it enclosures INC.™

"Superior Electronics Packaging Solutions"

3I...xDSL...VoIP...IP Telephony

E-LINT...ATM...VXI   CPCI...

...VSAT...IP Telephony...

TACTICAL...Air   ...Central Office...

...C³I...   ...MIL-SPEC

...VSAT...   ...VME...

Central Office...Earth St

...xDSL...

UL/ETSI/CE/NEBS...

Product Overview

About ITenclosures

IT Enclosures, Inc. (IT) specializes in the design, development and production of Embedded Data Communications and Telecommunications Platforms based on open system bus architecture standards (e.g. CPCI, VME and VXI/PXI). These platforms form a significant part of the infrastructure for today's information technology revolution—including the emergence of new packet-based (IP) global communication networks.

Datacom/Telecom Platforms require robust and reliable packaging solutions that address key technology issues, such as line density, thermal management, power distribution, scalability, and regulatory compliance. IT has a broad engineering background in the development of these technologies for advanced circuit and packet switched telecommunications systems running voice, data and video applications for commercial and government customers.

IT offers a wide range of platforms consisting of standard rack/chassis, high speed backplane, power, thermal management, single board computer (SBC), and alarm/network interface products for commercial, tele/data communications, and government/military system applications. IT is ISO-9001 Certified.

ITenclosures' standard products are grouped in the following categories:

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Features

- Full dimensional compatibility with CompactPCI® (PICMG® 2.0 R2.1) and IEEE-1101.10.

- EMC shielding on entire assembly, with continuous chassis ground.

- Lightweight and durable aluminum construction

- Standard powdercoating finish

- Five standard colors (others custom)

- Ideally suited for high density, CE, NEBS, ISP or Telco type applications

- Side panel access to power area for ease of wiring

- Available with rear interface housings for AC or DC power inputs to subrack. Housings support line, fuse, external chassis ground, and filtering for system level safety and compliance requirements

- Subracks come fully assembled with all pieces and cardguides ready for 19" rack mount environments

- Front or midmount rack ears

Description

The rack-it products are modular subrack-type packaging systems suitable for open bus architectures such as CPCI, VME, VME64 or other custom bus applications. The model 5000 series subracks house a variety of front and rear plug-in Eurocard type modules in standard card size formats. Each rack-it product is designed with many, built-in features such as, durability, modularity, EMC compatibility, product safety, and conforms to all international standards for subrack-type products. These subracks are designed to mate with all IT products in the Power-IT™, Bus-IT™, Cool-IT™ and Alarm-IT™ categories to allow seamless configuration and integration of your high performance electronics system.

Subrack Systems

Specifications

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Physical:......................H................6U (10.50")
W ....19" (STD EIA rack mount) w/removable rack mount ears
D ....12" maximum

Slot Configuration:................21 slots (maximum) 0.80" (20.32 mm) spacing

Front Module Layout: Accepts front 6U x 160mm module in accordance with
PICMG® 2.0 R2.1 CompactPCI® specification.

Transition Module Layout:...Accepts rear 6U x 80mm transition module in accordance
with PICMG® 2.0 R2.1 CompactPCI® specification.

Materials:...................Side plates ....Al ALY 6061 series
Top and bottom covers ....AL ALY 5052 series
Rack ears ....AL extrusion 6005
Module/backplane interface rails...........AL extrusion 6005
Card guides..Molded thermoplastic
Rear power interface panels......................AL ALY 5052 series
Hardware ....Stainless Steel

Finish: ....Standard: All external surfaces are powder coated (five standard colors available).
Custom finish options available upon request.

Module keying and alignment: ....4HP module spacing, cardguide provides for
keying and alignment pin in accordance with
IEEE 1101.10, section 6.

Plug in Unit injector/ejector handles:......Subrack dimensional format accepts module
with injector/ejector handles as specified in IEEE
1101.10, section 8.

Card guides:...Molded plastic with snap-in ESD contacts for
both plug-in module and injector/ejector handle
alignment pin.

Backplane: ....Subrack accepts backplane module in accordance
with the dimensional format specified for 6U
backplanes in PICMG® 2.0 R2.1 CompactPCI®, figure 19. Backplanes are purchased separately.

Airflow:..Units designed to mate with IT Enclosures, Inc.
cool-IT thermal management products and are
designed to accommodate maximum open area
and EMI shielding effectivity.

Interface: The subrack is provided with two (2) rear interface panels with ground
lugs, power fuses, and-48V DC power interface suitable for redundant power operation.

IT Enclosures Part #:   50-00001-01
IT Enclosures Model #:   5001

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Features

- Full dimensional compatibility with **CompactPCI®** (**PICMG®** 2.0 R2.1) and IEEE-1101.10.

- EMC shielding on entire assembly, with continuous chassis ground.

- Lightweight and durable aluminum construction

- Standard powdercoating finish

- Five standard colors (others custom)

- Ideally suited for high density, CE, NEBS, ISP or Telco type applications

- Subracks come fully assembled with all pieces and cardguides ready for 19" rack mount environments

- Front or midmount rack ears

- Only 7.25" Deep

Description

The rack-it products are modular subrack-type packaging systems suitable for open bus architectures such as **CPCI**, VME, VME64 or other custom bus applications. The model 5000 series subracks house a variety of front and rear plug-in Eurocard type modules in standard card size formats. Each rack-it product is designed with many, built-in features such as, durability, modularity, EMC compatibility, product safety, and conforms to all international standards for subrack-type products. These subracks are designed to mate with all IT products in the Power-IT™, Bus-IT™, Bool-IT™ and Alarm-IT™ categories to allow seamless configuration and integration of your high performance electronics system.
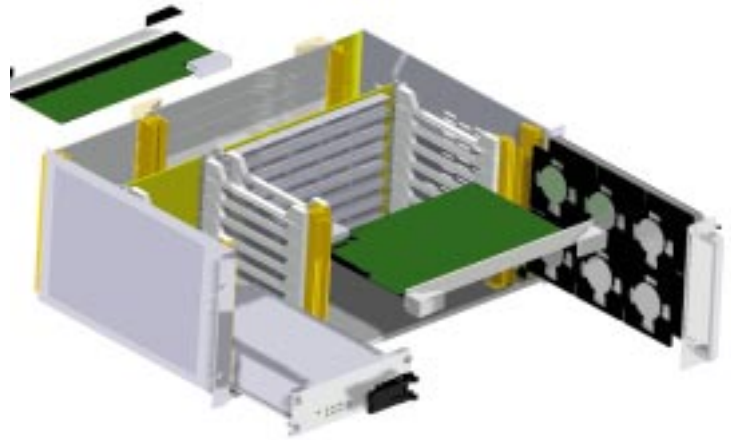
Subrack Systems

Specifications

Physical:......................H................6U (10.50")
W ....19" (STD EIA rack mount) w/removable rack mount ears
D.................7.25" maximum

Slot Configuration:................21 slots (maximum) 0.80" (20.32 mm) spacing

Front Module Layout: Accepts front 6U x 160mm module in accordance with
PICMG® 2.0 R2.1 **CompactPCI®** specification.

Materials:...................Side plates ....Al ALY 6061 series
Top and bottom covers ....AL ALY 5052 series
Rack ears ....AL extrusion 6005
Module/backplane interface rails...........AL extrusion 6005
Card guides...Molded thermoplastic
Rear power interface panels.....................AL ALY 5052 series
Hardware ....Stainless Steel

Finish: ....Standard: All external surfaces are powder coated (five standard col-
ors available).
Custom finish options available upon request.

Module keying and alignment: ....4HP module spacing, cardguide provides for
keying and alignment pin in accordance with
IEEE 1101.10, section 6.

Plug in Unit injector/ejector handles:......Subrack dimensional format accepts module
with injector/ejector handles as specified in IEEE
1101.10, section 8.

Card guides: ....Molded plastic with snap-in ESD contacts for
both plug-in module and injector/ejector handle
alignment pin.

Backplane: ....Subrack accepts backplane module in accordance
with the dimensional format specified for 6U
backplanes in **PICMG®** 2.0 R2.1 **CompactPCI®**, fig-
ure 19. Backplanes are purchased separately.

Airflow:..Units designed to mate with IT Enclosures, Inc.
cool-IT thermal management products and are
designed to accommodate maximum open area
and EMI shielding effectivity.

IT Enclosures Part #:   50-00002-01
IT Enclosures Model #:   5002

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Subrack Systems

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Features

- Full Dimensional Compatibility with CompactPCI® (PICMG® 2.0 R2.1) and IEEE-1101.10.

- EMC shielding on entire assembly, with continuous chassis ground.

- Lightweight and durable aluminum construction

- Standard powdercoating finish

- Five standard colors (others custom)

- Subracks come fully assembled with all pieces and cardguides ready for 19" rack mount environments

- Front mounting flanges for 19" rack mount environments

- Only 11.70" deep

Description

The model 5075 is a modular 4U x 19 inch rackmount subrack-type packaging system suitable for open bus architectures such as CPCI, VME, VME64, or custom bus applications. The base unit is adaptable into a wide array of product configurations. The product offers a low cost turnkey solution for customers desiring eight 6U x 160mm slots (a full CPCI bus segment) in the least possible vertical rack space. Additionally, the product also has eight 3U x 160mm slots to mount IT's Power-IT™ Power Supply Modules configured for external DC or AC power input. Additional 3U slots can be used for a variety of disk drive configurations. The rear of the chassis provides eight 6U x 80mm slots which can utilize IT's Alarm-IT™ Alarm Interface or other CPCI transition modules. Cooling can be provided with an optional Cool-IT™ plug-in fan tray module. The model 5075 is designed to accept IT modules from the Power-IT™, Bus-IT™, Cool-IT™, and Alarm-IT™ product families.

Subrack Systems

Specifications

Physical: ....H: ....4U (6.97")
W: ....19" (STD EIA rack mount)
D: ....11.70"

Slot Configuration:

Front: ....Eight 6U x 160mm slots
Eight 3U x 160mm slots
All slots are on 0.80" centers and accept front modules in accordance
With **PICMG®** 2.0 R2.1 **CompactPCI®** specifications.

Rear:.....................Eight 6U x 80mm slots
All slots are on 0.80" centers and accept rear transition
Modules in accordance With **PICMG®** 2.0 R2.1 **CompactPCI®**
specifications.

