, PC/104-Plus, PCI-104, PCI/104-Express, and PCIe/104.

 PCI/104-Express & PCIe/104

PCI Express to PCIe/104 Adapter

- Bus: PCIe/104 and PCI/104-Express compatible
- Features: x1 lane PCI Express card edge for installation in any slot width
- Connector: PCIe/104 156-pin
- Dimensions: 11.11 x 10.29 cm/4.375" x 4.050"

PCI/104 to PCI Express Adapter

- Bus: PCIe/104 and PCI/104-Express compatible
- Features: x16 lane vertical PCI Express card edge (supports x1, x4, x8 or x16)
- Connector: 156 pin PCIe/104 bottom connector
- Dimensions: 19.3 x 15.2cm/7.6" x 6"
Xtreme/SBC PCIe/104 Single Board Computer:
Xtreme/SBC PCIe/104 Single Board Computer utilizes the PCIe/104 form factor with 4 x1 PCIe lanes.

Xtreme/SBC PCI-104 Single Board Computer:
Xtreme/SBC PCI-104 Single Board Computer utilizes the PCI-104 form factor, supporting four peripheral boards.

Features
• 2x SATA, 1x Gigabit Ethernet, 4x USB 2.0, LVDS and VGA Video, 2x RS-232 and 2x RS-422/485 serial ports
• Choose from a variety of processors including AMD, Intel® Atom™, Freescale i.MX6
• Requires Qseven module

ArcticEdge/iMX6
The iMX6Q 800MHz Cortex-A9 processor gives the reliability needed for long life critical applications.

Features
• PicoITX Form Factor
• HDMI and LVDS Display Outputs
• i.MX6 Quad Core 800MHz ARM Cortex-A9 Processor
• Linux and Android BSPs Available
• Temp Range -40°C to +85°C

TrailBlazer/SBC
a rugged single board computer specifically designed for the Intel® Bay Trail series CPU. TrailBlazer is available with Quad Core Atom™ E3845, Dual Core Atom™ E3825, or Single Core Atom™ E3815.

Features
• External SATA/mSATA Switching Circuitry
• Single Wide Range Input Voltage +12V to +36V DC Input
### Ethernet to Serial

#### Blue Heat/Net Sync

- **Ports**: 4 Synchronous/Asynchronous Serial Ports
- **Control Signals**: Single ended: TxD, RxD, RTS, CTS, RI, DTR, DCD, RxClock, TxClock  
  Differential: (TxD, RxD, CTS, RTS, DTR, DCD, DSR)±, RxClock, TxClock
- **LAN Interface**: Auto sensing 10Base-T, 100Base-TX
- **Line Interface**: V.28, V.10, V.11, V.35, EIA-530, V.36
- **Protocols**: SDLC, HDLC, MonoSync, BiSync, Transparent BiSync, Async Ethernet Protocols: IP, TCP, UDP, ARP, RARP, TFTP, DHCP, BootP, HTTP, Telnet, ICMP, PPP
- **Temperature**: 0°C to 60°C/32°F to 140°F
- **Dimensions**: 11.56 x 11.68 x 3.43cm/4.55" x 4.50" x 1.35"
- **Power**: 5V DC (2.5A) - 28V DC (450 mA)

**Blue Heat/Net Sync** offers a synchronous Ethernet-to-serial solution for data communications.

---

#### Blue Heat/Net 2

- **Ports**: 2
- **Control Signals**: RS-232: TxD, RxD, CTS, RTS, DTR, DCD, GND  
  RS-422/485: (TxD, RxD, CTS, RTS)±, SR
- **LAN Interface**: Auto sensing 10Base-T, 100Base-TX
- **Line Interface**: RS-232
- **Baud**: 50 bps to 230.4 Kbps/Custom
- **Dimensions**: 11.56 x 11.68 x 3.43cm/4.55 x 4.50 x 1.35"
- **Power**: 5V DC to 30V DC, 500 mA  
  PoE model: 30 mA@ 48V DC  
  Screw Terminal Connector model: 36V-56V DC
- **Temperature**: -40°C to 85°C/-40°F to 185°F

**Blue Heat/Net 2** is a compact Ethernet-to-serial device which offers 2 software selectable RS-232/422/485 serial ports, and allows connection of any RS-232 or RS-422/485 serial device to an Ethernet LAN.

