Connect Tech Inc.

Embedded Computing Experts

DESIGN

ENGINEERING TEAM

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.

SYSTEM SOLUTION

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.

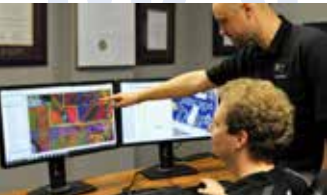
TECHNICAL SUPPORT

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.

MANUFACTURING



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FORM FACTORS

TECHNOLOGY

NOTE: Specifications found in this guide are subject to change without notice.

COM Express Type 6

COM Express® Type 6

CCG060

COM Express® Type 6 Carrier 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.

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® + GPU Carrier

VXG101

COM Express® + GPU Carrier 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.

Features

- 200mm x 125mm (7.87" x 4.92")
- Choose from AMD Radeon or NVIDIA GeForce GPUs
- 6 total outputs can be used for HDMI, DVI, or VGA

COM Express® Type 6 Rugged Ultra Lite Carrier

CCG011, CCG012

COM Express® Type 6 Rugged Ultra Lite Carrier is a small carrier board, offering durability with locking, rugged pin headers.

Features

- 95mm x 125mm (3.74" x 4.92")
- 2x Mini PCIe, 4x SATA, 2x GbE, 2x RS-232, 2x RS-422/485, 8x USB 2.0, VGA, LVDS
- Rugged Locking Pin Headers
- -40°C to +85°C

COM Express® Type 6 104e

CCG017, CCG018

COM Express® Type 6 104e is a compact carrier board matching the dimensions of a COM Express® Basic module with a PCIe/104 Expansion Bus.

Features

- 4x USB 3.0, 2x GbE, 2x RS-232/485, LVDS (2x24), VGA
- PCIe/104 Type 1 and 2 Expansion Stack
- On-Board DisplayPort/HDMI/DVI Display Switching
- -40°C to +85°C

COM Express® Type 6 PMC/XMC Ultra Lite Carrier

CCG013, CCG016

COM Express® Type 6 PMC/XMC Ultra Lite Carrier offers dual PMC/XMC and Mini-PCIe expansion.

Features

- Small form factor
- 2x PMC/XMC Expansion
- 3x USB 3.0, 2x GbE, LVDS (2x24), VGA
- -40°C to +85°C

COM Express® Type 6 Ultra Lite Carrier

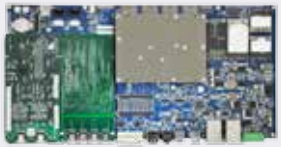
CCG008

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



CCG007

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

CCG001

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

NEW

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**

CCG070

	COM Express® Ultra Lite Carrier Type 6	COM Express® Type 6 Rugged Ultra Lite Carrier	COM Express® Type 6 PMC/XMC Ultra Lite Carrier	COM Express® + GPU Carrier	COM Express® Type 6 PMC/ XMC Lite	COM Express® Type 6 104e	COM Express® Type 6 104e	COM Express® Type 6	COM Express® Type 10 Mini Rugged Latching Carrier	COM Express® Type 10 Mini Rugged Latching Carrier	COM Express® Type 10 Stacking
Part #	**CCG008**	**CCG011 / CCG012**	**CCG013**	**VXG101**	**CCG016**	**CCG017**	**CCG018**	**CCG060**	**CCG010**	**CCG020**	**CCG030**
Mini PCI Express	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	3 slots	2 slots	2 slots	2 slots
PMC/XMC	-	-	2 slots	-	2 slots	-	-	-	-	-	-
HDMI	✓	-	-	-	✓	✓	✓	2**	-	✓	HDMI**
DisplayPort++ (*)	-	2	2	6	2	2	2	2**	✓	✓	DisplayPort**
DVI	-	-	-	-	-	✓	✓	2**	-	✓	-
LVDS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	LVDS
VGA	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
PCIe Expansion Bus	-	-	-	-	-	4x PCIe x1**	1x PCIe x16** 4x PCIe x1**	1x PCIe x16** 5x PCIe x1**	-	-	1x PCIe x1**
Ethernet	2 x 1GbE	2 x 1GbE	2 x 1GbE	2 x 1GbE	2 x 1GbE	2 x 1GbE	2 x 1GbE	4x 1GbE	2 x 1GbE	2 x 1GbE	2 x 1GbE
USB 2.0/3.0	6/4	6/4	6/4	6/4	6/4	2**/4	2**/4	4/4	6/0	4/2	4/2
USB Client Port	1	1	1	1	1	-	-	-	1	1	-
Serial RS-232 / RS-485	3/2	3/2	1/0	3/2	1/0	2/2	2/2	2/2	2/2	2/2	2/2
HD Audio	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GPIO	8 bits	8 bits	8 bits	8 bits	8 bits	-	-	-	8 bits	8 bits	8 bits
SATA	2	2	2	2	2	1 + 2**	1	4**	1	-	1**
mSATA	2	2	2	2	2	2	2	3	1	1	1
SD Card	✓	✓	✓	✓	2	-	-	✓	✓	✓	✓
Input Power Options	+12V only	+12V only	+12V to +48V	+12V to +48V	+12V to +48V DC	+12V only	+12V only	+12V only	+6V to +14V	+6V to +14V	+12V only
PCI-104 / PCIe/104	-	-	-	PCIe/104 Type 2	-	PCIe/104 Type 2	PCIe/104 Type 1	-	-	-	-
Dimensions	125 x 95mm	125 x 95mm	170 x 165mm	125 x 200mm	195 x 190mm	125 x 95mm	125 x 95mm	125 x 95mm	55 x 84mm	84 x 55mm	84 x 55mm
Temperature	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F
Rugged Locking Connectors	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* can be used as HDMI, DVI, or VGA via dongle