Module Keying and
Alignment: ....4HP module spacing, cardguides provide keying and alignment in
Accordance with IEEE 1101.10, section 8.

Card Guides:........................Molded plastic with metallic ESD contacts per **CompactPCI®**
PICMG® 2.0 R2.1 + IEEE 1101.10

Backplane: ....The model 5075 is designed to accept IT 4U Bus-IT™ backplane
products which can be standard or custom designed per customer
specifications. Backplanes are purchased separately.

Operating
Environment: ....0° - 50°C, 5-95% RH, non condensing

Cooling: ....Designed to accept IT Cool-IT™ model 5175 Fan Tray Assembly.
The tray is hot swap removable for air filter replacement.

IT Enclosures Part #   50-00075-01

IT Enclosures Model #   5075

Subrack Systems

rack it ™

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Features

• Full dimensional compatibility with **CompactPCI®** (**PICMG®** 2.0 R2.1) and IEEE-1101.10.

• EMC shielding on entire assembly, with continuous chassis ground.

• Lightweight and durable aluminum construction

• Standard powdercoating finish

• Five standard colors (others custom)

• Ideally suited for computer/industrial or XDSL-type applications

• Side panel access to power area for ease of wiring

• Available with rear interface housings for AC or DC power inputs to subrack. Housings support line, fuse, external chassis ground, and filtering for system level safety and compliance requirements

• Subracks come fully assembled with all pieces and cardguides ready for 19" rack mount environments

• Front or midmount rack ears

Description

The rack-it products are modular subrack-type packaging systems suitable for open bus architectures such as **CPCI**, VME, VME64 or other custom bus applications. The model 5000 series subracks house a variety of front and rear plug-in Eurocard type modules in standard card size formats. Each rack-it product is designed with many, built-in features such as, durability, modularity, EMC compatibility, product safety, and conforms to all international standards for subrack-type products. These subracks are designed to mate with all IT products in the power-it, bus-it, cool-it and alarm-it categories to allow seamless configuration and integration of your high performance electronics system.

Subrack Systems

Specifications

Physical:......................H................3U (5.25")
W ....19" (STD EIA rack mount) w/removable rack mount ears
D.................12" maximum

Slot Configuration:................21 slots (maximum) 0.80" (20.32 mm) spacing

Front Module Layout: Accepts front 3U x 160mm module in accordance with
PICMG® 2.0 R2.1 **CompactPCI®** specification.

Transition Module Layout:...Accepts rear 3U x 80mm transition module in accordance
with **PICMG®** 2.0 R2.1 **CompactPCI®** specification.

Materials:...................Side plates ....Al ALY 6061 series
Top and bottom covers ....AL ALY 5052 series
Rack ears ....AL extrusion 6005
Module/backplane interface rails...........AL extrusion 6005
Card guides...Molded thermoplastic
Rear power interface panels.....................AL ALY 5052 series
Hardware ....Stainless Steel

Finish: ....Standard: All external surfaces are powder coated (five standard col-
ors available).
Custom finish options available upon request.

Module keying and alignment: ....4HP module spacing, cardguide provides for
keying and alignment pin in accordance with
IEEE 1101.10, section 6.

Plug in Unit injector/ejector handles:......Subrack dimensional format accepts module
with injector/ejector handles as specified in IEEE
1101.10, section 8.

Card guides: ....Molded plastic with snap-in ESD contacts for
both plug-in module and injector/ejector handle
alignment pin.

Backplane: ....Subrack accepts backplane module in accordance
with the dimensional format specified for 3U
backplanes in **PICMG®** 2.0 R2.1 **CompactPCI®**, fig-
ure 19. Backplanes are purchased separately.

Airflow:..Units designed to mate with IT Enclosures, Inc.
cool-IT thermal management products and are
designed to accommodate maximum open area
and EMI shielding effectivity.

Interface: The subrack is provided with two (2) rear interface panels with ground lugs, power fuses,
and-48V DC power interface suitable for redundant power operation.

IT Enclosures Part #: 50-00500-01
IT Enclosures Model #: 5050

rack **it** ™

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Features

• Full dimensional compatibility with **CompactPCI®** (**PICMG®** 2.0 R2.1) and IEEE-1101.10.

• EMC shielding on entire assembly, with continuous chassis ground.

• Lightweight and durable aluminum construction

• Standard powdercoating finish

• Five standard colors (others custom)

• Ideally suited for computer/industrial applications

• Subracks come fully assembled with all pieces and cardguides ready for 19" rack mount environments

• Front or midmount rack ears

• Only 7.25" deep

Description

The rack-it products are modular subrack-type packaging systems suitable for open bus architectures such as **CPCI**, VME, VME64 or other custom bus applications. The model 5000 series subracks house a variety of front and rear plug-in Eurocard type modules in standard card size formats. Each rack-it product is designed with many, built-in features such as, durability, modularity, EMC compatibility, product safety, and conforms to all international standards for subrack-type products. These subracks are designed to mate with all IT products in the Power-IT™, Bus-IT™, Cool-IT™ and Alarm-IT™ categories to allow seamless configuration and integration of your high performance electronics system.

Subrack Systems

Specifications

Physical:......................H.................3U (5.25")
W................19" (STD EIA rack mount) w/removable rack mount ears
D.................7.25" maximum

Slot Configuration:................21 slots (maximum) 0.80" (20.32 mm) spacing

Front Module Layout: Accepts front 3U x 160mm module in accordance with
PICMG® 2.0 R2.1 **CompactPCI®** specification.

Materials:...................Side plates ....Al ALY 6061 series
Top and bottom covers ....AL ALY 5052 series
Rack ears ....AL extrusion 6005
Module/backplane interface rails...........AL extrusion 6005
Card guides...Molded thermoplastic
Rear power interface panels.....................AL ALY 5052 series
Hardware ....Stainless Steel

Finish: ....Standard: All external surfaces are powder coated (five standard colors available).
Custom finish options available upon request.

Module keying and alignment: ....4HP module spacing, cardguide provides for
keying and alignment pin in accordance with
IEEE 1101.10, section 6.

Plug in Unit injector/ejector handles:......Subrack dimensional format accepts module
with injector/ejector handles as specified in IEEE
1101.10, section 8.

Card guides: ....Molded plastic with snap-in ESD contacts for
both plug-in module and injector/ejector handle
alignment pin.

Backplane: ....Subrack accepts backplane module in accordance
with the dimensional format specified for 3U
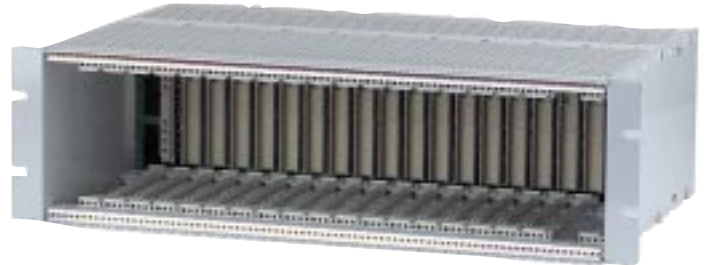backplanes in **PICMG®** 2.0 R2.1 **CompactPCI®**, figure 19. Backplanes are purchased separately.

Airflow:...Units designed to mate with IT Enclosures, Inc.
cool-IT thermal management products and are
designed to accommodate maximum open area
and EMI shielding effectivity.

IT Enclosures Part #:   50-00551-01
IT Enclosures Model #:   5051

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Subrack Systems

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Features

- Open Test/Development Chassis and Midplane

- Supplied with ITE Test Interface Plane (TIP) - Provides 2 slots **CPCI** midplane with J1 - J5 Interfaces for front and transition module plug-in cards
    - 2 slots full **CPCI** bussing
    - Each slot has connectors J1 - J5 fanned out to test headers for rear access
    - TIP includes power interface for wiring power from bench supply

- Test chassis can be rack or bench mounted

- Open chassis design allows full access to all sides of test/development modules

- Full dimensional and electrical compatibility with **CompactPCI®** (**PICMG®** 2.0 R2.1) and IEEE-1101.10

- 2 Front 6U x 160mm card slots

- 2 Rear 6U x 80mm card slots

Description

The Model 5007 Test Interface Chassis provides an open environment for test/development activities. Supplied with an ITE Test Interface Plane (TIP), the Model 5007 provides plug-in slots for 2 **CPCI** modules, and allows access to all **CPCI** bus signals running between the cards. The test interface chassis also provides access for two 80mm x 160mm rear transition modules, plus a full **CPCI** hard-wire power interface. The Model 5007 comes fully assembled, with interface plane and card guides.

Subrack Systems

Specifications

Physical:......................H.................6U (10.50″)
W ....19″ (STD EIA rack mount)
D.................12″

Slot Configuration:................2 slots - 3.2″ spacing allows full component access to components in test/development

Front Module Layout: Accepts front 6U x 160mm module in accordance with PICMG® 2.0 R2.1 CompactPCI® specification.

Transition Module Layout:...Accepts rear 6U x 80mm transition module in accordance with PICMG® 2.0 R2.1 CompactPCI® specification.

Midplane:...................Unit provided with Model 5480 Test Interface Plane
2 Slots CPCI:............J1 ....CPCI 32 Bit Function Bus
J2 ....CPCI 64 Bit Function Bus
J3 ....Feedthru
J4 ....ETCF H.110 CT Bus
J5 ....Open
Each connector is fanned to .10 x .10 pin header fields on the rear of midplane. These header fields allow the user to probe any bus signals.