---

#### Blue Heat/Net 4 or 8 RJ-45

- **Ports**: 4/8
- **Control Signals**: Tx, Rx, RTS, CTS, DTR, DSR, DCD, GND  
  RS-422/485: (Tx, Rx, CTS, RTS)±, SR
- **LAN Interface**: Auto sensing 10Base-T, 100Base-TX
- **Line Interface**: RS-232
- **Baud**: 50 bps to 230.4 Kbps/Custom
- **Dimensions**: 18.42 x 13.34 x 3.43cm/7.25" x 5.25" x 1.35"
- **Temperature**: 0°C to 70°C/32°F to 158°F

**Blue Heat/Net 4 or 8 RJ-45** is an Ethernet-to-serial device which offers 4 or 8 RS-232 serial ports.
### Blue Heat/Net 4 or 8 DB-9

Is an Ethernet-to-serial device which offers 4 or 8 RS-232 or software selectable RS-232/422/485 serial ports over Ethernet LAN.

<table>
<thead>
<tr>
<th>Port</th>
<th>Control Signals</th>
<th>LAN Interface</th>
<th>Line Interface</th>
<th>Baud</th>
<th>Dimensions</th>
<th>Temperature</th>
</tr>
</thead>
</table>
| 4/8  | RS-232: TxD, RxD, RTS, DTR, DSR, DCD, RI, GND  
      | RS-422/485: (Tx(R,Rx(R,CTS))±, SR | Auto sensing 10Base-T, 100Base-TX | RS-232/422/485 | 50 bps to 460.8 Kbps/Custom | 24.41 x 13.34 x 4.29 cm  
      | 9.61" x 5.25" x 1.69" | 0°C to 70°C/32°F to 158°F |

### Blue Heat/Net 16

Is an Ethernet-to-serial device which offers 16 RS-232 or software selectable RS-232/422/485 serial ports over Ethernet LAN.

<table>
<thead>
<tr>
<th>Port</th>
<th>Control Signals</th>
<th>LAN Interface</th>
<th>Line Interface</th>
<th>Baud</th>
<th>Dimensions</th>
<th>Temperature</th>
</tr>
</thead>
</table>
| 16   | RS-232: DTR, DSR, RTS, CTS, TxD, RxD, RI, DCD, GND  
      | RS-422/485: (Tx(R,Rx(R,CTS))±, SR | Auto sensing 10Base-T, 100Base-TX | RS-232/422/485 | 50 bps to 460.8 Kbps/Custom | 43.7 x 16 x 4.4 cm/17.25" x 6.25" x 1.74" |

Our technical support team is easily accessible and allows for direct contact with an Engineer.
**PCI Serial**

<table>
<thead>
<tr>
<th>Ports</th>
<th>Line Interface</th>
<th>Control Signal</th>
<th>Baud</th>
<th>UART</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BlueStorm/LP RS-232</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>RS-232</td>
<td>Tx, Rx, RTS, CTS, RI, DTR, DSR, DCD, GND</td>
<td>50 bps to 921.6 Kbps/Custom</td>
<td>Dual/Quad/Octal 64 Byte FIFO</td>
</tr>
<tr>
<td>4</td>
<td>RS-232</td>
<td>Tx, Rx, RTS, CTS, RI, DTR, DSR, DCD, GND 2+2 Ports RS-232+RS-422/485</td>
<td>50 bps to 921.6 Kbps/Custom</td>
<td>Dual/Quad/Octal 64 Byte FIFO</td>
</tr>
<tr>
<td>8</td>
<td>RS-232</td>
<td>Tx, Rx, RTS, CTS, RI, DTR, DSR, DCD, GND 4+4 Ports RS-232+RS-422/485</td>
<td>50 bps to 921.6 Kbps/Custom</td>
<td>Dual/Quad/Octal 64 Byte FIFO</td>
</tr>
<tr>
<td><strong>BlueStorm/LP RS-422/485</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>RS-422/485</td>
<td>TxD±, RxD±, RTS±, CTS±, GND</td>
<td>50 bps to 1.8432 Mbps/Custom</td>
<td>Dual/Quad/Octal 64 Byte FIFO</td>
</tr>
<tr>
<td>4</td>
<td>RS-422/485</td>
<td>TxD±, RxD±, RTS±, CTS± , GND 2+2 Ports RS-232+RS-422/485</td>
<td>50 bps to 1.8432 Mbps/Custom</td>
<td>Dual/Quad/Octal 64 Byte FIFO</td>
</tr>
<tr>
<td>8</td>
<td>RS-422/485</td>
<td>TxD±, RxD±, RTS±, CTS± , GND 4+4 Ports RS-232+RS-422/485</td>
<td>50 bps to 1.8432 Mbps/Custom</td>
<td>Dual/Quad/Octal 64 Byte FIFO</td>
</tr>
</tbody>
</table>

