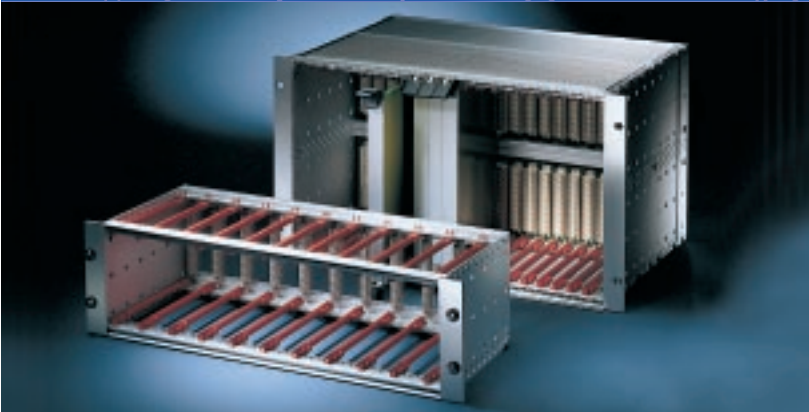
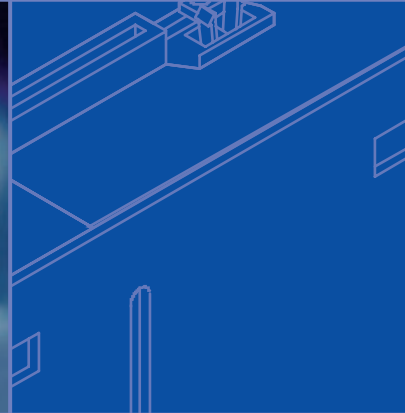


CompactPCI Systems and Backplanes

Schroff[®]



Pentair
Electronic Packaging



Custom Integrated Systems

Pentair Electronic Packaging specializes in the design, assembly, and testing of fully integrated CompactPCI enclosure systems featuring Schroff® brand electronic products that meet all international and national standards (IEEE 1101.10 and 1101.11 compliant). The Schroff CompactPCI system platform provides for a wide range of different configurations from 3U to 10U, 4-8 slot backplanes with user specified bussing, and a variety of cooling and power options.

Pentair offers up to “Level Five” system integration and assembly services for fully configured enclosure systems that integrate the backplane, power supply, drive mounting and cooling. Our new Prototype Center houses a dedicated production center for enclosure system prototypes, including fabrication, welding and assembly.

Pentair’s backplane design and testing facility supports a full line of standard, high performance CompactPCI, VME and custom backplanes. As customers’ volumes increase, Pentair offers build-to-print and custom backplane designs in a wide range of complexity. The company has 100% Level Three testing of all backplanes.

Some of the features we offer in the design of Custom CompactPCI systems include:

- Redundant cPCI backplanes with H.110 bus
- Hot-swap power supplies
- Hot-swap low-profile blowers
- Redundant hot swap fan trays
- Custom backplane design
- NEBS testing and certification
- Levels 1-5 integration services
- Multiple CAD platform support



10U High Performance CompactPCI Enclosure System



NEBS Compliant CompactPCI Hybrid System

From Prototype to Production



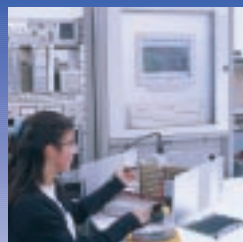
Designing



Assembling



Cooling



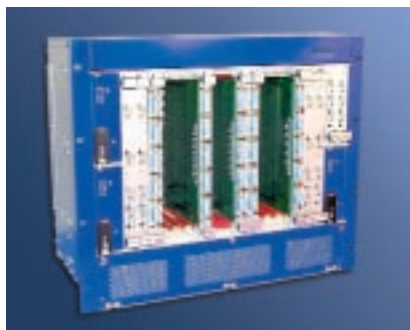
Testing



Integration

Pentair can help you every step of the way in designing your CompactPCI application. We can guide you through approval requirements and design considerations such as EMI/RFI protection, cooling, special power needs, and high performance backplanes. Contact our Product Applications Group at 1-800-451-8755 or email us at info@pentair-ep.com.