Power Interface:........Power bugs are provided for all standard CPCI voltages on rear of midplane

IT Enclosures Part #:   50-00007-01
IT Enclosures Model #:   5007

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Subrack Systems

Model 5201 - POWER SUPPLY UNIT

450 Watt Output - 6U **CompactPCI®** *Format*

Features

- 450 Watts in a 6U x 160mm x 8HP **CompactPCI®** format

- 3.3V, 5V and +/- 12V DC outputs

- 48V DC input (can be configured for a wide range of inputs)

- Full dimensional compatibility with **CompactPCI®** (**PICMG®** 2.0 R2.1) and IEEE 1101.10 for mechanical structures

- Ideally suited for 1+1 redundant operation in high density, CE, NEBS, ETSI, Telco or ISP applications

- +5V @ 60 amps
  +3.3V @ 45 amps
  +12V @ 1 amp
  -12V @ 0.5 amp

- Current share on all DC outputs

- Full Hot-Swap enabled

Description

The Power-IT™ model 5201 is a modular, high power, **CPCI** plug-in module that supplies standard 3.3V, 5V, and 12V DC voltages in a variety of configurations for use in electronics systems. The unit is designed to operate in a 1+1 redundant mode and interface with Bus-IT™ and Rack-IT™ products. The unit can be operated as either a wide range, AC input or 48V DC input and offers full mechanical compatibility with IEEE-STD-1101.10. Power-IT™ power supplies are designed to deliver the power that is required by today's high density electronic systems.

Power Supplies

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Specifications

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Description: Physical ....6U X 160mm X 8HP **CPCI**, dual ejector
Output ....+5.0 VDC @ 60 Amps
+3.3 VDC @ 45 Amps
+12.0 VDC @   1 Amps
-12.0 VDC @ 0.5 Amps
Input: ....-36 to -72 VDC @ 15 Amps max.
Optional: AC wide range, PFC (see below)
Noise ....50 mV
Load Regulation.....................1%, 10% - 100% of full load
Output Accuracy....................5%
Overload Protection ....Main fuse @ 20 Amps,
Short circuit shutdown
Over temperature shutdown
Operating Temperature.........-10º C to + 80º C

Indicators: Front Panel LED's..................Green "Power Good"
Red "Power Fail"
Green "Input Power"
Alarms ....Output & Input conditions
Diode OR'd to FAL#

Features: Suitable for redundant supply requirements.
Can be configured as a +5V @ 30 Amp and +3.3 @ 90 Amps.
Designed to meet the requirements of: UL, CSA, FCC, NEBS and CE
UL1950, EN 60950, FCC class B, EN 55022 Class B, NEBS-FR-2063 (1997)
Unit generates full power output with 450LFM (linear feet per minute) airflow.
Contact factory for performance ratings with reduced airflow.

AC Front End (optional): AC front end mounted in subrack transition module area
behind power supply

Input Voltage ....85 - 265 VAC continuous
Input Frequency...........................47 - 63 Hz
Input Current: ....9.8 A (max) @ 85VAC
Inrush Current ....50A peak 1 ms pulse
Power Factor.................................99 @ full load
Leakage Current: ....3.5 mA (max)
Over Voltage Protection..............300 VAC (max) Continuous
Total Harmonic Distortion ....5% (nominal) @full load

IT Enclosures Part #   52-00001-01 DC Version
52-00001-02 AC Version
IT Enclosures Model #   5201

Power Supplies

power it™

Interface

The Power-IT™ backplane pinout follows the existing **CompactPCI®** guidelines as set forth under **PICMG®** 2.0 R2.1 **CompactPCI®** Specification, September 2, 1997.

Connector J1 Pin Assignments:

PIN#	Staging	Mnemonic	Description
Column A			
A13	EL	IS3B	Supply interconnect 3 B
A14	EL	IS3A	Supply interconnect 3 A
A15	EL	+3.3V	+3.3 VDC
A16	EL	3S-	+3.3 V sense -
A17	EL	3S+	+3.3 V sense +
A18	EL	+3.3V	+3.3 VDC
A19	EL	IS2B	Supply interconnect 2 B
A20	EL	IS2A	Supply interconnect 2 A
Column B			
B2	SL	5V	+5 VDC
B5	SL	5V	+5 VDC
B8	-	-	No connect
B11	EL	+3.3V	+3.3 VDC
B13	SL	+3.3V	+3.3 VDC
B14	SL	+3.3V	+3.3 VDC
B15	SL	+3.3V	+3.3 VDC
B16	SL	+3.3V	+3.3 VDC
B17	SL	+3.3V	+3.3 VDC
B18	SL	+3.3V	+3.3 VDC
B19	SL	-	No connect
B20	SL	-	No connect
B22	EL	+3.3V	+3.3 VDC
B25	EL	GND	Ground
B28	EL	GND	Ground
B31	EL	GND	Ground
Column C			
C13	SL	-	No connect
C14	SL	-	No connect
C15	SL	-	No connect
C16	SL	+3.3V	+3.3 VDC
C17	SL	+3.3V	+3.3 VDC
C18	SL	+3.3V	+3.3 VDC
C19	SL	GND	Ground
C20	SL	-	No connect

Note: J1 and J3 are DIN 41612 series connectors. Specifically, STV-M 24/8-M-abc fitted with 40 Amp, high current contacts at positions B - 2, 5, 8, 11, 22, 25, 28 and 31.

Connector J2 Pin Assignments (DC Version):

Pin #	Mnemonic	Description
1	- 48 VDC	- 48 Volt Input Power
2	-	No Connect
3	-	No Connect
4	-	No Connect
5	- 48 VDC RTN	- 48 Volt Input Power Return

Note: J2 is a DIN 41612 series connector. Specifically ZW-5-M fitted with 40 Amp, high current contacts at positions 1 and 5.

Connector J2 Pin Assignments (AC Version):

Pin #	Mnemonic	Description
1	+ VDC	+ from AC front end
2	-	No Connect
3	-	No Connect
4	-	No Connect
5	- VDC	- from AC front end

Note: J2 is a DIN 41612 series connector. Specifically ZW-5-M fitted with 40 Amp, high current contacts at positions 1 and 5.

Connector J3 Pin Assignments:

PIN#	Staging	Mnemonic	Description
Column A			
A13	EL	SP	Spare
A14	EL	INH#	Inhibit Signal **
A15	EL	ISH	Current Share Signal **
A16	EL	5S-	5V sense -
A17	EL	5S+	5V sense +
A18	EL	3.3V	+3.3 VDC
A19	EL	+12V	+12 VDC
A20	EL	-12V	-12VDC
Column B			
B2	SL	ACL	AC Line **
B5	SL	CAN	AC Line **
B8	-	-	No Pin Loaded
B11	EL	CG	Chassis Ground
B13	SL	3.3V	+3.3 VDC
B14	SL	3.3V	+3.3 VDC
B15	SL	3.3V	+3.3 VDC
B16	SL	3.3V	+3.3 VDC
B17	SL	3.3V	+3.3 VDC
B18	SL	3.3V	+3.3 VDC
B19	SL	+12V	+12 VDC
B20	SL	-12V	-12 VDC
B22	EL	5V	+5 VDC
B25	EL	GND	Ground
B28	EL	+DC	+DC Input **
B31	EL	-DC	-DC input **
Column C			
C13	SL	EN#	Enable Signal **
C14	SL	DEG#	Derate Signal **
C15	SL	FAL#	Supply Fail Signal
C16	SL	3.3V	+3.3 VDC
C17	SL	3.3V	+3.3 VDC
C18	SL	3.3V	+3.3 VDC
C19	SL	+12V	+12 VDC
C20	SL	-12V	-12 VDC

** Indicates that the function is not implemented on the 52-00001-01

Note: J1 and J3 are DIN 41612 series connectors. Specifically, STV-M 24/8-M-abc fitted with 40 Amp, high current contacts at positions B - 2, 5, 8, 11, 22, 25, 28 and 31

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Features

- 200 Watts in a 3U x 160mm x 8HP **CompactPCI®** format

- 3.3V, 5V and +/- 12V DC outputs

- 48V DC input (can be configured for a wide range of inputs)

- Full dimensional compatibility with **CompactPCI®** (**PICMG®** 2.0 R2.1) and IEEE 1101.10 for mechanical structures

- Ideally suited for N+1 redundant operation in high density, CE, NEBS, ETSI, Telco or ISP applications

- Current share on all DC outputs

- Full Hot-Swap enabled

- Uses latest CPCI power interface connector

Description

The Power-IT™ model 5250 is a modular, high power, **CPCI** plug-in module that supplies standard 3.3V, 5V, and 12V DC voltages in a variety of configurations for use in electronics systems. The unit is designed to operate in a N+1 redundant mode and interface with Bus-IT™ and Rack-IT™ products. The unit can be operated as either a wide range, AC input or 48V DC input and offers full mechanical compatibility with IEEE-STD-1101.10. Power-IT™ power supplies are designed to deliver the power that is required by today's high density electronic systems.

Power Supplies

Specifications

Description: Physical ....3U X 160mm X 8HP **CPCI**, dual ejector
Output (DC Version) ....+5.0VDC ....150 Watts
+3.3VDC ....75 Watts
+12.0VDC ....12 Watts
-12.0VDC..............6 Watts

Output (AC Version) ....+5.0VDC ....75 Watts
+3.3VDC ....150 Watts
+12.0VDC ....12 Watts
-12.0VDC..............6 Watts

Input: ....-36 to -72 VDC @ 8 Amps max.
Optional: AC wide range, PFC (see below)
Noise......................................50 mV
Load Regulation.....................1%, 10% - 100% of full load
Output Accuracy....................5%
Overload Protection ....Main fuse @ 20 Amps,
Short circuit shutdown
Over temperature shutdown
Operating Temperature.........-10° C to + 80° C

Indicators: Front Panel LED's..................Green "Power Good"
Red "Power Fail"
Green "Input Power"
Alarms ....Output & Input conditions
Diode OR'd to FAL#

Features: Designed to meet the requirements of: UL, CSA, FCC, NEBS and CE
UL1950, EN 60950, FCC class B, EN 55022 Class B, NEBS-FR-2063 (1997)
Unit generates full power output with 300LFM (linear feet per minute) airflow.
Contact factory for performance ratings with reduced airflow.