*Low profile models are available with standard height brackets.*
**BlueStorm/SP** is a high-speed multi-port adapter which offers 8 ports of RS-232/422/485 connectivity.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>8</td>
</tr>
<tr>
<td>Line Interface</td>
<td>RS-232/422/485</td>
</tr>
<tr>
<td>Control Signals</td>
<td>RS-232: Tx,Rx,CTS,BL,DTR,DSR,DCD,GND&lt;br&gt;RS-422/485: (Tx,Rx,CTS,RTS)±,GND</td>
</tr>
<tr>
<td>Baud</td>
<td>RS-232: 50 bps to 921.6 Kbps&lt;br&gt;RS-422/485: 50 bps to 1.8432 Mbps</td>
</tr>
<tr>
<td>UART</td>
<td>Octal, 64 Byte FIFO</td>
</tr>
<tr>
<td>Temperature</td>
<td>0°C to 70°C/32°F to 158°F</td>
</tr>
<tr>
<td>Dimensions</td>
<td>14.702 x 10.605cm/5.788&quot; x 4.175&quot;</td>
</tr>
</tbody>
</table>

**BlueStorm/SP RJ-11** is a high-speed multi-port adapter which offers 8 independently configurable RS-232 ports, along with +5 VDC or +12 VDC power on 6 RJ-11 ports.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>8</td>
</tr>
<tr>
<td>Line Interface</td>
<td>RS-232, 6 RJ-11 connectors/2x10 pin headers</td>
</tr>
<tr>
<td>Control Signals</td>
<td>Tx,Rx,Rts,Dsr,Gnd,DC Power&lt;br&gt;10 Pin Header: Tx,Rx,Rts,Cts,Dtr,Dsr,Dcdr,Di,Sql</td>
</tr>
<tr>
<td>Baud</td>
<td>50 bps to 921.6 Kbps</td>
</tr>
<tr>
<td>UART</td>
<td>Octal, 64 Byte FIFO</td>
</tr>
<tr>
<td>Temperature</td>
<td>0°C to 70°C/32°F to 158°F</td>
</tr>
<tr>
<td>Dimensions</td>
<td>12.129 x 10.668cm/4.775&quot; x 4.2&quot;</td>
</tr>
</tbody>
</table>

**BlueStorm/SP Opto** is a high-speed multi-port adapter which offers 4 ports of RS-232/422/485 connectivity, along with 3kV optical isolation.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>4</td>
</tr>
<tr>
<td>Line Interface</td>
<td>RS-232/422/485, 3kV optical isolation</td>
</tr>
<tr>
<td>Control Signals</td>
<td>RS-232: Tx,Rx,CTS,GND&lt;br&gt;RS-422/485: TxD±,RxD±,RTS±,CTS±,GND</td>
</tr>
<tr>
<td>Baud</td>
<td>RS-232: 50 bps to 921.6 Kbps&lt;br&gt;RS-422/485: 50 bps to 1.8432 Mbps</td>
</tr>
<tr>
<td>UART</td>
<td>Dual, 64 Byte FIFO</td>
</tr>
<tr>
<td>Temperature</td>
<td>0°C to 70°C/32°F to 158°F</td>
</tr>
<tr>
<td>Dimensions</td>
<td>14.702 x 10.605cm/5.788&quot; x 4.175&quot;</td>
</tr>
</tbody>
</table>

**BlueStorm/LP** is a high-speed multi-port Universal PCI adapter designed for low profile and standard height PCI computers.

**BlueStorm/LP RS-232**

- **Ports**: 2/4/8
- **Temperature**: 0°C to 70°C/32°F to 158°F
- **Dimensions**: 12.72 x 1.5 x 6.44 cm/5.01" x .59" x 2.54"

**BlueStorm/LP RS-422/485**

- **Ports**: 2/4/8
- **Temperature**: 0°C to 70°C/32°F to 158°F
- **Dimensions**: 12.72 x 1.5 x 6.44 cm/5.01" x .59" x 2.54"
BlueStorm/Express is a standard profile PCI Express serial card available in 2, 4, 8, or 16 ports of RS-232/422/485 connectivity.

### BlueStorm/Express Ports

**Ports** 2/4/8/16  
**Line Interface** RS-232/422/485  
**Temperature** 0°C to 70°C/32°F to 158°F  
**Dimensions** 2/4 Port: 10.86 x 10.92cm/4.275” x 4.300”  
8/16 Port: 14.699 x 11.125cm/ 5.787” x 4.375”

### BlueStorm/Express Opto

**Ports** 4  
**Isolation** 3kV  
**Line Interface** RS-232/422/485  
**Temperature** 0°C to 70°C/32°F to 158°F  
**Dimensions** 14.699 x 11.009cm/5.787” x 4.350”

BlueStorm/Express 8/16 Port RS-232 is a standard profile PCI Express serial card which offers 8 or 16 ports of RS-232 connectivity, and is compatible with any PCI Express slot.