** Available as High Density Connector

COM Express

COM Express® PC Connectors Type 10 Carrier	COM Express® Type 7 Carrier
CCG022	**CCG070**
2 slots	2 slots
-	-
✓	-
✓	-
✓	-
✓	-
-	-
2 x half size cards OR 1 x full length card	2 miniPCIe, 1 x M.2 NVMe
2 x 1GbE	2x 1GbE, 1x 10GbE
6/2	2/4
1	-
2/2	-
✓	-
8 bits	8x 3.3 buffered GPIO
-	✓
1	1
✓	-
+6V to +14V	+12V DC only
-	-
84mm x 73.415mm	125mm x 95mm
-40°C to +85°C -40°F to 185°F	-40°C to +85°C -40°F to 185°F
PC style and locking pin header	-

COM Express® Type 10 Mini Rugged Latching Carrier

CCG010, CCG020

COM Express® Type 10 Mini Carrier is an extremely small carrier board featuring rugged, locking connectors and offers the ultimate durability.

Features

- 84mm x 55mm (3.307" x 2.165")
- 2x Half Sized Mini PCIe
- +6V to +14V Input Power
- -40°C to +85°C

COM Express® Type 10 I/O Stacking Carrier

CCG030

COM Express® Type 10 Carrier utilizes a high density connector to rapidly advance project development. Use with off the shelf breakout boards or easily design a custom breakout to meet your needs.

Features

- 84mm x 55mm (3.307" x 2.165")
- 1x High Density Connector for Breakout Board Utilization
- -40°C to +85°C

COM Express® Type 10 PC Connectors Carrier

NEW CCG022

COM Express® Type 10 Carrier COM Express® Type 10 Carrier is an extremely small carrier board featuring a combination of PC style connectors and locking pin header connectors.

Features

- Small size 84mm x 73.415mm
- Combination of PC style and locking pin header connectors
- Support for the latest generation of low-powered CPUs
- -40°C to +85°C

COM Express® TK1

NEW CMG601

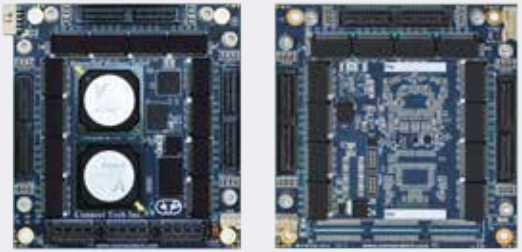
COM Express® TK1 is based on the NVIDIA® Tegra K1 SoC. It is compliant with the COM Express® Type 6 pinout.

Features

- Small Form Factor: 95mm x 95mm (3.74" x 3.74")
- 2x MIPI CSI, 1x GbE, 1x SATA, 1x micro SD, 5x USB 2.0, 1x USB 3.0, 4x UARTS
- 15 watts max (+12VDC)
- Ubuntu 14.04 LTS Operating System

Managed Ethernet Switches

Xtreme/GbE 24-Port Managed Carrier Ethernet Switch



XDG024, XDG025

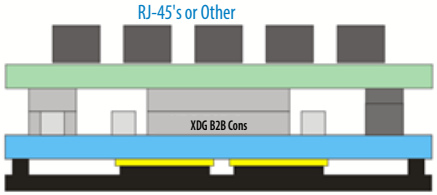
Xtreme/GbE 24-Port Managed Carrier Ethernet Switch provides high density, high port count, Carrier Grade Ethernet switching capabilities in an extremely small embedded form factor. Excellent for any space constrained, mission-critical application needing an embedded high-density/high-port count managed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

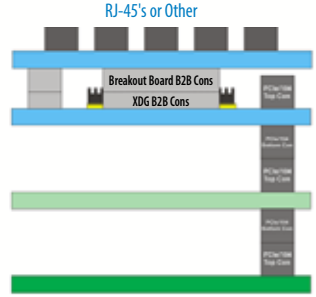
Features

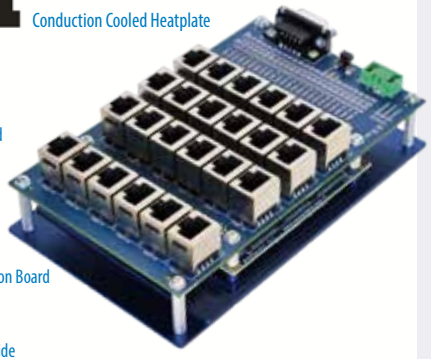
- 24 Port Gigabit Ethernet (10/100/1000 Mbps) Switch
- All 24 Port Magnetics Integrated on-board
- High-Density Ruggedized Board-to-Board/Board-to-Cable Port Breakout
- Extremely Small Footprint of 90mm x 96mm (3.550" x 3.775")
- Conduction cooled Heatplate or Air cooled Heatsink Options
- -40°C to +85°C

Breakout Board

XBG001
XBG002
XBG003







1GbE and 10G Solutions

Xtreme/GbE Managed Carrier Ethernet Switch

XDG004

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

1GbE

ESG301, ESG302

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 Managed Ethernet Switch

VPG201

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

10G

XDG201

Xtreme/10GbE 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

XDG101

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

3U VPX

GraphiteVPX/CPU-TX2/TX1

NEW VPG003

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

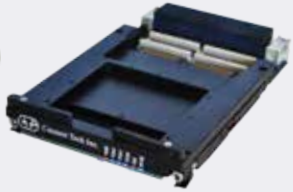
VPG001

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



VPG101

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

VPG301

GraphiteVPX/GPU, with NVIDIA GTX 950M GPU, PCIe Gen 3.0 Solution.