AC Front End (optional): AC front end mounted in subrack transition module area
behind power supply

Input Voltage................................85 - 265 VAC continuous
Input Frequency...........................47 - 63 Hz
Input Current: ....9.8 A (max) @ 85VAC
Inrush Current ....50A peak 1 ms pulse
Power Factor.................................99 @ full load
Leakage Current: ....3.5 mA (max)
Over Voltage Protection..............300 VAC (max) Continuous
Total Harmonic Distortion ....5% (nominal) @full load

IT Enclosures Part #   52-00050-01 DC Version
52-00050-02 AC Version
IT Enclosures Model #   5250

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Power Supplies

Connector J1 Pin Assignments:

Pin#	Staging	Signal Name	Description
1-4	M	V1	+5 Volt out
5-12	M	RTN	Signal Ground
13-18	M	V2	+3.3 Volt out
19	M	RTN	Signal Ground
20	M	V3	+12 Volt out
21	S	V4	-12 Volt out
22	M	RTN	Signal Ground
23	M	RES	Reserved
24	S	RTN	Signal Ground
25	M	ADD1	Address Bit 1*
26	M	RES	Reserved
27	S	EN#	Enable - a 0 will enable the supply
28	M	ADD2	Address Bit 2*
29	M	V1 ADJ	V1 Adjust*
30	M	V1 SENSE	+5 Volt Sense
31	M	ADD3	Address Bit 3*
32	M	V2 ADJ	V2 Adjust
33	M	V2 SENSE	+3.3 Volt Sense
34	M	S RTN	Signal Ground
35	M	V1 SHARE	+5 Volt current share - connect between modules
36	M	V3 SENSE	+12 Volt Sense
37	M	TX	Signal Comm Transmit*
38	M	DEG#	Degrade Signal - a 0 indicated imminent failure
39	M	INH#	Inhibit Signal
40	M	RX	Serial Comm, Receive*
41	M	V2 SHARE	+3.3 Volt share - connect between modules
42	M	FAL#	Fail Signal - 0 indicates module has failed
43	M	INT	Serial Comm Interrupt*
44	M	V3 SHARE	V3 Share*
45	L	CGND	Chassis Ground
46	S	ACN/+DC IN	Positive DC voltage input
47	S	ACN/-DC IN	Negative DC voltage input

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Features

- 6U **CPCI** transition format alarm interface module for management of cooling, power and other alarm inputs/outputs.

- Designed to meet the requirements of UL, CSA, FCC, and CE in a convenient 6U x 80mm **CPCI** transition module format.

- 1000V RMS Isolation

- Visual Indicators for alarm conditions:
  - Major Alarm Out
  - Minor Alarm Out
  - Temperature Out
  - AUX 1 Input
  - AUX 2 Input
  - Power

- User configurable inputs:
  - Over Temp
  - Aux 1 optically isolated TTL
  - Aux 2 optically isolated TTL
  - PS fail left
  - PS fail right
  - PS temp right
  - PS temp left

- Outputs:
  - Emergency shut down
  - Major Alarm
  - Minor Alarm

- Designed to mate with Bus-IT™, Rack-IT™, and Cool-IT™ products
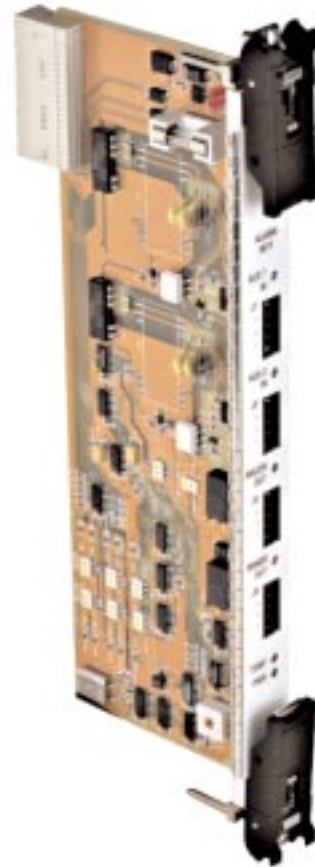
Description

The Alarm-IT™ alarm module is designed to monitor and report alarm conditions to a system level controller or a remote alarm panel for high availability/reliability systems. The unit incorporates an Over Temperature Alarm input, which in conjunction with the built in 10 position timer can provide emergency shut down to every slot position in a subrack

Inputs to the alarm module come from the IT Enclosures Redundant Power System and the two Auxiliary connectors provided on the panel. Both the AUX 1 And AUX 2 connec-tors provide fully independent and isolated TTL level sig-nals, which can be connected to any external monitoring device the user desires.

All inputs can be configured as either Major or Minor alarm events. The Major and Minor Alarms provide a Normally open / Normally closed relay configuration that allows the user the flexibility and isolation required to connect to an external controller or an external alarm panel.   The unit is designed to comply with all electrical and mechanical requirements of IEEE-STD-1011.10

Specifications

Description: Physical...6U X 80mm x 4HP **CPCI** transition module
Isolation Alarm I/O..........................1000V RMS (nominal)
Power Requirements ....+5.0 VDC (+/- 10%) @ 300 m A, fused
Environmental ....0°- 50° C, 5-95% RH, Non-Condensing
Backplane Interface Connection .....See Interface Section, **CPCI** compliant

Controls: Temperature Timer Selection...........0 - 9 minutes
Major/Minor Alarm ....User defines input as major or minor
Input Alarm State ....User defines input as either 0 or 1

Indicators: Major Alarm Out ....LED (Amber)
Minor Alarm Out........LED (Amber)
Temperature Alarm ....LED (Red)
AUX 1 Input ....LED (Amber)
AUX 2 Input ....LED (Amber)
Power ....LED (Green)

Connections: Major Alarm (JP5).............................N/O ....(Pin 1)
Relay Contacts ....COM (Pin 2)
N/C (Pin 3)

Minor Alarm (JP6)......N/O (Pin 1)
Relay Contacts ....COM (Pin 2)
N/C (Pin 3)

AUX 1 Alarm (JP1) .....COM (Pin 1)
Active Opto-Isolator ..In (Pin 2)
FET Output..................RTN (Pin 3)

AUX 2 Alarm (JP3) .....COM (Pin 1)
Active Opto-Isolator ..IN (Pin 2)
FET Output..................RTN (Pin 3)

All Alarm Inputs and Outputs connected to the module through locking terminal strip connectors (Weidmuller Part # 161554. Mating connector is Weidmuller Part # 161579. The mating connector accepts 12-22 AWG wire range for connection to the physical plant alarm system.

Compliance: Module designed to meet the compliance requirements of: UL, CSA, FCC, NEBS, and CE , UL 1950, EN 60950, FCC Class B, EN 55022, NEBS-FR-2063 (1997).

Interface: The backplane pin out follows the **CPCI** design guidelines as set forth under **PICMG®** 2.0 R2.1 **CompactPCI®** Specification, September 2, 1997. Figure 1 is the pinout of the

IT Enclosures Part #: 55-00001-01
IT Enclosures Model #: 5501

Interface

The Power-IT™ backplane pinout follows the existing **CompactPCI®** guidelines as set forth under **PICMG®** 2.0 R2.1 **CompactPCI®** Specification, September 2, 1997.

Connector J5 Pin Assignments:

PIN#	Staging	Mnemonic	Description
Column A			
A1		+5V	+5VDC Input Power
A2		+5V	+5VDC Input Power
A3		PRST#	
A4		HEAT EMERGENCY TEMP OUT	Over Temp alarm output - sent to all cards to cause immediate shut down.
A5		Major Out	Major Alarm Output
A6		Minor Out	Minor Alarm Output
A7		Temp Out	Over Temperature Alarm
A8		Aux 1 Out	Auxiliary 1 Alarm Output
A9		Aux 2 Out	Auxiliary 2 Alarm Output
A10		N/C	No Connection
A11		N/C	No Connection
A12		N/C	No Connection
A13		N/C	No Connection
A14		N/C	No Connection
A15		N/C	No Connection
A16		N/C	No Connection
A17		N/C	No Connection
A18		N/C	No Connection
A19		N/C	No Connection
A20		N/C	No Connection
A21		N/C	No Connection
A22		N/C	No Connection
Column B			
B1		+3.3V	+3.3V DC input power
B2		+3.3V	+3.3V DC input power
B3		N/C	No Connection
B4		N/C	No Connection
B5		N/C	No Connection
B6		N/C	No Connection
B7		N/C	No Connection
B8		INH_LEFT#	Interconnect to Power Supply Slot 20

A l a r m   M o d u l e

Connector J5 Pin Assignments (continued):

PIN#	Staging	Mnemonic	Description
Column B			
B9		DEG_LEFT#	Interconnect to Power
			Supply Slot 20
B10		PFS0#	Power Fail Slot 1
B11		AUX5V_LFT	
B12		N/C	No Connection
B13		N/C	No Connection
B14		N/C	No Connection
B15		N/C	No Connection
B16		N/C	No Connection
B17		N/C	No Connection
B18		N/C	No Connection
B19		N/C	No Connection
B20		N/C	No Connection
B21		N/C	No Connection
B22		N/C	No Connection
Column C			
C1		AUX5V_LFT	
C2		N/C	No Connection
C3		N/C	No Connection
C4		N/C	No Connection
C5		N/C	No Connection
C6		N/C	No Connection
C7		N/C	No Connection
C8		N/C	No Connection
C9		N/C	No Connection
C10		N/C	No Connection
C11		N/C	No Connection
C12		N/C	No Connection
C13		N/C	No Connection
C14		N/C	No Connection
C15		N/C	No Connection
C17		N/C	No Connection
C18		N/C	No Connection
C19		N/C	No Connection
C22		N/C	No Connection

A l a r m   M o d u l e

Connector J5 Pin Assignments (continued):

PIN#	Staging	Mnemonic	Description
Column D			
D1		AUX5V_LFT	
D2		N/C	No Connection
D3		N/C	No Connection
D4		N/C	No Connection
D5		N/C	No Connection
D6		N/C	No Connection
D7		N/C	No Connection
D8		INH_RIGHT#	Interconnection to power supply slot 1
D9		DEG_RIGHT#	Interconnection to power supply slot 1
D10		PFS1#	Power Supply Fail slot 20
D11		AUX5V_RIGHT	
D12		N/C	No Connection
D13		N/C	No Connection
D14		N/C	No Connection
D15		N/C	No Connection
D16		N/C	No Connection
D17		N/C	No Connection
D18		N/C	No Connection
D19		N/C	No Connection
D20		N/C	No Connection
D21		N/C	No Connection
D22		N/C	No Connection
Column E			
E1		GND	LOGIC GND
E2		GND	LOGIC GND
E3		GND	LOGIC GND
E4		SPARE8	
E5		SPARE7	
E6		SPARE6	
E7		SPARE5	
E8		SPARE4	
E9		SPARE3	
E10		SPARE2	
E11		SPARE1	
E12		N/C	No Connection
E13		N/C	No Connection
E14		N/C	No Connection
E15		N/C	No Connection
E17		N/C	No Connection
E18		N/C	No Connection
E19		N/C	No Connection
E22		N/C	No Connection

A l a r m   M o d u l e

25

Features

- 3U modular design with redundant, hot swap air movers

- Air delivery - 1200 CFM (@ 0" H_2O Static Pressure)

- 48 VDC or 110 VAC input

- Removeable dust filter (media variable based on particulate filtering requirements)

- Optional front panel customization for wire management or corporate logo/ID

- Rear panel output for air mover monitoring - mates with Alarm-IT™ Model 5501 alarm interface module

- Dimensionally suitable for NEBS and ETSI applications

Description

Our Cool-IT™ modular thermal management units are designed for high performance, redundant thermal management applications. Each Cool-IT™ product is intended to mate with our Rack-IT™ subrack enclosures and Alarm-IT™ alarm modules, and is constructed using the latest impeller-based air moving devices. These devices yield high performance at high system impedance levels, while providing long life cycles and reduced audible noise. They make Cool-IT™ modular thermal management units the perfect choice for demanding high-density subrack environments.