### BlueStorm/Express 8/16 Port RS-232

**Ports** 8/16  
**Line Interface** RS-232  
**Control Signals** TxD, RxD, RTS, CTS, RI, DTR, DSR, DCD  
**Baud** 50 bps to 1 Mbps  
**UART** Octal, 256 Byte FIFO  
**Temperature** -40°C to 85°C/-40°F to 185°F  
**Dimensions** 14 x 10.7cm/5.5” x 4.2”

BlueStorm/Express Opto is a standard profile PCI Express serial card which offers 4 ports of RS-232/422/485 connectivity, and 3kV optical isolation. These x1 lane cards are compatible with x1, x4, x8, x16 lane PCI Express slots.

### BlueStorm/Express Opto

**Ports** 4  
**Isolation** 3kV  
**Line Interface** RS-232/422/485  
**Temperature** 0°C to 70°C/32°F to 158°F  
**Dimensions** 14.699 x 11.049cm/5.787” x 4.350”
BlueStorm/Express Opto (1kV) is a standard profile PCI Express serial card which offers 8 ports of RS-232/422/485 connectivity, and 1kV optical isolation on 4 of 8 ports.

- **Ports**: 8
- **Isolation**: 1kV (4 Ports)
- **Line Interface**: RS-232/422/485
- **Control Signals**:
  - RS-232: Tx,Rx,RTS,CTS,GND
  - Non-Isolated: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,GND
- **Baud**: RS-232: 921.6 Kbps
- **UART**: Octal PCI, 64 Byte TX, and RX FIFOs
- **Temperature**: 0°C to 70°C/32°F to 158°F
- **Dimensions**: 14.702 x 10.605cm/5.788" x 4.175"

BlueStorm/Express Isolated is a standard profile PCI Express serial card which offers 8 ports of RS-232 connectivity, and 2kV optical isolation on all 8 ports.

- **Ports**: 8
- **Isolation**: 2kV isolation, 3kV on board
- **Line Interface**: RS-232
- **Control Signals**:
  - Tx,Rx,CTS,DTC,DTR
- **Baud**: RS-232: 1 Mbps, RS-422/485: 7.8 Mbps
- **UART**: Octal, 256 Byte TX, and RX FIFOs
- **Temperature**: 0°C to 70°C/32°F to 158°F
- **Dimensions**: 14.699 x 6.891cm/5.787" x 2.713"

BlueStorm/Express LP Opto is a low profile PCI Express serial card which offers 2 ports of RS-232/422/485 connectivity, along with 3kV optical isolation on both ports.

- **Ports**: 2
- **Line Interface**: RS-232/422/485
- **Control Signals**:
  - RS-232: Tx,Rx,RTS,CTS,GND
  - RS-422/485: (Tx±,Rx±,CTS±,RTS)±,GND
- **Baud**: RS-232: 1 Mbps, RS-422/485: 7.8 Mbps
- **UART**: Octal PCI, 64 Byte TX, and RX FIFOs
- **Temperature**: 0°C to 70°C/32°F to 158°F
- **Dimensions**: 15.7 x 6.9cm/6.2" x 2.7"

BlueStorm/Express LP is a low profile PCI Express serial card which offers 8 ports of RS-232/422/485 connectivity.

- **Ports**: 8
- **Line Interface**: RS-232/422/485
- **Control Signals**:
  - RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,GND
  - RS-422/485: (Tx±,Rx±,CTS±,RTS)±,GND
- **Baud**: RS-232: 1 Mbps, RS-422/485: 7.8 Mbps
- **UART**: Octal PCI, 64 Byte TX, and RX FIFOs
- **Temperature**: 0°C to 70°C/32°F to 158°F
- **Dimensions**: 14.699 x 6.891cm/5.787" x 2.713"
Synchronous Serial

**ComSync/PCI-104 Gen 3**

ComSync/PCI-104 Gen 3 is a PCI-104 card that allows you to choose from multiple electrical interfaces, protocols and encoding schemes to ensure your hardware solution is suited to your specific application.

**Features**
- Two synchronous/asynchronous serial channels
- Multiple communication protocols supported: RS 232, RS-422, RS-485, HDLC, SDLC, MonoSync, BiSync and Async
- Operating temperature range of -40°C to 85°C

**ComSync/104** offers two synchronous/asynchronous RS-232, RS-422, RS-449, EIA-530, EIA-530/A, V.35, and X.21 serial channels.

<table>
<thead>
<tr>
<th>Ports</th>
<th>2 Synchronous/Asynchronous Serial Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>RS-232, RS-422, RS-449, EIA-530, EIA-530/A, V.35, X.21</td>
</tr>
<tr>
<td>Control Signals</td>
<td>Tx±, Rx±, DCD±, RTS±, CTS±, DSR±, DTR±, SYNC±, TRX±, RXT±</td>
</tr>
<tr>
<td>Temperature</td>
<td>0°C to 70°C / 32°F to 158°F</td>
</tr>
<tr>
<td>Dimensions</td>
<td>PC/104 v.2.3 Compliant</td>
</tr>
</tbody>
</table>

**Blue Heat/Net Sync**

Blue Heat/Net Sync offers an Ethernet to synchronous serial solution for data communications.