Pro Series Integrated Systems



9U/8-slot Pro Series CompactPCI System

- CompactPCI NEBS-ready system ideal for high availability telecom applications
- Full compatibility with IEEE 1101.10 and 1101.11 and CompactPCI
- Configured to accept eight 6U x 160mm cards including an 8HP CPU from front and eight 6U x 80mm rear transition cards
- 8 slot cPCI hot-swap compliant backplane (PICMG CompactPCI Spec. 2.0 Rev. 3.0)
- 350W Pluggable (Hot-Swap) Power Supply
- Three easily accessible plug-in fan tray modules
- Filtered front air intake, rear exhaust
- EMC Shielding
- Custom colors available. Standard color is white (Fed# 27925)
- Drive bays for one 5.25" and two 3.5" drives

Ordering Information

CompactPCI Pro Series
9U/8-slot System
Order No. **10827-023**

Specifications

Physical Size	Height: 9U, Width: 19", Depth: 12"
Backplane	8-slot, system slot right justified
Slot Configuration	All slots are on 4HP (0.80") centers Front: Eight 6U x 160mm slots Rear: Eight 6U x 80mm slots

Card Guides - Color coded UL94-VO rated molded plastic with metallic ESD clips. Card Guides include integral keying block to accept optional keying pegs.

Power Supply	Input: 90-264VAC, 350 Watts, 47-63Hz PFC
	Output: +5V @ 50A +12V @ 12A -12V @ 2A 3.3V @ 40A

Cooling-Three plug-in fan trays include one 90 cfm fan each. AC power cord included.



4U/4-slot Pro Series CompactPCI System

- Low-profile NEBS-ready CompactPCI system ideal for central office applications
- Full compatibility with IEEE 1101.10 and 1101.11 and CompactPCI
- Configured to accept four 6U x 160mm cards including 8HP CPU from front and four 6U x 80mm rear transition cards
- 4 slot cPCI hot-swap compliant backplane with H.110 Telephony bus
- 400W Power Supply
- Easily accessible plug-in fan tray module, removable top cover
- Filtered front air intake, side exhaust
- EMC Shielding
- Custom colors available. Standard color is clear alodined finish
- Drive bays for one 5.25" and two 3.5" drives

Ordering Information

CompactPCI Pro Series
4U/4-slot System
Order No. **10827-024**

Specifications

Physical Size	Height: 4U, Width: 19", Depth: 12"
Backplane	4-slot, system slot right justified
Slot Configuration	All slots are on 4HP (0.80") centers Front: Four 6U x 160mm slots Rear: Four 6U x 80mm slots

Card Guides - Color coded UL94-VO rated molded plastic with metallic ESD clips. Card Guides include integral keying block to accept optional keying pegs.

Power Supply	Input: 90-265VAC, 400 Watts, PFC
	Output: +5V @ 50A +12V @ 27A -5V @ 1A -12V @ 3A 3.3V @ 30A 5Vsb @ 1A

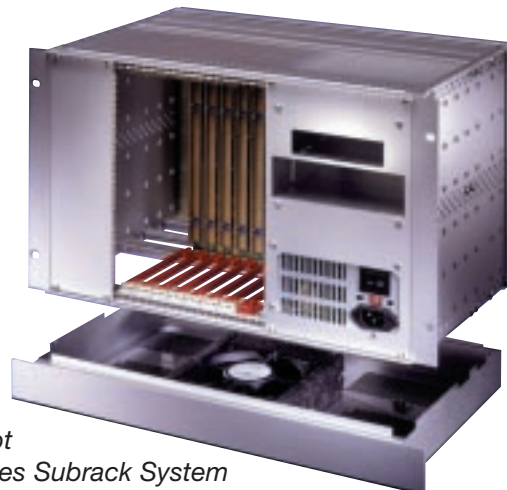
Cooling - Plug-in fan tray includes three 39 cfm fans. AC power cord included.