Features

- NVIDIA GeForce GTX 950M/2GB GDDR5
- Conduction Cooled only
- The onboard PCIe Gen 3.0 switch supports multiple Dataplane options: one x8 or two x4 ports with NT capabilities
- I/O support up to 6 DisplayPort outputs and/or 2 DVI output
- -40°C to +70°C

GraphiteVPX/GbE

VPG201

GraphiteVPX/GbE 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

RTMs available for Graphite CPU-TX2/TX1, CPU, GPU, and GbE options.

Mini PCI Express/M.2

Mini PCIe GbE

MPG101, MPG102, MPG104

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

MPG201, MPG202, MPG203, MPG204

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 PCI Express Serial

MPG001, MPG002, MPG003, MPG004

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 PCI Express ADC

MPG401

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

M2G201

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

Embedded Systems

Rudi

NEW ESG503

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

Rosie

ESG501

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, IEEE 802.11 ac, 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

Kube

ESG401

Kube is a small form factor rugged processor system based on 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 a/b/g/n, 1x RS-232
- +9V to +36V Power Input
- -40°C to +85°C

LINQ/GbE

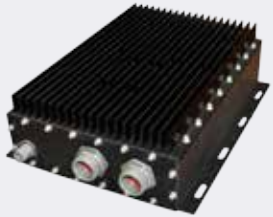
ESG301, ESG302

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 & DO-160 compliance
- -40°C to +85°C

Ruggedized Embedded Systems



ESG101

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

VXG101

Connect Tech's GPU solutions bring exceptional desktop-level graphics, outstanding multimedia features, and GPU processing power to the PCIe/104 and COM Express® form factors. Choose from AMD Radeon or NVIDIA GeForce GPUs. Ideal for driving multiple displays or with access to the NVIDIA CUDA™ Cores, the GPU can become a parallel computational CPU for non-graphical applications. Now with Gen 6 Intel Processors.

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

Xtreme/GPU

XGG001, XGG002, XGG003

Features

- PCIe/104
- 4x Dual-Mode Mini DisplayPort
- PCIe x1 Up/Down stack compatible
- PCIe x16 Down stack compatible
- PCIe x16 Up stack available
- Additional rugged options available

MXM Graphics Module

NEW

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.

Options

- GeForce® GTX1050
- GeForce® GTX1060
- GeForce® GTX1070
- GeForce® GTX1080

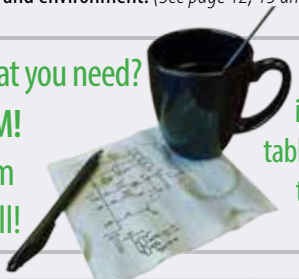
Introducing...

NEW

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)*

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.

- USES Integrated UTX1AS Cluster Server -

NVIDIA® Jetson™ TX2 & TX1 Solutions

Spacely

NEW ASG006

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

Cogswell

NEW ASG007

Cogswell Carrier for NVIDIA® Jetson™ TX2 and TX1 is provides 4 GbE channels with built-in PoE sourcing capabilities, ideal for use in GigE Vision applications.

Features

- For use with GigE Vision Cameras
- 5 x Gigabit Ethernet Ports 4 x PoE, 2 x PoE+ PSE Gigabit Ports
- Only a single +12V input required
- 1 x USB 3.0, 1x USB 2.0, 1x USB OTG, 2x RS-232, 1x miniPCIe, 1x mSATA
- -40°C to +85°C

Sprocket

NEW ASG008

Sprocket 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, 1 x4 lane MIPI CSI-2, 2x 3.3V UART, I2C, 4x GPIO
- +9V to +16V DC Input Range
- -40°C to +85°C

Orbitty

ASG003

Orbitty Carrier is designed to match the NVIDIA® Jetson™ TX2 and TX1 module form factor. Ideal for robotics and unmanned applications.

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

Elroy

ASG002

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

NVIDIA® Jetson™ TX2 & TX1 Solutions

Astro

ASG001

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 break out boards
- -40°C to +85°C

Rudi

NEW ESG503

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

ESG501

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, IEEE 802.11 ac, 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

GraphiteVPX/CPU-TX2/TX1

NEW VPG003

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.