<table>
<thead>
<tr>
<th>Ports</th>
<th>4 Synchronous/Asynchronous Serial Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Signals</td>
<td>Single ended: TxD, RxD, RTS, CTS, RI, DTR, DSR, DCD, RxClock, TxClock</td>
</tr>
<tr>
<td>Differential:</td>
<td>(TxD, RxD, CTS, RTS, DTR, DCD, DSR)±, RxClock, TxClock</td>
</tr>
<tr>
<td>LAN Interface</td>
<td>Auto sensing 10Base-T, 100Base-TX Ethernet</td>
</tr>
<tr>
<td>Line Interface</td>
<td>V.28, V.10, V.11, V.35, EIA-530, V.36</td>
</tr>
<tr>
<td>Protocols</td>
<td>SDLC, HDLC, MonoSync, BiSync, Transparent BiSync, Async, Ethernet Protocols: IP, TCP, UDP, ARP, RARP, TFTP, DHCP, BootP, HTTP, Telnet, ICMP, PPP</td>
</tr>
<tr>
<td>Temperature</td>
<td>0°C to 60°C / 32°F to 140°F</td>
</tr>
<tr>
<td>Dimensions</td>
<td>11.56 x 11.68 x 3.43cm / 4.55&quot; x 4.50&quot; x 1.35&quot;</td>
</tr>
<tr>
<td>Power</td>
<td>5V DC (2.5A) - 28V DC (450 mA)</td>
</tr>
</tbody>
</table>

**Xtreme/Multi-I/O**

Xtreme/Multi-I/O is a high density, all-in-one PC/104 communication board for CANbus, serial port, wired and wireless communication.

**Features**
- 2500V isolation protection
- 2x SJA1000 controllers, 1Mbp/s
- 4x RS-232/1x RS-485/1x708
- 2x MultiTech compatible sockets
- 5x isolated LEDs, 1x USB
- Extended operating temperature
**Analog and Digital I/O**

### Mini PCI Express ADC
- **Features**
  - 16 ADC input channels
  - 500kSPS
  - 16-bit resolution
  - Used in any Mini PCIe socket
  - -40°C to +85°C
- **MPG401**

### Xtreme I/O Express ADC-DAC
- **Features**
  - 32 Single Ended/16 Differential Channels, 16-bit 500kps, Up to +/− 10.24V Input Range
  - 4 Channels, 16 bit resolution, 6 us Settling Time, Up to +/− 10.24V Output Swing
- **DAG103**

### Xtreme I/O ADC-DAC
- **Features**
  - 32 Single Ended/16 Differential Channels, 16/14/12 bit 100kps, Software-Programmable Input Ranges
  - 4 Channels, 16/14/12 bit resolution, 6 programmable output ranges
- **DAG003, DAG004, DAG005**

### Xtreme I/O Opto
- **Features**
  - Analog Inputs: 24 optically isolated inputs (24-bits), input voltage range +0 up to +40V DC
  - Analog Outputs: 24 optically isolated outputs (24-bits), output voltage range +0 up to +40V DC
- **DAG001**

### FreeForm/104
- **Features**
  - Analog Inputs: 32 Single Ended/16 Differential Channels, 16/14/12 bit 100kps, Software-Programmable Input Ranges
  - Isolated I/O: 16-bit bidirectional I/O, +3.3V or +5V, 24mA Drive
  - Temperature: -40°C to +85°C
- **FBG006**

**Mini PCle ADC** is a dual-channel analog to digital converter peripheral board for the embedded marketplace. Ideal for data acquisition, measurement, and control applications.

**Xtreme I/O Express ADC-DAC** is an analog and digital peripheral board for the PCIe/104 small form factor embedded marketplace.

**Xtreme I/O ADC-DAC** is an analog and digital peripheral board.

**Xtreme I/O Opto** is a 48-bit isolated digital input/output board.

**FreeForm/104** is a PC/104 card that features a reconfigurable FPGA for digital I/O and control applications.

**FPGA**: Xilinx Spartan-3E, 500,000 gates, 360K RAM

**Standard**: 96 digital I/O

**Programmable I/O**: 96 high current TTL/CMOS (48 per 50 pin connector), 6 TTL (26 pin connector)

**Fixed I/O**: 12 TTL inputs (26 pin connector)
**Adapters/Development Tools**

<table>
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<th>PCIe/104 to M.2 Adapter</th>
<th>PCIe/104 Quad Mini PCIe/mSATA</th>
<th>Mini-PCIe Carrier</th>
<th>PCI/104-Express to Single/Dual Mini-PCIe Adapter</th>
<th>PCIe-104 to Mini-PCIe Adapter</th>
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<td>ADG092</td>
<td>ADG078, ADG080</td>
<td>ADG075, ADG077</td>
<td>ADG044, ADG051</td>
<td>ADG046</td>
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</table>

**PCIe/104 to M.2 Adapter**
allows for the implementation of two M.2 next generation form factor expansion slots. Supported cards are B, B&M, E, and A&E key type.