19" Pro Series Subrack Systems/Kits

7U 8-slot Pro Series Subrack System

- 6U backplane
- Integrated ATX power supply
- EMC Shielded design
- IEEE 1101.10 compliant
- 235 watt ATX power supply
- 19" rackmountable
- Fan tray mounted below card cage on 6U version
- Full range of accessories (contact factory)
- Provisions for 8 slots of 6U x 80mm rear I/O
- Order drive bays, filler panels separately

Height	Slot Controller	Rear I/O	Order No.
7U	Right	Yes	24579-021
Optional AC power cord			60262-207

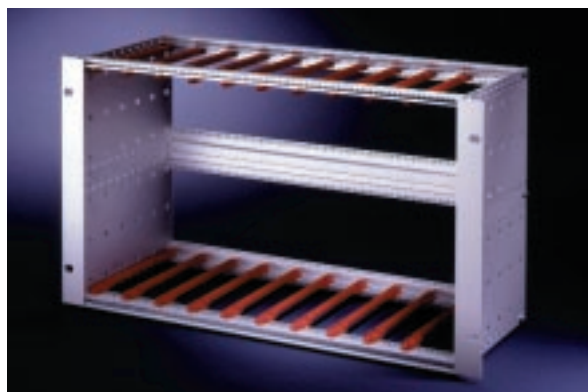


7U 8-slot
Pro Series Subrack System

3U x 19"x 235mm Pro Series Subrack Kit

Accepts an 8-slot backplane (not supplied)

Qty.	Description (contents)	Order No.
2	3U x 235mm side plates	20827-088
2	3U x 19" mounting angles	
2	Backplane mounting rails (top & bottom)	
2	Backplane insulating strip	
1	Front panel mounting rail, top	
1	Front panel mounting rail, bottom	
4	Threaded inserts for rails	
1	Front panel alignment strips	
2	Card guides for 160mm boards, Red	
14	Card guides for 160mm boards, Grey	
1	kit Hardware	



6U Pro Series Subrack System
(3U not shown)

6U x 19"x 278.5mm Pro Series Subrack Kit

Accepts an 8-slot cPCI backplane (not supplied)
and 80mm transition cards (not supplied)

Qty.	Description (contents)	Order No.
2	6U x 277.5mm side plates	20827-091
2	6U x 19" mounting angles	
2	Mid-plane mounting rails	
2	Mid-plane insulating strip	
2	Transition card mounting rails (top and bottom)	
4	Front/rear panel mounting rails (top and bottom)	
2	Front panel alignment strip	
6	Threaded insert for rails	
16	Card guides for 80mm transition cards	
16	Card guides for 160mm boards	
2	Red Card guide coding block, top	
2	Red Card guide coding block, bottom	
14	Gray Card guide coding block, top	
14	Gray Card guide coding block, top	
1	kit Hardware	
Torx screwdriver		
1	T8 x 60 for M 2.5 screws	64560-026
1	T20 x 100 for M 4 screws	64560-027

Shielding upgrade kits

Includes top and bottom vented covers and all gaskets and hardware.

for kit 20827-088	20827-090
for kit 20827-091	20827-096



For more information on Pro Series Subrack Components, call us for our new Subrack Catalog at 1-800-451-8755 or visit our website at www.pentair-ep.com/literature.asp

CompactPCI Injector/Ejector Handles

Schroff®

Injector/Ejector handles

Features:

- Designed to comply with IEEE 1101.10, IEC 48D/118/CD
- Three different styles:
 - Injection/Extraction Locking (IEL) handle for hot swap
 - Injection/Extraction Standard (IES) handle without locking function
 - Injection/Extraction Telecom (IET) handle

IES-, IEL-, and IET handle contents:

Qty.	Description	Note
1	Die cast holder	Die-cast Zn. With alignment pin for perforated strip and IEEE. 1101.10 guide rail
1	Lever	Plastic PC (94 V-O)
1	Push-Button*	Plastic PC (94 V-O)
1	Collar Screw	M 2.5 x 12.3
1	Torx screw	M 2.5 x 7

* for IET, IEL only

IEL handle with locking function

- Self locking for Hot Swap applications
- Accepts micro-switches

Qty.	Finish	Order No.	
		Bottom	Top
10	Lever: black, RAL 9005, Push button: light grey, RAL 7035	20817-732	20817-734
100	Lever: black, RAL 9005, Push button: light grey, RAL 7035	20817-733	20817-735

For .10" offset PCB mount

Qty.	Finish	Order No.	
		Bottom	Top
10	Lever: black, Push button: light grey	20817-812	20817-814
100	Lever: black, Push button: light grey,	20817-813	20817-815