NVIDIA

NVIDIA® Jetson™ TX2 & TX1 Solutions

Name	Astro Carrier	Elroy Carrier	Orbitty Carrier	Spacely	Cogswell	Sprocket
Part Number	ASG001 w/ XBG201	ASG002	ASG003	ASG006	ASG007	ASG008
Dimensions	87mm x 57mm (3.43" x 2.24")	87mm x 50mm (3.425" x 1.968")	87mm x 50mm (3.425" x 1.968")	125mm x 95mm (4.92" x 3.74")	178mm x 147.5mm (7.008" x 5.81")	87mm x 50mm (3.425" x 1.968")
Mini-PCIe/ mSATA	1x half size card or 1x full length card PCIe and USB signalling (Mini PCIe)	1x Mini-PCIe/mSATA half or full size (use of full size removes secondary Mini PCIe slot)	1x miniPCIe Slot, mSATA Slot	1 x miniPCIe Slot with PCIe, USB + SIM; 1x mSATA Full Sized Slot	1 x miniPCIe Slot with PCIe & USB, x mSATA Full Sized Slot	N/A
SATA	1x SATA Link	1x mSATA half or full size (use of full size removes secondary Mini PCIe slot)	N/A	N/A	N/A	N/A
Display	1x HDMI	1x HDMI	1x HDMI	1x HDMI	1x HDMI	N/A
Serial	2x RS-232/RS-485	2x RS-232/RS-485	2x 3.3V UART through discreet connector	2x 3.3V from TX2/TX1 UART0 and UART1	2x RS-232	2 x 3.3V from TX2/TX1 UART0 and UART1
USB	1x USB 3.0, 2x USB 2.0	1x USB 3.0 (Integrated USB 2.0), 1x USB 2.0	1x USB 3.0, 1x USB 2.0 OTG	2x USB 3.0 Ports, 1x USB OTG, 2x USB 2.0, 1x USB 2.0 to miniPCIe Slot	1 x USB 3.0 Port (Type-A); 1 x USB OTG (Micro-AB); 1 x USB 2.0 (Type-A); 1 x USB, 2.0 to miniPCIe Slot	1 x USB OTG (Micro-AB)
Ethernet	2x GbE	1x GbE	1x GbE	2x GbE	5 x GbE (4x PoE, 2x PoE+)	N/A
Audio	HD Audio Link: 1x Output	1x HDMI Integrated Audio	1x HDMI Integrated Audio	N/A	N/A	N/A
SD Card	1x microSD Card Slot	1x microSD Card Slot	1x microSD Card Slot	1x microSD Card Slot	1x microSD Card Slot	N/A
Video Inputs	1x CSI-2 (x2) interface, 2x CSI-2 (x4) interfaces via U.FL connector accepting GMSL signalling	2x 2-Lane (2x) MIPI CSI 2.0	N/A	6 x2 Lane MIPI CSI-2 OR 3 x4 Lane MIPI CSI-2	5x capable ports	1 x4 lane MIPI CSI-2
Misc	1x I2C Link 1x System Control (PWR and RST buttons, etc.), 1x RTC Battery Input, 4x GPIO	1x I2C Link, 1x SPI Link, 1x System Control (PWR and RST buttons, etc.), 1x RTC Battery Input, 4x GPIO	I2C, 4x GPIO	1x USB OTG, I2C, CAN, GPIO, 1x GPS/GNSS (optional), SPI Channel @ 3.3V IO	1x USB OTG, I2C, CAN 2.0, GPIO	1x USB OTG, I2C, 4x GPIO
Power Requirements	+9V to +36V Input	DC Input Range +12V DC Nominal Input	+9V to +14V DC Nominal (+19V Peak)	Wide Input +12V to +22V DC	+12 DC Only	+9V to +16V DC
Operating Temperature	-40℃ to +85℃ (-40℉ to +185℉)	-40℃ to +85℃ (-40℉ to +185℉)	-40℃ to +85℃ (-40℉ to +185℉)	-40℃ to +85℃ (-40℉ to +185℉)	-40℃ to +85℃ (-40℉ to +185℉)	-40℃ to +85℃ (-40℉ to +185℉)

Don't see what you need?

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Bring your ideas to the table and we'll take it from there.

SMARC/SL

SRG001

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

NEW SRG004

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

Qseven Carrier Boards

	Gen 2.0	Ultra Lite			Lite
Specifications	**QCG201**	**QCG005**	**QCG011**	**QCG015**	**QCG006**
Size	NanoITX, 120 x 120mm	PicoITX, 72x100mm	PicoITX, 72x100mm	PicoITX, 72x100mm	128x100mm
Mini-PCIe Connector	2 (MiniPCIe/mSATA)	1	1	-	2
mSATA	2 (MiniPCIe/mSATA)	-	-	1	-
SIM Card Connector	2	1	1	-	2
LVDS Video & Back Light Controls	-	✓	-	-	-
HDMI Video/Audio	With Adapter	-	-	1x HDMI	1x HDMI
Power Connectors: • Molex Power • 2 PC Screw Term Connector	Optional* ✓	✓ Optional*	✓ Optional*	Optional* ✓	✓ Optional*
USB 2.0 Ports	2	4	4	4	8
USB 3.0 Ports	2	-	-	-	-
USB Client Port	-	-	1	1	1
Gigabit Ethernet	2	-	1	1	1
RS-232/RS-485	1 RS-232	-	-	1/0	1/0
CAN	✓	-	-	-	-
SATA Ports	Up to 2x SATA	1	1	1	2
microSD Card	1	-	-	✓	✓
RTC Battery	✓	✓	✓	✓	✓
Operating Temperature	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)
Power Requirements	+5V Input	+5V 6A, +12V 200ma	+5V 6A, +12V 200ma	+5V 6A, +12V 200ma	+5V 6A, +12V 200ma
Accessories	Optional Cable Kit*	Optional Cable Kit*	Optional Cable Kit*	Optional Cable Kit*	Optional Cable Kit*

Qseven Carrier Boards

Qseven Carrier Gen 2.0

QCG201

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

QCG002

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

QCG001

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

QCG006

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

QCG005, QCG011, QCG015

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

FPGAs

Specifications	FreeForm/ Express S6	Xtreme I/O Opto	FreeForm /PCI-104	FreeForm/104	FreeForm/104 Daughter Board
Form Factor	PCI Express Card	PCI-104 or PC/104-*Plus*	PCI-104	PC/104	PC/104
Ports	-	-	-	-	2
FPGA	Xilinx Spartan-6 LX45T	Actel ProASIC3 (PCI IP Core)	Xilinx Virtex-5 LX30T, LX50T & FX30T	Xilinx Spartan-3E	-
Bus Interface	Spartan-6 PCIe Gen 1 Endpoint	-	-	-	-
Interface	-	-	-	-	RS-232, RS-422, RS-449
Mezzanine Card	1x low pin count LPC FMC	-	-	-	-
Connectors	-	2 x 25 (50 position) 0.1" (DIL) pin headers	-	-	PC/104 pass-through 2 x 50 pin connector 2 x 26 pin header connectors
Control Signals	-	-	-	-	TxD, RxD, DTR, RTS, CTS, DCD, TxClk, RxClk
Power	+3.3V DC and +12V DC	+5V DC	+5V DC	+5V DC (± 5%)	-
Temperature	-40°C to 85°C -40°F to 185°F	-40°C to 85°C -40°F to 185°F	-40°C to 85°C -40°F to 185°F	-40°C to 85°C -40°F to 185°F	-40°C to 85°C -40°F to 185°F
Dimensions	16.76 x 11.11cm	9.5885 x 9.017cm	9.5885 x 9.0805cm	9.5885 x 9.017cm	9.5885 x 9.017cm
	6.6" x 4.375"	3.775" x 3.550"	3.775" x 3.575"	3.775" x 3.55"	3.775" x 3.55"