**Features**
- Additional connectors include 2 SIM card slots for cellular applications and 2 wireless status signal headers to aid with integration in custom enclosures
- Extended Temperature Range -40°C to +80°C

**PCIe/104 Quad Mini PCIe/mSATA** board supports up to four mini PCIe modules simultaneously for applications in the PCIe/104 small form factor embedded market place.

**Features**
- Supports up to four Mini PCIe modules simultaneously
- Supports any “Half” or “Full” Mini PCIe/mSATA product
- Maximum flexibility keeping the PCIe/104 stack small

**Single and Dual Mini-PCIe Carriers** easily enable the integration of a Mini-PCIe Card into a PCIe/104 or PCI/104-Express System. Fully compatible with any Mini-PCIe Peripheral.

**Features**
- PCIe/104 Compliant
- On-Board USB Switching
- Extended Temperature Range -40°C to +85°C

**PCI/104-Express to Single Mini-PCI Express Adapter** enables the integration of a Mini-PCIe (PCI Express Mini Card) into a PCIe/104 (PCI/104-Express) system.

**Connector**
- PCI/104 x 1

**Features**
- 3.3V (at 3A) and 1.5V (at 1A) DC power
- SIM card, Half-Mini and Full-Mini-PCIe cards supported
- 3 Mini-PCIe status LEDs
- Optional PCI Express Mini-Card Specification Revision 2.0 which adds a DisplayPort connection

**PCI/104-Express to Single Mini-PCI Express Adapter**
- 3.3V (at 3A) and 1.5V (at 1A) DC power
- SIM card, Half-Mini and Full-Mini-PCIe cards supported
- 3 Mini-PCIe status LEDs
- Optional PCI Express Mini-Card Specification Revision 2.0 which adds a DisplayPort connection
Adapters/Development Tools

SMART Battery Adapter

- Enables users to add four PCI-104 compatible boards into either a stack up or stack down configuration.

Features
- Use of PCI-104 Boards in PCIe/104 Stack
- Up/Down Stack Compatible
- PCIe/104 Compliant

SMART Battery Adapter

- Allows for easy integration of a SMART battery into an existing PC/104 system.

Size
- 9.017 x 9.589cm/3.55" x 3.775"

Connector
- SMART Battery connector (S787428-1)

Features
- Easily integrates SMART battery into a PC/104 Stack
- Use with Xtreme/PSU-UPS (SCG001)

PCIe/104 to PCI-104 Adapter

- Enables users to add four PCI-104 compatible boards into either a stack up or stack down configuration.

Features
- Use of PCI-104 Boards in PCIe/104 Stack
- Up/Down Stack Compatible
- PCIe/104 Compliant

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Features
- Use of PCI-104 Boards in PCIe/104 Stack
- Up/Down Stack Compatible
- PCIe/104 Compliant

XMC to PCIe/104 Adapter

- Is an engineering tool for the purpose of enabling rapid development of systems requiring the use of next generation form factor peripheral cards.

Features
- PCIe/104 Compliant
- Type 1 PCIe/104 & XMC Connectors
- 96.018mm x 152.4mm (3.780" x 6.0")
- -40°C to +85°C

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Connect Tech is regularly on the road at industry events around the globe. Visit our website at www.connecttech.com to find out where you can see us next!

WWW.CONNECTTECH.COM
Adapters/Development Tools

**COM® Express Bus Extender**
- Allows full Type 2 or Type 6 COM Express functionality without compromising the testing process.
- **Size**
  - 9.5cm x 12.5cm/3.75" x 4.92"
- **Connectors**
  - COM Express
- **Features**
  - COM Express Type 2/Type 6 Compatible
  - Supports Compact and Basic COM Express Modules
  - Impedance Controlled Design

**PCI/PCIe to PMC/XMC Adapter**
- Links a PCIe card to a XMC Carrier, or a PCI card to a PMC Carrier.
- **Size**
  - 14.9cm x 7.4cm/5.87" x 2.91"
- **Connectors**
  - XMC, PMC, PCIe (x16 Card accepted, x8 Compatible), PCI (32-bit)
- **Features**
  - XMC to PCIe Connection
  - PMC to PCI Connection
  - BUSMODE LEDs with Jumper Selection for Testing