Thermal Management

Specifications

Physical:
H ....3U (5.25")
W....................19" (STD EIA rack mount) w/removable rack mount ears
D ....12" maximum

Air Flow Direction: Bottom Air Entry, Rear Air Exit

Configuration: Dual, Redundant Impeller, Front Hot Swappable
Designed to reduce shadowing effect in the event of a fan failure.

Performance: 1200 CFM (at static pressure 0 in.H20) (max)
500 CFM (at static pressure 0.6 in.H20) (min)

Input Power: ....-36 to -72 VDC (optional AC)

Materials: Housing ....Al ALY 5052 series
Fans ....Brushless DC motors

Finish: Standard: All external surfaces are powder coated (five standard colors available).
Custom finish options available upon request.

EMI/RFI: Designed to meet the requirements of: UL, CSA, FCC, NEBS and CE
UL1950, EN 60950, FCC class B, EN 55022 Class B, NEBS-FR-2063 (1997)

Mounting: Removable Rack mount ears accommodate front or mid rack mounting.

Rear Panel: Fan alarm output (9 position female "D" type connector) for fan fail.
Interfaces with IT Enclosures, Inc. Alarm-IT™ alarm interface module Model 5001.

#1/4-20 earth ground stud.

Power Input: (-48VDC) 2 Position Telco Connector (Phoenix P/N: DFK-PC 4/2-GF-7,62). Mating part Phoenix P/N: PC 4/2-STF-7,62.

Airflow: Unit designed to mate with IT Enclosures, Inc. Rack-IT™ subrack products. Designed to cool a block of three (3) 6U x 12" deep subrack units dissipating 400 - 500 Watts each.

Front Panel: Plastic bezel frame with customization areas and optional front cable management plate.

Life Expectancy: 75,000 hours

IT Enclosures Part #: 51-00002-01 3U Thermal Management Unit
IT Enclosures Model #: 5102

Thermal Management

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Features

- 2U modular design with redundant, hot swap air movers

- Air delivery - 800 CFM (@ 0″ H_2O Static Pressure)

- 48 VDC or 110 VAC input

- Removeable dust filter (media variable based on particulate filtering requirements)

- Optional front panel customization for wire management or corporate logo/ID

- Rear panel output for air mover monitoring - mates with Alarm-IT™ Model 5501 alarm interface module

- Dimensionally suitable for NEBS and ETSI applications

Description

Our Cool-IT™ modular thermal management units are designed for high performance, redundant thermal management applications. Each Cool-IT™ product is intended to mate with our Rack-IT™ subrack enclosures and Alarm-IT™ alarm modules, and is constructed using the latest impeller-based air moving devices. These devices yield high performance at high system impedance levels, while providing long life cycles and reduced audible noise. They make Cool-IT™ modular thermal management units the perfect choice for demanding high-density subrack environments.
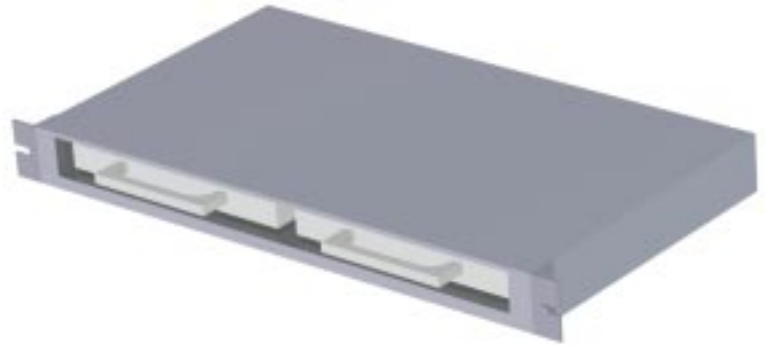
Thermal Management

Specifications

Physical: H ....2U (3.50")
W....................19" (STD EIA rack mount) w/removable rack mount ears
D ....12" maximum

Air Flow Direction: Bottom Air Entry, Rear Air Exit

Configuration: Dual, Redundant Impeller, Front Hot Swappable
Designed to reduce shadowing effect in the event of a fan failure.

Performance: 800 CFM (at static pressure 0 in.H20) (max)
400 CFM (at static pressure 0.6 in.H20) (min)

Input Power: ....-36 to -72 VDC (optional AC)

MATERIALS: Housing ....Al ALY 5052 series
Fans ....Brushless DC motors

Finish: Standard: All external surfaces are powder coated (five standard colors available).
Custom finish options available upon request.

EMI/RFI: Designed to meet the requirements of: UL, CSA, FCC, NEBS and CE
UL1950, EN 60950, FCC class B, EN 55022 Class B, NEBS-FR-2063 (1997)

Mounting: Removable Rack mount ears accommodate front or mid rack mounting.

Rear Panel: Fan alarm output (9 position female "D" type connector) for fan fail.
Interfaces with IT Enclosures, Inc. Alarm-IT™ alarm interface module Model 5001.

#1/4-20 earth ground stud.

Power Input: (-48VDC) 2 Position Telco Connector (Phoenix P/N: DFK-PC 4/2-GF-7,62). Mating part Phoenix P/N: PC 4/2-STF-7,62.

Airflow: Unit designed to mate with IT Enclosures, Inc. Rack-IT™ subrack products. Designed to cool a block of two (2) 6U x 12" deep subrack units.

Front Panel: Plastic bezel frame with customization areas and optional front cable management plate.

Life Expectancy: 75,000 hours

IT Enclosures Part #:   51-00025-01   2U Thermal Management Unit
IT Enclosures Model #:   5125

Thermal Management

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Features

- 1U modular design with redundant, hot swap air movers

- Air delivery - 250 CFM (@ 0″ H_2O Static Pressure)

- 48 VDC or 110 VAC input

- Optional front panel customization for wire management or corporate logo/ID

- Rear panel output for air mover monitoring - mates with Alarm-IT™ Model 5501 alarm interface module

- Dimensionally suitable for NEBS and ETSI applications

Description

Our Cool-IT™ modular thermal management units are designed for high performance, redundant thermal management applications. Each Cool-IT™ product is intended to mate with our Rack-IT™ subrack enclosures and Alarm-IT™ alarm modules, and is constructed using the latest impeller-based air moving devices. These devices yield high performance at high system impedance levels, while providing long life cycles and reduced audible noise. They make Cool-IT™ modular thermal management units the perfect choice for demanding high-density subrack environments.

Thermal Management

Specifications

Physical: H ....1U (1.75")
                          W....................19" (STD EIA rack mount) w/removable rack mount ears
                          D ....12" maximum

Air Flow Direction: Bottom Air Entry, Rear Air Exit

Configuration: Dual, Redundant Impeller, Front Hot Swappable
                          Designed to reduce shadowing effect in the event of a fan
                          failure.

Performance: 250 CFM (at static pressure 0 in.H20) (max)
                          125 CFM (at static pressure 0.6 in.H20) (min)

Input Power: ....-36 to -72 VDC (optional AC)

MATERIALS: Housing ....Al ALY 5052 series
                          Fans ....Brushless DC motors

Finish: Standard: All external surfaces are powder coated (five standard
                          colors available).
                          Custom finish options available upon request.

EMI/RFI: Designed to meet the requirements of: UL, CSA, FCC, NEBS and CE
                          UL1950, EN 60950, FCC class B, EN 55022 Class B, NEBS-FR-2063 (1997)

Mounting: Removable Rack mount ears accommodate front or mid rack mounting.

Rear Panel: Fan alarm output (9 position female "D" type connector) for fan fail.
                          Interfaces with IT Enclosures, Inc. Alarm-IT™ alarm interface module
                          Model 5001.

   #1/4-20 earth ground stud.

                          Power Input: (-48VDC) 2 Position Telco Connector (Phoenix P/N: DFK-PC
                          4/2-GF-7,62). Mating part Phoenix P/N: PC 4/2-STF-7,62.

Airflow: Unit designed to mate with IT Enclosures, Inc. Rack-IT™ subrack products.
                          Designed to cool one 6U subrack.

Front Panel: Plastic bezel frame with customization areas and optional front cable man-
                          agement plate.