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.

FreeForm/Express S6

As shown with Epiq Solutions' Bitshark FMC-1RX RF receiver

FDG001

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

DAG001

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

FCG001

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

FBG006

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

DBG002

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

CAN

Specifications	CANpro/104 Opto	CANpro/104-Plus Opto	Xtreme/Multi-I/O
Part #	CNG001	CRG001	XMG001
Form Factor	PC/104	PCI-104	PC/104
CAN Controller (CAN 2.0B Compliant)	x2 NXP SJA1000	x2 NXP SJA1000	x2 NXP SJA1000 J1708
BasicCAN & PeliCAN Modes (SJA1000)	✓	✓	✓
SJA1000 Input Clock	16MHz	16MHz	16 or 24MHz
Isolated CAN Interface	3kV TI ISO1050	3kV TI SN65HVD251	ADM3053
Memory Mapped Addressing	-	✓	✓Jumperless
General Purpose I/O	-	8-bit 3.3V I/O Header	-
Supports 1Mbps Operation	✓	✓	✓
Operating Temperature	-40°C to 85°C -40°F to 185°F	-40°C to 85°C -40°F to 185°F	-40°C to 85°C -40°F to 185°F
I/O & Memory Space Selectable	✓	-	✓
Single or Dual Interrupts	✓	-	✓
Free Technical Support	✓	✓	✓

CANpro/104 Opto

CNG001

CANpro/104-*Plus* Opto

CRG001

Ideal for a broad range of applications

XMG001

Rugged Tablets

FieldTab7

FTG001

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

NEW FTG015

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

FTG005

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

FTG003, FTG010, FTG011

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

FTG007, FTG008, FTG009, FTG012

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

PC/104

Xtreme/104

Xtreme/104 offers four or eight asynchronous RS-232 and/or RS-422/485 serial ports.

Ports	4/8
Interface	RS-232/422/485
Control Signals	RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD RS-422/485: TxD±,RxD±,CTS±,RTS±
Baud	RS-232: 50 bps to 230 Kbps/Custom RS-422/485: 50 bps to 460.8 Kbps/ Custom
Temperature	0°C to 70°C/32°F to 158°F Optional -40°C to +85°C
Dimensions	9.60 x 10.41 x 1.12cm/3.77" x 4.09" x 0.44"

Xtreme/104 Opto

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

Ports	2/4
Interface	RS-232/422/485
Control Signals	RS-232: Tx,Rx,RTS,CTS RS-422/485: TxD±,RxD±,CTS±,RTS±
Temperature	0°C to 70°C/32°F to 158°F Optional -40°C to +85°C
Dimensions	9.60 x 10.41 x 1.12cm/3.77" x 4.09" x 0.44"

Xtreme/104 RS-232

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

Ports	4/8
Interface	RS-232
Control Signals	Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD
Baud	50 bps to 230 Kbps/Custom
Temperature	0°C to 70°C/32°F to 158°F
Dimensions	9.60 x 10.41 x 1.12cm/3.77" x 4.09" x 0.44"

ComSync/104

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

Ports	2 Synchronous/Asynchronous Serial Channels
Interface	RS-232,RS-422,RS-449, EIA-530,EIA-530/ A,V.35 & X.21
Control Signals	Tx±,Rx±,DCD±,RTS±,CTS±,DSR±,DTR±, SYNC±,TRxC±,RTxC±
Temperature	0°C to 70°C/32°F to 158°F

FreeForm/104 Daughter Board

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

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
Connectors	10-pin connectors: RS-232/422/485 ports 6-pin connectors: RS-232 ports
Temperature	-40°C to 85°C/-40°F to 185°F
Power	+5V DC 500mA (typical), 1A (maximum)

FreeForm/104

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%)

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/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

PC/104-Plus & PCI-104

Xtreme/104-*Plus*

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.

Form Factor	PC/104-*Plus*
Ports	2/4/8
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

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.

Form Factor	PC/104-*Plus*
Ports	16
Interfaces	RS-232/422/485
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* Opto

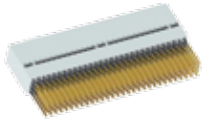
Xtreme/104-*Plus* Opto provides the added protection of 3kV optical isolation on a rugged and compact form factor for critical embedded applications.

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

Xtreme I/O Opto

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

Form Factor	PCI-104 or PC/104-*Plus*
Connectors	2 x 25 (50 position) 0.1" (DIL) pin headers
Isolation	3kV isolation on all channels
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

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

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

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

Xtreme/SBC PCI-104 Single Board Computer 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

PC/104-Plus & PCI-104

Xtreme/PCI-104 Opto 12 Port

Xtreme/PCI-104 Opto 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.

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"

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/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

ComSync/PCI-104

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.