IES handle without locking function

Qty.	Finish	Order No.	
		Bottom	Top
10	black, RAL 9005	20817-752	20817-754
100	black, RAL 9005	20817-753	20817-755

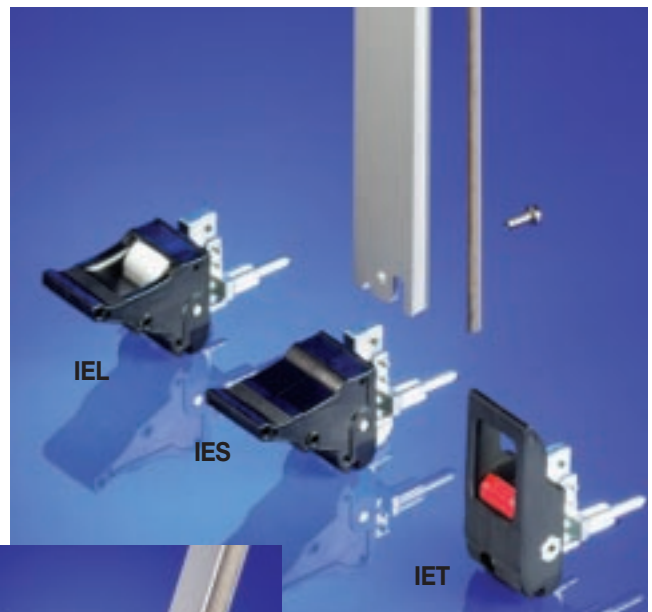
IET handle with locking function

- Low profile for telecommunication applications
- Accepts micro-switches

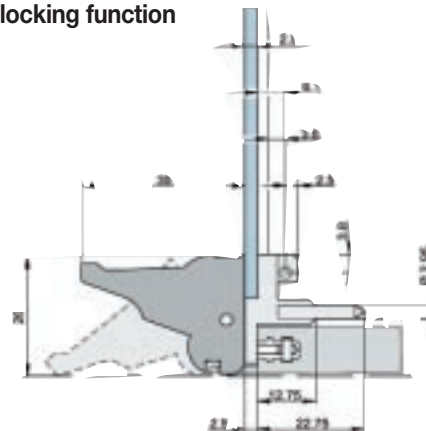
Qty.	Finish	Order No.	
		Bottom	Top
10	Lever: black, RAL 9005, Push button: light grey, RAL 7035	20817-772	20817-774
100	Lever: black, RAL 9005, Push button: light grey, RAL 7035	20817-773	20817-775

For .10" offset PCB mount

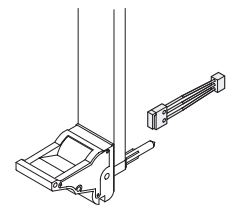
Qty.	Finish	Order No.	
		Bottom	Top
10	Lever: black, Push button: light grey	20817-796	20817-798
100	Lever: black, Push button: light grey	20817-797	20817-799



IEL Handle with locking function



Handle dimensions



Micro Switch



IET Handle

Micro switch

Technical data

Max. switch current	≥50 mA
Operating temperature	-25°C up to 70 °C
Mechanical life span	≥50,000 switch cycles
Electrical life span	≥20,000 switch cycles
Length of cable	22 mm
Connector*	Molex 51021-0300 connector

Qty.	Description	Order No.
10	Micro-switch with cable	20817-606

* A Molex 53398-0390 mating connector should be used on the plug-in board



Pentair
Electronic Packaging

170 Commerce Drive, Warwick, RI 02886 Tel: 1-800-451-8755 Fax: (401) 738-7988 www.pentair-ep.com/schroff

Front Panel Express Program

Front Panel Express offers “Quick Ship” service on a wide variety of Schroff front panels and handles – modified to your exact specifications.