Life Expectancy: 75,000 hours

                          IT Enclosures Part #:   51-00050-01   1U Thermal Management Unit
                          IT Enclosures Model #: 5150

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Thermal Management

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Features

- Blind mate connector interface for Model 5075 subrack

- Hot Swap removeable for air filter access

- High reliability ball bearing cooling fans

- Includes Bellcore compliant dust filter

- Six axial cooling fans positioned for maximum airflow through the subrack
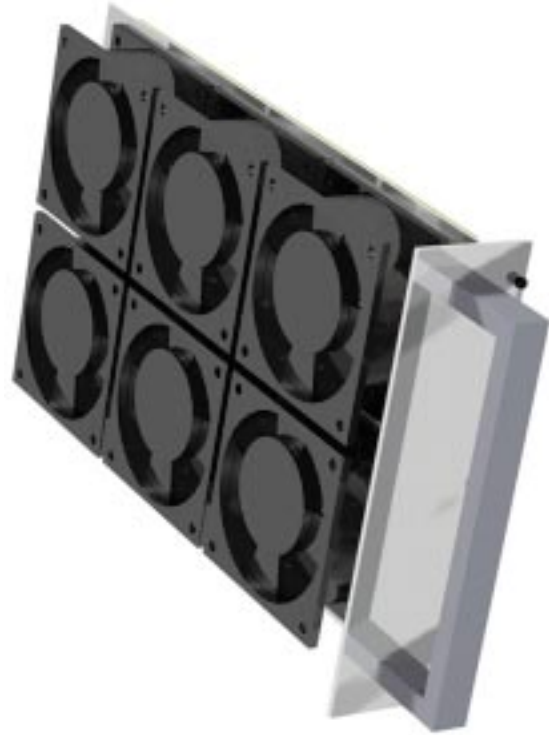
Description

The Model 5175 is a fan tray assembly designed for use with the Model 5075 Subrack System. The unit utilizes six 12VDC axial cooling fans which are positioned for optimum side-to-side air flow through the subrack. A Bellcore compliant dust filter is included. The tray is hot swap removable from the subrack for filter replacement.

Thermal Management

Specifications

Physical:...H:............6.36"
W: ....1.70"
D: ....10.50"

Power Requirements: ....1A @ 12VDC

Performance:.......................................144 CFM @ 0" H2O

Reliability: ....150,000 hours @ 50°C

Operating Environment:....................0° - 50°C, 5-95% RH, non condensing

IT Enclosures Part #............................51-00075-01

IT Enclosures Model # 5175

Replacement Air Filter Part # 05-00083-01

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Thermal Management

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Features

- 64 BIT (66MHZ) **CompactPCI®** compliant, 6U-21 slot development backplane supporting two (2) **CPCI** 8 segment busses (electrically separate)

- Accepts Power-IT™ plug-in power supply units providing 450W of power in 1+1 redundant mode - all voltage levels and pinouts conform to **CPCI** specifications

- Mechanically designed in compliance with IEEE 1101.10

- Backplane supports all feed-through functionality for rear transition modules (midplane applications)

- 12 layer design provides excellent power distribution and signal integrity

- Supports **CompactPCI®** specification **PICMG®** 2.0 R2.1 and **CompactPCI®** telephony specification **PICMG®** 2.5 D3.8

- Designed to accept Alarm-IT™ alarm interface module for power monitoring and reporting

- Schematic available upon request

Description

The Bus-IT™ Model 5401 backplane is a **CPCI** based, 21-slot development bus suitable for mounting in 6U IEEE 1101.10 compliant subracks. The backplane is configured to accept 2 (1+1) redundant 6U plug-in power supply units (450w), and provides two complete and electrically separate **CPCI** bus segments for system development activities.

The **CPCI** bus segment on the left side supports J1 - J5, without any signals routed in J4 (ECTF H.110 CT BUS). The **CPCI** bus segment on the right side supports J1 - J5, with full routing for J4 (ECTF H.110 CT BUS). This flexibility is just one reason why the Bus-IT™ Model 5401 backplane is ideal for system development and integration.

IT Enclosures develops, simulates and manufactures a wide range of backplane solutions for high speed data, voice and computer telephony applications. These solutions are implemented by IT Enclosures using standard, open systems, hybrid or custom bus technologies.

Backplanes

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Specifications

6U Backplane Orientation

FUNCTION	SLOT#	**CPCI** SEGMENT	COMMENTS
Power	1	n/a	Suitable for Power-IT™Model 5201 or similar
	2	n/a	6U, 450W power supply in N+1 redundant format.
CPU	3	1	
Peripheral	4	1	**CPCI** Segment 1 Bus Format:
	5	1	J1 + J2 . . . . . .**CPCI** Bus
	6	1	J3 . . . . .Open (Feedthrough)
	7	1	J4 . . . . .Open (Feedthrough)
	8	1	J5 . . . . .Open (Feedthrough)
	9	1	
	10	1	
CPU	11	2	
Peripheral	12	2	**CPCI** Segment 2 Bus Format:
	13	2	J1 + J2 . . . . . .**CPCI** Bus
	14	2	J3 . . . . .Open (Feedthrough)
	15	2	J4 . . . . .ETCF H.110 CT (TDM) Bus
	16	2	J5 . . . . .Open (Feedthrough)
	17	2	
	18	2	
Alarm	19	n/a	Accepts Alarm-IT™Model 5501 6U **CPCI** Plug-in alarm module - monitors shelf major/minor alarms, over temp or power fail conditions.
Power	20	n/a	Suitable for Power-IT™Model 5201 or similar
	21	n/a	6U, 450W power supply in N+1 redundant format.

Physical ....6U X 21-slot IEEE 110.10 Dimensional Compliant
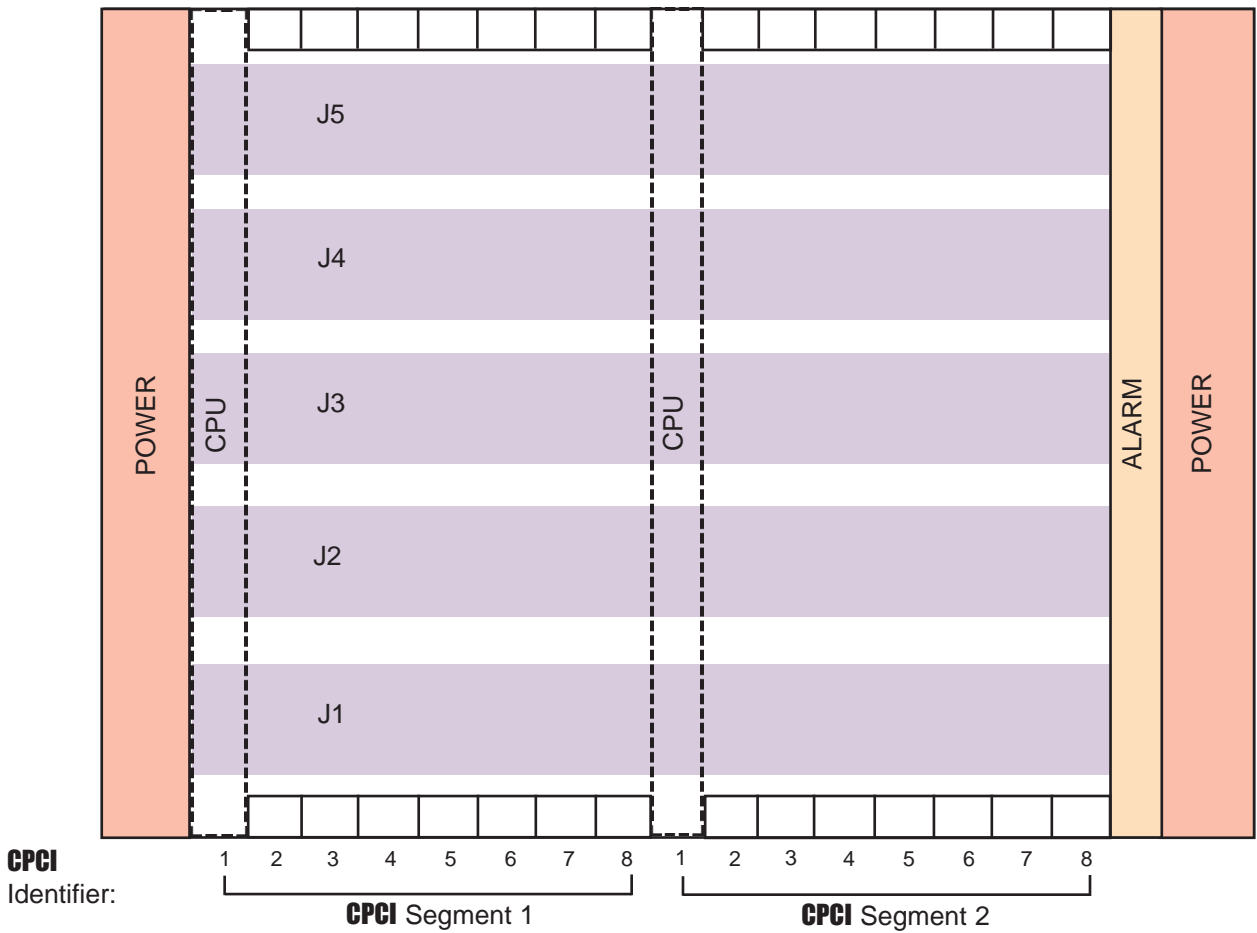
Materials..................................12 layer FR-4 glass epoxy and IPC soldermask; nominal
thickness - .187”; UL94V-0 Flammability

IT Enclosures Part #   54-00001-01

IT Enclosures Model #   5401

Backplanes

bus**it**™

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Backplane Configuration

Slot #: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

POWER

CPU

J5

J4

J3

J2

J1

CPU

ALARM

POWER

CPCI Identifier:

1 2 3 4 5 6 7 8   1 2 3 4 5 6 7 8

CPCI Segment 1   CPCI Segment 2

Backplanes

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Features

• 6U, 21-slot backplane providing redundant **CPCI** bus segments with a common H.110 bus segment

• Accepts Power-IT™ 3U plug-in power supplies for redundant N+1 applications using the latest 47 position **CPCI** power interface connector

• Mechanically designed in compliance with IEEE 1101.10

• Backplane supports all feed-through with rear AB shrouds on J3, J4 and J5 positions

• 12 layer design provides excellent power distribution and signal integrity

• Supports **CompactPCI®** specification **PICMG®** 2.0 R2.1 and **CompactPCI®** telephony specification **PICMG®** 2.5 D3.8

• Functional diagram available upon request

Description

The Bus-IT™ Model 5406 backplane is a **CPCI**, 21-slot redundant system suitable for mounting in 6U Rack-IT™ products. The backplane is configured to accept four Model 5250 Power-IT™ 3U plug-in supplies for N+1 power redundancy. The system can provide 600 W of online power, with one 200 W hot standby unit for fault tolerant operation.

The backplane provides two electrically separate 8-slot J1/J2 **CPCI** bus segments. It also provides a 17-slot common H.110 bus on the P4 location, making the Model 5406 an excellent choice for redundant, fault-tolerant applications.