Form Factor	PCI-104
Interface	RS-232, RS-422, RS-449, EIA-530, EIA-530/A, V.35 & X.21
Modes	NRXI: NRZI, NRZIB, 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 I/O Express ADC-DAC

DAG103

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.

Form Factor	PCIe/104
Analog Inputs	32 Single Ended/16 Differential Channels, 16-bit 500kps, Up to +/- 10.24V Input Range
Analog Outputs	4 Channels, 16 bit resolution, 6 us Settling Time, Up to +/-10.24V Output Swing
Digital I/O	16-bit bidirectional I/O, +3.3V or +5V, 24mA Drive
Temperature	-40°C to 85°C/-40°F to 185°F

PCI/104-Express & PCIe/104

Xtreme/104-Express

XEG005, XEG006

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.

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 Opto

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

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/SBC PCIe/104 Single Board Computer

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.

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

PCIe/104 Qseven Carrier Board

PCIe/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.

Form Factor	PCIe/104, 4x1 PCIe lanes
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

PCI/104-Express & PCIe/104

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.

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"

PCIe/104 to PCI Express Adapter - Bottom Stacking

PCIe/104 to PCI Express 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.

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 top connector; footprint for 2x USB Type B connector
Dimensions	19.3 x 15.2cm/7.6" x 6"

PCIe/104 to PCI Express Adapter - Top Stacking

PCIe/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.

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	9.5885 x 9.017cm/3.775" x 3.550"

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/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

Single Board Computers

Xtreme/SBC PCIe/104

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:

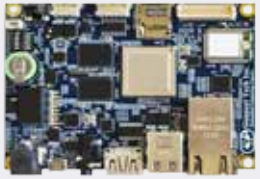
Xtreme/SBC PCI-104 Single Board Computer utilizes the PCI-104 form factor, supporting four peripheral boards.

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

Xtreme/SBC PCI-104

ArcticEdge/iMX6



ELG001

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

QKG201

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

Connect Tech on the Road

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!

Ethernet to Serial

Blue Heat/Net Sync

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

BMG006-01

Ports	4 Synchronous/Asynchronous Serial Ports
Control Signals	Single ended: TxD, RxD, RTS, CTS, RI, DTR, DSR, 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 2

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.

BNG009-01, BNG010-01

Ports	2
Control Signals	RS-232: TxD, RxD, CTS, RTS, DTR, DCD, DSR, RI, GND RS-422/485: (TxD, RxD, CTS, RTS)±, SR
Baud	50 bps to 460.8 Kbps/Custom
Dimensions	11.56 x 11.68 x 3.43cm/4.55 x 4.50 x 1.35"
Power	Multi-mode power adapter, 5V -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 PoE: -40°C to 74°C/-40°C to 165°F

Blue Heat/Net 4 or 8 RJ-45

BN002-01, BNG004-01

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

Ports	4/8
Control Signals	Tx, Rx, RTS, CTS, DTR, DSR, DCD, GND
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 DB-9

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.

BNG006-01, BNG008-01

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

Blue Heat/Net 16

BNG022-01

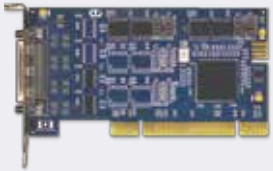
Blue Heat/Net 16 is an Ethernet-to-serial device which allows serial devices to connect directly to an Ethernet LAN via 16 software selectable RS-232/422/485 ports.

Ports	16
Control Signals	RS-232: DTR, DSR, RTS, CTS, TxD, RxD, RI, DCD, GND RS-422/485: (TxD, RxD, RTS, CTS)±, SR
LAN Interface	Auto sensing 10Base-T,100Base-TX
Line Interface	RS-232/422/485
Protocols	IP, TCP, UDP, ARP, RARP, TFTP, DHCP, BootP, HTTP, Telnet, ICMP, PPP
Temperature	-40°C to 60°C/-40°F to 140°F
Baud	50 bps to 460.8 Kbps/Custom
Dimensions	43.7 x 16 x 4.4cm/17.25" x 6.25" x 1.74"
Power	110/240V AC, 50/60 Hz, 24-56 V DC

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

PCI Serial

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



** Low profile models are available with standard height brackets.*

BlueStorm/SP

BTG001-01

BlueStorm/SP is a high-speed multi-port adapter 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: 50 bps to 921.6 Kbps RS-422/485: 50 bps to 1.8432 Mbps
UART	Octal, 64 Byte FIFO
Temperature	0°C to 70°C/32°F to 158°F
Dimensions	14.702 x 10.605cm/5.788" x 4.175"

BlueStorm/SP Opto

BSG001-01

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.

Ports	4
Line Interface	RS-232/422/485, 3kV optical isolation
Control Signals	RS-232: Tx,Rx,RTS,CTS,GND RS-422/485: TxD±,RxD±,RTS±,CTS±,GND
Baud	RS-232: 50 bps to 921.6 Kbps RS-422/485: 50 bps to 1.8432 Mbps
UART	Dual, 64 Byte FIFO
Temperature	0°C to 70°C/32°F to 158°F
Dimensions	14.702 x 10.605cm/5.788" x 4.175"

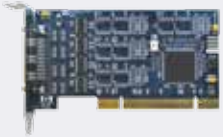
BlueStorm/SP RJ-11

BTG008-01

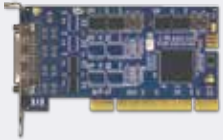
BlueStorm/SP RJ-11 is a high-speed multi-port adapter which offers 8 independently configurable RS-232 ports, along with +5 VDC or +12 VDC power on 6 RJ-11 ports.