**Qseven to COM® Express Adapter**
- Installs a Qseven module into any COM Express® Carrier Board.
- **Size**
  - Compact: 9.5 x 9.5cm/3.75" x 3.75"
  - Basic: 9.5 x 12.5cm/3.75" x 4.92"
- **Connectors**
  - Single or double row COM Express Module Connectors
  - Qseven Connector
- **Features**
  - Compatible with COM Express Type 2 and Type 6

**PCI-104 Adapter to PC/104 Adapter**
- Enables testing and development of PC/104 (ISA) devices in a PCI-104 (PCI) only system.
- **Connectors**
  - PCI-104, PC/104
- **Features**
  - PCI Memory and I/O interface to operate, control, and monitor peripherals on the PC/104 (ISA) bus
  - PCI driven interrupt controller monitors and relays triggered IRQ lines on the PC/104 bus

**SUMIT to PCIe/104 Adapter**
- Integrates a PCIe/104 or PCI/104-Express card into a SUMIT-104 system.
- **Connectors**
  - SUMIT A and B, PCIe/104 x1
- **Features**
  - 2 x USB (from SUMIT) via Mini USB connectors
PCIe/104 to PCI Express Adapter - Bottom Stacking enables the installation of a PCI Express card into a PCIe/104 or PCI/104-Express single board computer system in a stack down configuration.

**Size**
- 19.3 x 15.2cm/6" x 7.6"  

**Connector**
- 156 pin PCIe/104 top connector; footprint for 2x USB Type B connector  

**Features**
- x16 lane vertical PCI Express card edge (supports x1, x4, x8 or x16)

---

PCIe/104 to PCI Express Adapter - Top Stacking enables the installation of a PCIe Express card into a PCIe/104 or PCI/104-Express single board computer system in a stack up configuration.

**Size**
- 9.5885 x 9.017cm/3.775" x 3.550"  

**Connector**
- 156 pin PCIe/104 bottom connector  

**Features**
- x16 lane vertical PCI Express card edge (supports x1, x4, x8 or x16)

---

PCIe/104 to PCI Express Cable Adapter provides an interface from the PCIe/104 (PCI/104-Express) bus to a PCI Express cable connection.

**Connector**
- PCIe cable connector, PCI-104/Express 156 pin top and bottom connectors  

**Features**
- x1 PCIe/104 lanes connected via PCI Express cable

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PCIe to PCIe-104 Adapter enables the installation of a PCIe/104 or PCI/104-Express card into a standard PCI Express slot.

**Size**
- 11.11 x 10.29cm/4.375" x 4.050"  

**Connector**
- PCIe/104 156-pin  

**Features**
- x1 lane PCI Express card edge for installation in any slot width

---

PCIe/104 Bus Extender allows one additional card height spacing between peripherals in a PCIe/104 or PCI/104-Express stack.

**Size**
- 9.02 x 1.4605cm/3.55 x .575"  

**Connector**
- 156 pin PCIe/104 bottom connector  

**Features**
- PCIe/104 x16 bus connector
<table>
<thead>
<tr>
<th>Adapter Type</th>
<th>Description</th>
<th>Size</th>
<th>Connector</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCI to PC/104-Plus Adapter</strong></td>
<td>Enables a PCI-104 or PC/104-Plus serial card to be installed into a standard Universal PCI slot.</td>
<td>• 10.69 x 12.48cm/4.2&quot; x 4.913&quot;</td>
<td>• PCI-104, 120 pin and PC/104, 64 and 40 pin stack-through connectors</td>
<td>• 16x11 (.100” grid) breadboarding area for assembly and testing</td>
</tr>
<tr>
<td><strong>ISA to PC/104 Adapter</strong></td>
<td>Enables an 8 or 16-bit PC/104 card to be installed into a standard ISA system.</td>
<td>• 15.62 x 10.68cm/6.145” x 4.2”</td>
<td>• PC/104, 64 and 40 pin passive stack-through connectors</td>
<td>• Compatible with standard Universal 3.3V or 5V slot</td>
</tr>
<tr>
<td><strong>PC/104-Plus to Mini PCI Adapter</strong></td>
<td>Enables a Mini PCI card to be installed into a standard PCI/104-Plus stack.</td>
<td></td>
<td>• PC/104-Plus, 120 pin and PC/104, 64 and 40 pin stack-through connectors</td>
<td>• 3.3V regulator delivers 2 watts of power to the Mini PCI card</td>
</tr>
<tr>
<td><strong>PCI-104 to PMC Adapter</strong></td>
<td>Enables a PMC card to be installed into a PCI-104 or PC/104-Plus stack.</td>
<td>• 9.02 x 16.58cm/3.550” x 6.526”</td>
<td>• PCI-104 120 pin stack-through, 2x64 pin passive PMC connectors</td>
<td>• Operates multiple PMC cards in a PCI-104 stack with multiple adapters</td>
</tr>
<tr>
<td><strong>PCI to Compact PCI Adapter</strong></td>
<td>Enables a CompactPCI card to be installed into a standard Universal PCI system.</td>
<td>• 12.00 x 6.40cm/4.721” x 2.525”</td>
<td>• CompactPCI 110 pin male A connector for connection to host system</td>
<td>• 16x11 (.100” grid) breadboarding area for assembly and testing</td>
</tr>
</tbody>
</table>
**PCI Dump Switch Card** allows debugging during system hang-ups.