IT Enclosures develops, simulates and manufactures a wide range of backplane solutions for high speed data, voice and computer telephony applications. These solutions are implemented by IT Enclosures using standard, open systems, hybrid or custom bus technologies.

Backplanes

Specifications

6U Backplane Orientation

FUNCTION	SLOT#	CPCI SEGMENT	COMMENTS
Power	1	n/a	Suitable for Power-IT™Model 5250 or similar
	2	n/a	3U, 200W power supply in N+1 redundant format.
Peripheral	3	1	
	4	1	
	5	1	
	6	1	J1/J2 CPCI 1
	7	1	
	8	1	
	9	1	J3 . . . . .Feedthrough
CPU	10	1	J4 . . . . .17 Slot, H.110
CPU	11	2	J5 . . . . .Open (suitable for customization)
Peripheral	12	2	
	13	2	
	14	2	
	15	2	J1/J2 CPCI 2
	16	2	
	17	2	
	18	2	
Alarm (front or rear)	19	n/a	Accepts Alarm-IT™Model 5501 6U CPCI Plug-in alarm module - monitors shelf major/minor alarms, over temp or power fail conditions.
Power	20	n/a	Suitable for Power-IT™Model 5250 or similar
	21	n/a	3U, 200W power supply in N+1 redundant format.

Physical ....6U X 21-slot IEEE 110.10 Dimensional Compliant

Materials..................................12 layer FR-4 glass epoxy and IPC soldermask; nominal thickness - .187"; UL94V-0 Flammability

IT Enclosures Part #   54-00006-01

IT Enclosures Model #   5406

Backplane Configuration

CPCI Segment 1   CPCI Segment 2

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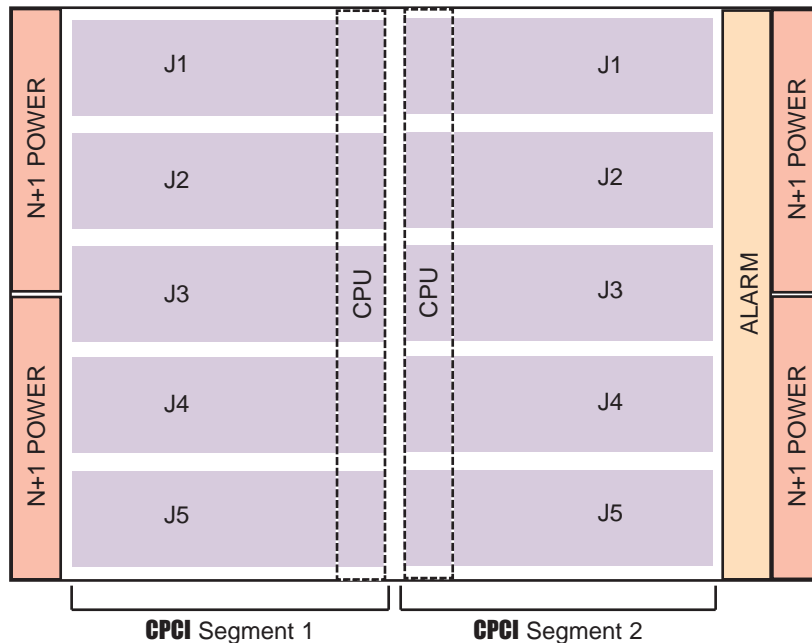
Features

• 64 BIT (66MHZ) **CompactPCI®** compliant, 3U-21 slot development backplane supporting two (2) **CPCI** 8 segment busses (electrically separate)

• Accepts Power-IT™ plug-in power supply units providing 200W of power in 1+1 redundant mode - all voltage levels and pinouts conform to **CPCI** specifications

• Mechanically designed in compliance with IEEE 1101.10

• 12 layer design provides excellent power distribution and signal integrity

• Supports **CompactPCI®** specification **PICMG®** 2.0 R2.1

• Schematic available upon request

Description

The Bus-IT™ Model 5450 backplane is a **CPCI** based, 21-slot development bus suitable for mounting in 3U IEEE 1101.10 compliant subracks. The backplane is configured to accept 2 (1+1) redundant 3U plug-in power supply units (200w), and provides two complete and electrically separate **CPCI** bus segments for system development activities.

The **CPCI** bus segment on the left side supports J1 + J2. The **CPCI** bus segment on the right side supports J1 **CPCI** and J2 CT (TDM) bus homologation (suggested in Appendix C of the **CompactPCI®** Computer Telephony Specification). This flexibility is just one reason why the Bus-IT™ Model 5450 backplane is an ideal development platform for advanced systems.

IT Enclosures develops, simulates and manufactures a wide range of backplane solutions for high speed data, voice and computer telephony applications. These solutions are implemented by IT Enclosures using standard, open systems, hybrid or custom bus technologies.

Backplanes

Specifications

6U Backplane Orientation

FUNCTION	SLOT#	CPCI SEGMENT	COMMENTS
Power	1	n/a	Suitable for Power-IT™Model 5250 or similar
	2	n/a	3U, 200W power supply in 1+1 redundant format.
CPU	3	1	
Peripheral	4	1	CPCI Segment 1 Bus Format:
	5	1	J1 + J2 . . . . . .CPCI Bus
	6	1	
	7	1	
	8	1	
	9	1	
	10	1	
CPU	11	2	
Peripheral	12	2	CPCI Segment 2 Bus Format:
	13	2	J1 . . . . .CPCI Bus
	14	2	J2 . . . . .CT (TDM) Bus Homologation
	15	2	(see Table, opposite page)
	16	2	
	17	2	
	18	2	
Open	19	n/a	Open
Power	20	n/a	Suitable for Power-IT™Model 5250 or similar
	21	n/a	3U, 200W power supply in 1+1 redundant format.

J2 - CT (TDM) Bus Homologation

POS#	Row Z	Row A	Row B	Row C	Row D	Row E	Row F
22	NP	GA4	GA3	GA2	GA1	GA0	FG
21	NP	-SELVbat	GND_FT	5V_FT	-SELVbat	CT_MC	FG
20	NP	SGA4	SGA3	SGA2	SGA1	SGA0	FG
19	NP	IN/C	IN/C	IN/C	IN/C	IN/C	GND/NP
18	NP	IN/C	IN/C	IN/C	IN/C	IN/C	GND/NP
17	NP	T1	T3	T5	T7	IN/C	GND/NP
16	NP	R1	R3	R5	R7	IN/C	GND/NP
15	NP	T2	T4	T6	T8	IN/C	GND/NP
14	NP	R3	R4	R6	R8	IN/C	GND/NP
13	NP	IN/C	IN/C	IN/C	IN/C	IN/C	GND/NP
12	NP	IN/C	IN/C	IN/C	IN/C	IN/C	GND/NP
11	NP	CT_D29	CT_D30	CT_D31	V(I/O)	/CT_FRAME_A	GND
10	NP	CT_D27	+3.3V	CT_D28	+5V	/CT_FRAME_B	GND
9	NP	CT_D24	CT_D25	CT_D26	GND	/FR_COMP	GND
8	NP	CT_D21	CT_D22	CT_D23	+5V	CT_C8_A	GND
7	NP	CT_D19	+5V	CT_D20	GND	CT_C8_B	GND
6	NP	CT_D16	CT_D17	CT_D18	GND	CT_NETREF_1	GND
5	NP	CT_D13	CT_D14	CT_D15	+3.3V	CT_NETREF_2	GND
4	NP	CT_D11	+5V	CT_D12	+3.3V	SCLK	GND
3	NP	CT_D8	CT_D9	CT_D10	GND	SCLKx2	GND
2	NP	CT_D4	CT_D5	CT_D6	CT_D7	GND	GND
1	NP	CT_D0	+3.3V	CT_D1	CT_D2	CT_D3	GND

Specifications (continued)

Physical ....3U X 21-slot IEEE 110.10 Dimensional Compliant

Materials..................................12 layer FR-4 glass epoxy and IPC soldermask; nominal
thickness - .187"; UL94V-0 Flammability

IT Enclosures Part #   54-00050-01

IT Enclosures Model #   5450

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Backplane Configuration

Slot #:   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20   21

CPCI
Identifier:

CPCI Segment 1   CPCI Segment 2

Backplanes
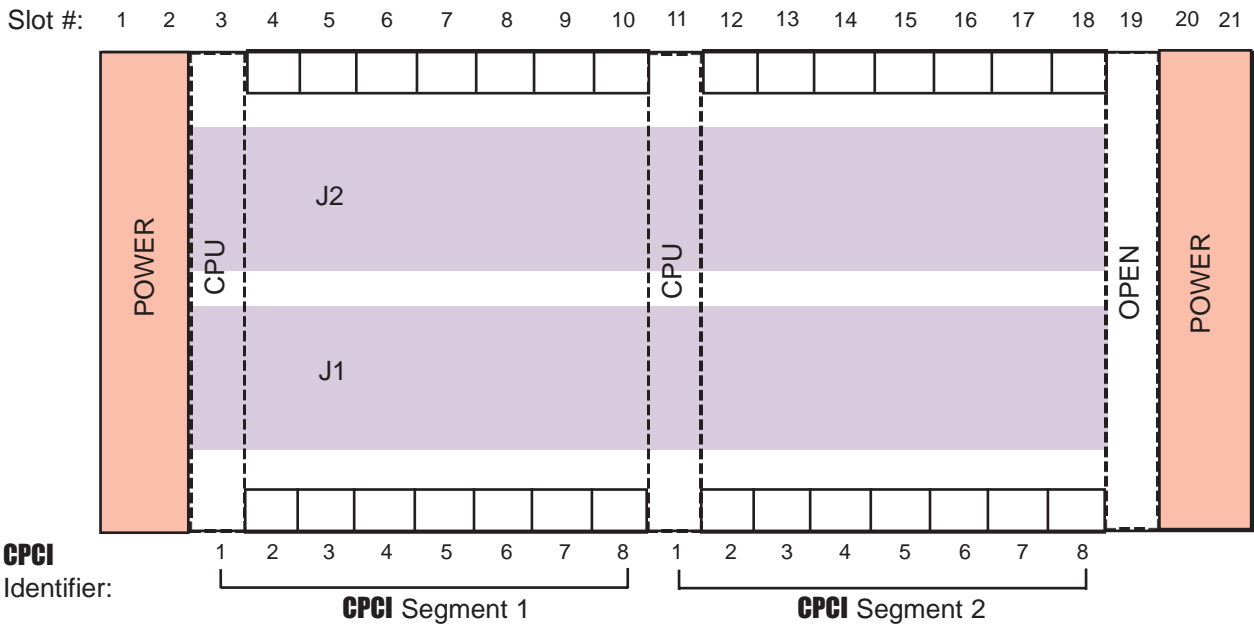
Features

- Sturdy snap-together/ pop-open construction

- UL <u>94V0</u> Rated Flame Retardant ABS plastic

- Traditional miniature cases

- Universal rectangular cases

- Universal cylindrical cases

- Compact standalone cases

- Optional <u>custom</u> colors

- Optional <u>custom</u> molded logos

- Various dimensions to accommodate the follow-ing connectors:

DB-9	TNC
DB-15	Dual TNC
DB-25	Twinax
DB-37	RJ-11
M/34	Dual RJ-11
Centronics®	RJ-45
BNC	Dual RJ-45
Dual BNC	Strain Relief

Description

ITenclosures has a wide selection of molded plastic cases designed to house an almost infinite variety of electronic OEM equipment. Go with our stock cases or customize our designs to fit your specific requirements.