Ports	8
Line Interface	RS-232, 6 RJ-11 connectors/2x10 pin headers
Control Signals	Tx,Rx,RTS,DSR,GND,DC Power 10 Pin Header: Tx,Rx,RTS,CTS,DTR,DSR,DCD,RI,SG
Baud	50 bps to 921.6 Kbps
UART	Octal, 64 Byte FIFO
Temperature	0°C to 70°C/32°F to 158°F
Dimensions	12.129 x 10.668cm/4.775" x 4.2"

BlueStorm/LP RS-232



BlueStorm/LP RS-422/485



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

Features

- Available in 2, 4, and 8 port RS-232 serial interface models, and 1 plus 1, 2 plus 2, and 4 plus 4 RS-232 plus RS-422/485 serial interface models.

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"

PCI Express Serial

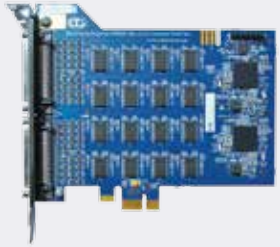
BlueStorm/Express

BlueStorm/Express is a standard profile PCI Express serial card available in 2, 4, 8, or 16 ports of RS-232/422/485 connectivity.

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 11.1125cm/ 5.787" x 4.375"

Ports	Control Signal	Baud	UART
2	RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,GND RS-422/485: (Tx,Rx,CTS,RTS)±,GND	RS-232: 1 Mbps RS-422/485: 7.8 Mbps	Dual PCIe 256 Byte TX and RX FIFOs
4	RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,GND RS-422/485: (Tx,Rx,CTS,RTS)±,GND	RS-232: 1 Mbps RS-422/485: 7.8 Mbps	Quad PCIe 256 Byte TX and RX FIFOs
8	RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,GND RS-422/485: (Tx,Rx,CTS,RTS)±,GND	RS-232: 921.6 Kbps RS-422/485: 1.843 Mbps	Octal PCI 64 Byte TX and RX FIFOs
16	RS-232: Tx,Rx,RTS,CTS,RI,DTR,DSR,DCD,GND RS-422/485: (Tx,Rx,CTS,RTS)±,GND	RS-232: 921.6 Kbps RS-422/485: 1.843 Mbps	2x Octal PCI 64 Byte TX and RX FIFOs

BlueStorm/Express 8/16 Port RS-232



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.

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

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.

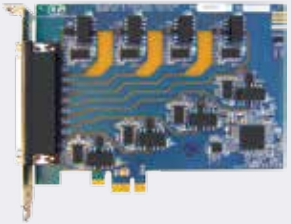
Ports	4
Isolation	3kV
Line Interface	RS-232/422/485
Control Signals	RS-232: Tx,Rx,RTS,CTS,GND RS-422/485: (Tx,Rx,RTS,CTS)±,GND
Baud	RS-232: 921.6 Kbps RS-422/485: 1.843 Mbps
UART	2x Dual PCI, 64 Byte TX, and RX FIFOs
Temperature	0°C to 70°C/32°F to 158°F
Dimensions	14.699 x 11.049cm/5.787" x 4.350"

BlueStorm/Express Opto (1kV)

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: Isolated: 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



BDG001-01

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,RTS,CTS,DCD,DTR
Baud	RS-232: 1 Mbps
UART	Octal, 256 Byte FIFO, 265 Byte TX, and RX FIFOs
Temperature	0°C to 70°C/32°F to 158°F
Dimensions	14.699 x 11.049cm/5.787" x 4.350"

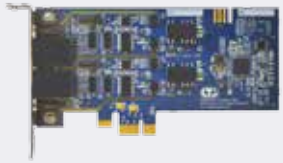
BlueStorm/Express LP

BFG002-01

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"

BlueStorm/Express LP Opto



BCG001-01

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	Dual PCIe, 265 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"

Synchronous Serial

ComSync/PCI-104 Gen 3

CPG004

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

CSG001-01, CSG005-01

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

Ports	2 Synchronous/Asynchronous Serial Channels
Interface	RS-232,RS-422,RS-449, EIA-530,EIA-530/A,V.35 & X.21
Control Signals	Tx±,Rx±,DCD±,RTS±,CTS±,DSR±, DTR±, SYNC±,TRxC±,RTxC±
Temperature	0°C to 70°C/32°F to 158°F
Dimensions	PC/104 v.2.3 Compliant

Blue Heat/Net Sync

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

BMG006-01

Ports	4 Synchronous/Asynchronous Serial Ports
Control Signals	Single ended: TxD, RxD, RTS, CTS, RI, DTR, DSR, DCD, RxClock, TxClock Differential: (TxD, RxD, CTS, RTS, DTR, DCD, DSR)±, RxClock, TxClock
LAN Interface	Auto sensing 10Base-T, 100Base-TX Ethernet
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)

Xtreme/Multi-I/O

XMG001-01

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/J1708
- 2x MultiTech compatible sockets
- 5x isolated LEDs, 1x USB
- Extended operating temperature

Analog and Digital I/O

Mini PCI Express ADC

MPG401

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
- Used in any Mini PCIe socket
- -40°C to +85°C

Xtreme I/O Express ADC-DAC

DAG103

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

Analog Inputs: 32 Single Ended/16 Differential Channels, 16-bit 500kps, Up to +/- 10.24V Input Range

Analog Outputs: 4 Channels, 16 bit resolution, 6 us Settling Time, Up to +/-10.24V Output Swing

Digital I/O: 16-bit bidirectional I/O, +3.3V or +5V, 24mA Drive

Temperature: -40°C to +85°C

Xtreme I/O ADC-DAC

DAG003, DAG004, DAG005

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

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

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

Digital I/O: 16 bit bi-directional I/O

Xtreme I/O Opto

DAG001

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

Connectors: 2 x 25 (50 position) 0.1" (DIL) pin headers

Isolation: 3kV isolation

Inputs: 24 optically isolated inputs (24-bits), input voltage range +0 up to +40V DC