**Size**
- 11.99 x 6.44cm/4.72” x 2.54”

**Connector**
- Transparent PCI to PCI bridge

**Features**
- Universal 32-bit PCI card (PCI 2.3 compliant)

---

**PCI Express Dump Switch Card** allows debugging during system hang-ups.

**Size**
- 6.7 x 6.8cm/2.64” x 2.68”

**Connector**
- Transparent PCIe to PCI bridge

**Features**
- x1 lane PCIe (PCI Express 1.0 compliant)

---

**PCI Express Burn-in Rack Adapter** burns up to 10 (15W or 25W) PCI Express cards simultaneously with lane widths from x1 to x16 in any combination.

**Size**
- 31.5 x 13.97cm/12.4” x 5.5”

**Connector**
- ATX power supply connectors to power common components

**Features**
- Quick verification of power conditions and lane widths via on-board LEDs

---

**SSD/104 SATA** is a rugged stackable storage solution that allows installation of up to two mSATA SSD modules into any PC/104-Plus, PCI-104, PCI/104-Express and PCIe/104 stack or embedded system.

**Capacity**
- Limited only by the choice of SSD

**Connector**
- Standard right angle 7-pin SATA

**Flash**
- MLC and SLC

**Temperature**
- -40°C to 85°C (-40°F to 185°F)

**Power**
- +3.3V ±5%

---

**SSD/104 SATA 2.5” Drive Carrier** is a stackable storage solution that allows any 2.5” SATA hard drive to be installed into any type II PCIe/104 stack or embedded system.

**Features**
- Use any 2.5” Hard Drive
- Supports all SATA III
- For PCIe/104 Type 2 stack

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**ADG001**

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**SSD/104 SATA Drive Carrier**

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**ADG006**

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**SDG001**

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**SDG006**

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Connect Tech’s **Power Supplies** power all of the PC/104 family expansion buses including PC/104, PC/104-Plus, PCI-104, PCI/104-Express, and PCIe/104.

**Xtreme/PSU:** 115W total output power (+5V @ 10A, +12V @ 5A, and +5V standby @ 1A), and +6V to +36V DC input voltage

**Xtreme/PSU-XP:** 160W total output power (+5V @ 10A, +3.3V @10A, +12V @ 5A, -12V @ 1A and +5V standby @ 1A), and +6V to +36V DC input voltage

**Xtreme/PSU Isolated:** 195W total output power (+5V @ up to 15A, +3.3V @ up to 20A and 12V @ up to 10A), +9V to +36V DC input voltage, and up to 2.25kV isolation

**Xtreme/PSU-UPS:**
- SMART battery charging for uninterrupted power supply
- 125W+ output power (+5V, +12V, -12V, +3.3V, +5V standby)

**Xtreme PSU-UC** is a high efficiency, high powered PC/104 form factor power supply featuring Ultracapacitor backup for uninterrupted power supply.

**Size**
- 90mm x 96mm/3.55” x 3.775”

**Connector**
- ATX power supply connectors to power common components

**Features**
- Ultracapacitor backup for uninterrupted power supply

**SMART Battery Adapter** allows for easy integration of a SMART battery into an existing PC/104 system.

**Size**
- 90mm x 96mm/3.55” x 3.775”

**Connector**
- SMART Battery connector (S787428-1)

**Features**
- Easily integrates SMART battery into a PC/104 Stack
Connect Tech is a hardware design and manufacturing company that specializes in rugged, small form factor solutions. Our products support a wide variety of industry standards including COM Express®, SMARC, Qseven, 3U VPX, and PC/104. Our peripheral solutions include Managed Gigabit and 10G Ethernet switches, NVIDIA® GPU solutions, Digital & Analog I/O, CAN Controllers, Multi-Port Serial, FPGA, and Power Supplies. Additionally, CTI offers a line of Rugged Tablets. We have a nimble engineering team ready to engage in Custom Design when “off-the-shelf” is not an option. Connect Tech has built a global reputation for delivering quality, cost-effective devices backed by stellar customer support.

Mission Statement

Connect Tech is a designer and manufacturer of computer interface products for the global market. Our commitment is customer satisfaction through fair and ethical relationships with our customers, suppliers and employees.

Connect Tech Inc. - ISO 9001:2008 Certified