<u>Stock Cases:</u> (Small or Large Quantities) Choose from dozens of sizes, shapes and end inserts. All are available with a blank cutout to receive your own label. UL 94HB rated (flame retardant) black ABS plastic is used on most stock cases. We can supply the connectors and hardware too. **Call or E-mail today** for part numbers and *quantity discount* pricing information.

<u>Customized Cases:</u> (Large Quantities) Take our stock cases and go even further! Specify your own *custom color* (our standalone cases offer dual case/bezel color combinations). Enhance the *flame retardance* of your cases with special plastic. You can even have your own *custom logo* molded into your cases, for a completely unique appearance. **Call or E-mail today** with your specific custom case requirements.

Specifications

Standard Connector Cases							
Description	Part No.	overall length	max. width	outside height	body width	inside width	inside height
Centronics to DB-25 with ears (2.95")	0436S8	2.95	2.08	0.75	1.70	1.49	0.57
Centronics to RJ-11 (2.60")	0436M4S	2.60	2.08	0.75	1.70	1.49	0.57
Centronics to RJ-45 (2.60")	0436M4S	2.60	2.08	0.75	1.70	1.49	0.57
DB-15 to RJ-11	041006S	2.50	1.55	0.75	1.25	0.90	0.57
DB-15 to RJ-45	041056S	2.50	1.55	0.75	1.25	0.90	0.57
DB-25 to DB-25	0430S	1.94	2.08	0.69	1.75	1.49	0.50
DB-25 to DB-25 (thick)	0434S	1.94	2.08	0.89	1.75	1.49	0.70
DB-25 to DB-25, (2.9"long)	0408S	2.86	2.08	0.73	1.75	1.49	0.57
DB-25 to Dual RJ-11 (2.50")	0405S	2.50	2.08	0.73	1.75	1.49	0.57
DB-25 to Dual RJ-45 (2.50")	0407S	2.50	2.08	0.73	1.75	1.49	0.57
DB-25 to RJ-11 (2.50")	0404S	2.50	2.08	0.73	1.75	1.49	0.55
DB-25 to RJ-11 (4.25")	042S	4.25	2.08	1.00	1.90	1.53	0.75
DB-25 to RJ-45 (2.50")	0406S	2.50	2.08	0.73	1.75	1.49	0.55
DB-25 to Strain Relief (4.25")	041S	4.15	2.08	1.00	1.90	1.53	0.75
DB-37 to RJ-11	437S4	2.54	2.78	0.73	1.76	1.49	0.55
DB-9 to DB-15	041096S	2.47	1.55	0.68	1.21	1.00	0.55
DB-9 to DB-25 (ears on both ends)	0471S	1.93	2.08	0.69	angles	angles	0.50
DB-9 to DB-9	041099S	2.43	1.21	0.69	1.21	1.00	0.55
DB-9 to RJ-11	041009S	2.49	1.25	0.76	1.25	1.00	0.55
DB-9 to RJ-45	041059S	2.49	1.25	0.76	1.25	1.00	0.55
Typical Universal Plastic Enclosures*							
Electronic Enclosure	0443	3.00	4.17	1.52			
Electronic Enclosure	0445	5.00	4.17	1.52			
Electronic Enclosure	0473	3.00	7.29	1.52			
Note: these cases use sheet metal front and rear panels for universal applications.							
Universal Plastic Cases**							
Universal Rectangular Case-(0.8")	0421CS	0.80	1.70	0.80			
Universal Rectangular Case-(2.00")	0421S	2.00	1.70	0.80			
Universal Rectangular Case-(2.60")	0421M	2.60	1.70	0.80			
Universal Rectangular Case-(3.00")	0421L	3.00	1.70	0.80			
**Note: these cases hold the following end plates: Blank, BNC, Centronics, DB-15, DB-25, M/34, RJ-11, Dual RJ-11, RJ-45, Dual RJ-45 and Strain Relief. Case dimensions vary according to the end plate used.							

Even more plastic enclosures available—call or email for details!

Plastic Enclosures

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Enclosures specializes in the development of custom enclosures and electronics systems. We have developed and manufactured custom packaging solutions for many space, airborne, shipborne, ground based, central office and commercial applications.

ITenclosures offers a broad range of capabilities, including:

Program Management —

-System concepts, statements of work, program,
    production, planning and manpower
-Technical specifications
-Lifecycle logistics

Engineering —

-Power supply and power distribution design and analysis
-Circuit and backplane architecture design, simulation,
    layout and analysis
-Thermal modeling and FEA analysis
-Regulatory compliance design and analysis
-Shock, vibration and EMC applications

System Integration —

-Turn-key platform development
-Production level system testing and verification
-Regulatory testing and approvals
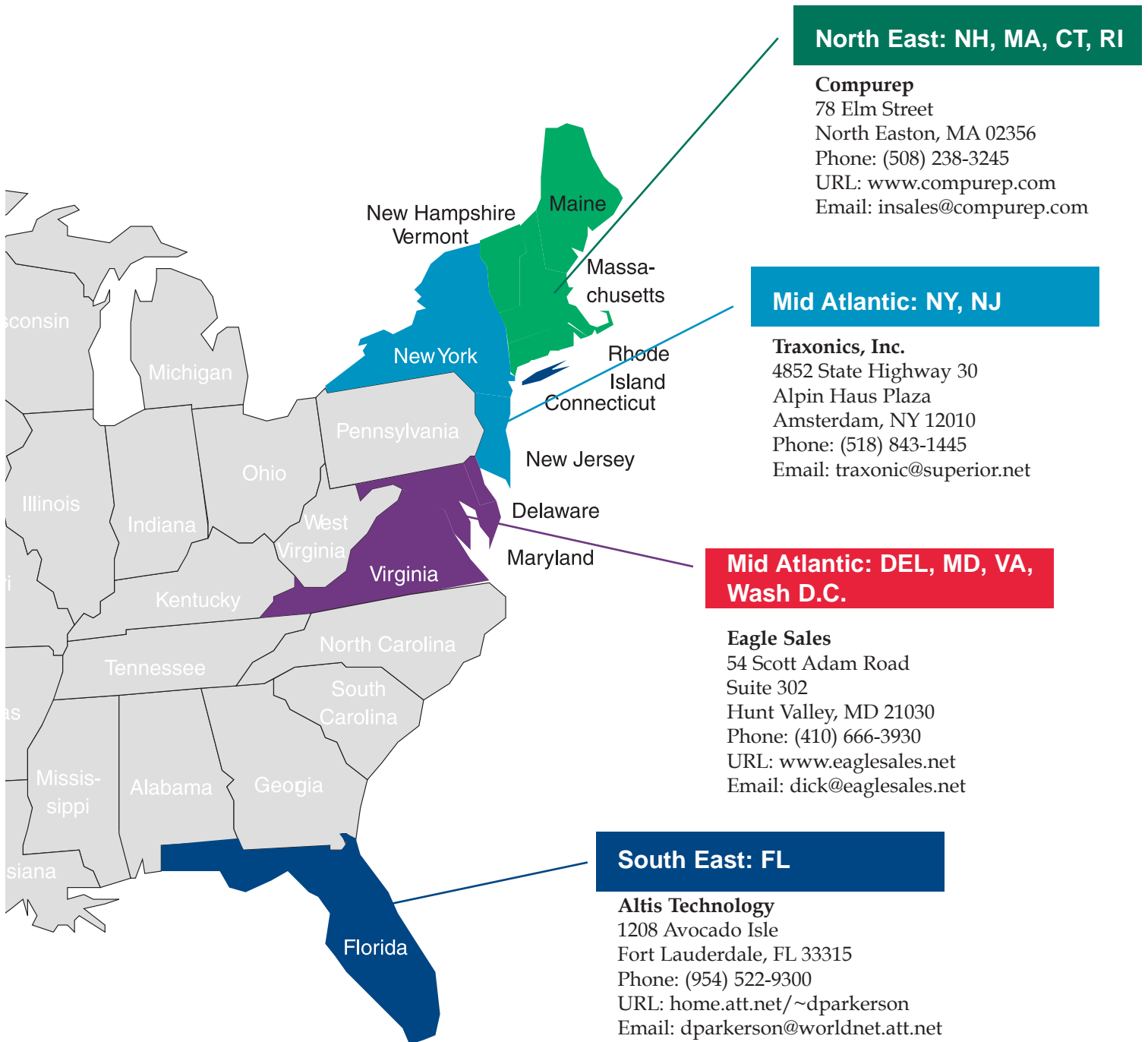-Direct shipment to customer destinations

Manufacturing —

-20,000 Sq ft manufacturing facility supporting component
    procurement, surface mount and thru-hole board assembly,
    JIT work flows, mechanical/electrical assembly and integration
-ISO 9001 and BABT certifications

Let ITenclosures meet all your complex system enclosure needs! Call (301-548-0800), Fax (301-548-0885) or Email (itsales@itenclosures.com) ITenclosures today with your most challenging system demands...

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