Outputs: 24 optically isolated outputs (24-bits), output voltage range +0 up to +40V DC

FreeForm/104

FBG006

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
Digital I/O Opto-22: 48 Opto-22

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

PCIe/104 to M.2 Adapter

ADG092

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

ADG078, ADG080

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

Mini-PCIe Carrier

ADG075, ADG077

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/Dual Mini-PCIe Adapter

ADG044, ADG051

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-Express

Features

- 3.3V (at 3A) and 1.5V (at 1A) DC power
- Half-Mini and Full-Mini PCIe card supported
- SIM card support, USB, and PCI bus pass-through (all optional)

PCI-104 to Mini-PCIe Adapter

ADG046

PCI-104 to Mini-PCIe Adapter enables the integration of a Mini-PCIe (PCI Express Mini) card into a PCI-104 system.

Connector

- PCI-104 x 1

Features

- 3.3V and 1.5V 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

Visit Connect Tech on the Road

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!

SMART Battery Adapter

ADG061

SMART Battery Adaper 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 (5787428-1)

Features

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

PCIe/104 to PCI-104 Adapter

ADG054

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

XMC to PCIe/104 Adapter

NEW ADG095

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

Adapters/Development Tools

COM® Express Bus Extender

ADG053

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

ADG052

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

ADG042

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 to PC/104 Adapter

ADG043

PCI-104 Adapter to PC/104 Adapter enables testing and development of PC/104 (ISA) devices in a PCI-104 (PCI) only system.

Connector
- PCI-104, PC/104

Features
- PCI Memory and IO 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

ADG039

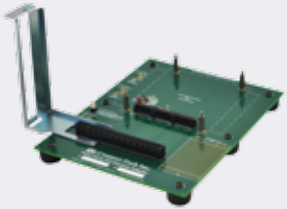
SUMIT to PCIe/104 Adapter integrates a PCIe/104 or PCI/104-Express card into a SUMIT-104 system.

Connector
- SUMIT A and B, PCIe/104 x1

Features
- 2 x USB (from SUMIT) via Mini USB connectors

Adapters/Development Tools

PCIe/104 to PCI Express Adapter - Bottom Stacking



ADG021

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

ADG017

PCIe/104 to PCI Express Adapter - Top Stacking enables the installation of a PCI 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

ADG040, ADG041

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

PCI Express to PCIe/104 Adapter

ADG016

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

ADG038

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

Adapters/Development Tools

PCI to PC/104-*Plus* Adapter

ADG001

PCI to PC/104-Plus Adapter enables a PCI-104 or PC/104-*Plus* serial card to be installed into a standard Universal PCI slot.

Size

- 10.69 x 12.48cm/4.2" x 4.913"

Connector

- PCI-104, 120 pin and PC/104, 64 and 40 pin stack-through connectors

Features

- Compatible with standard Universal 3.3V or 5V slot

ISA to PC/104 Adapter

ADG003

ISA to PC/104 Adapter enables an 8 or 16- bit PC/104 card to be installed into a standard ISA system.

Size

- 15.62 x 10.68cm/6.145" x 4.2"

Connector

- PC/104, 64 and 40 pin passive stack-through connectors

Features

- 16x11 (.100" grid) breadboarding area for assembly and testing

PC/104-*Plus* to Mini PCI Adapter

ADG006

PC/104-*Plus* to Mini PCI Adapter enables a Mini PCI card to be installed into a standard PCI/104-*Plus* stack.

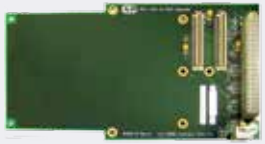
Connector

- PC/104-*Plus*,120 pin and PC/104, 64 and 40 pin stack-through connectors

Features

- 3.3V regulator delivers 2 watts of power to the Mini PCI card

PCI-104 to PMC Adapter



ADG013

PCI-104 to PMC Adapter enables a PMC card to be installed into a PCI-104 or PC/104-*Plus* stack.

Size

- 9.02 x 16.58cm/3.550" x 6.526"

Connector

- PCI-104 120 pin stack-through, 2x64 pin passive PMC connectors

Features

- Operates multiple PMC cards in a PCI-104 stack with multiple adapters

PCI to CompactPCI Adapter

ADG004

PCI to Compact PCI Adapter enables a CompactPCI card to be installed into a standard Universal PCI system.

Size

- 12.00 x 6.40cm/4.721" x 2.525"

Connector

- CompactPCI 110 pin male A connector for connection to host system

Features

- 16x11 (.100" grid) breadboarding area for assembly and testing

Storage Devices

PCI Dump Switch Card

ADG005

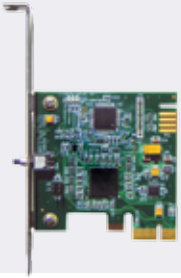
PCI Dump Switch Card allows debugging during system hang-ups.

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



ADG018

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

ADG010

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

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%

SDG001

SSD/104 SATA 2.5" Drive Carrier

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

SDG006

Power Supplies

Xtreme/PSU & Xtreme/PSU-XP

Xtreme/PSU Isolated

Xtreme/PS-UPS

Xtreme/PSU-UC

PSG013

SMART Battery Adapter

ADG061

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 (5787428-1)

Features
- Easily integrates SMART battery into a PC/104 Stack

Connect Tech Inc.

Embedded Computing Experts

www.connecttech.com

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

Serving customers around the globe

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