Front Panel Modification Service

- 2D and 3D CAD files available for download from our web site (www.pentair-ep.com/schroff/fpx)
- Design and engineering assistance (Pro-E, SDRC & AutoCAD)
- CompactPCI injector/ejector handles (IEEE 1101.10 & 1101.11)
- Various flat, U-channel extruded and PMC panels available

Available Options

- Custom cutouts
- High quality plating and silkscreening
- Anodized front surface with conductive plating on rear surface
- Conductive fabric-over-foam and stainless steel gasketing
- Microswitch
- Assembly & kitting

Front Panel Express Sizes and Handles

Size	Standard w/VME ejector	Shielded w/VME ejector	Shielded w/IEL/IET handle
3U4HP	✓	✓	✓
3U8HP	✓	✓	✓
6U4HP	✓	✓	✓
6U8HP	✓	✓	✓
9U4HP	✓		✓



3/6/9U shielded front panel

Front panel width		Order No.		
HP ¹⁾	b(mm)	3U	6U	9U
4	20.32	30848-312	30848-317	30848-408
8	40.64	30848-314	30848-319	30848-412

¹⁾ 1 HP= 5.08 mm

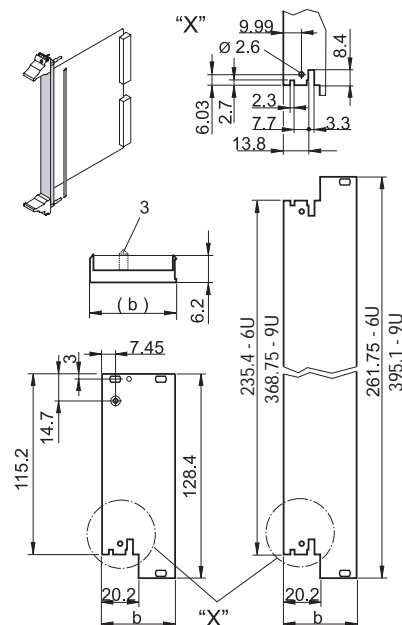
Notes: Alignment pin pressed in for 3U panels only.
Order gasketing separately.

3/6/9U shielded filler panel

Front extrusion width		Order No.		
HP ¹⁾	b(mm)	3U	6U	9U
4	20.32	30848-354	30848-355	30848-417
8	40.64	30848-356	30848-357	30848-421
12	60.96	30848-358	30848-359	30848-425

¹⁾ 1 HP= 5.08 mm

Notes: Alignment pin pressed in.
Order gasketing separately.



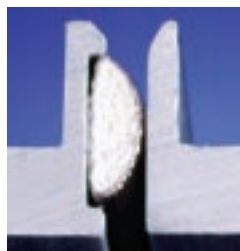
Front Panels

Front Panel/Handle Accessories

EMC gasket

Front extrusion height	Order No.	
	pkg of 10	pkg of 100
3U	21101-853	21101-854
6U	21101-855	21101-856
9U	21101-859	-

Notes: One gasket required per panel

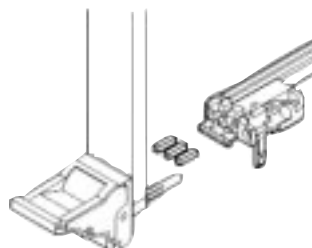


EMC Gasket

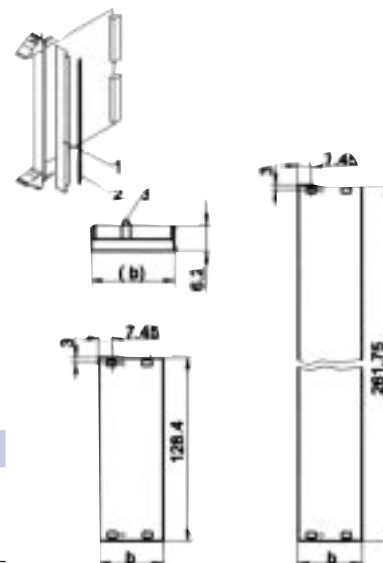
Coding Pegs

■ Prevents insertion of components in wrong slots

Qty.	Designation	Description	Order No.
100 pcs.	Coding Pegs	PBT, UL 94 V-0, grey	20817-499



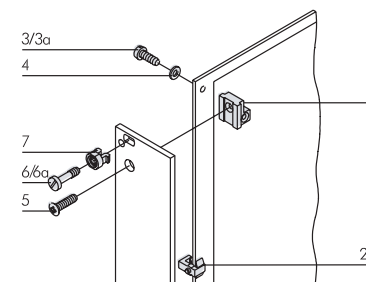
Coding Pegs



Filler Panels

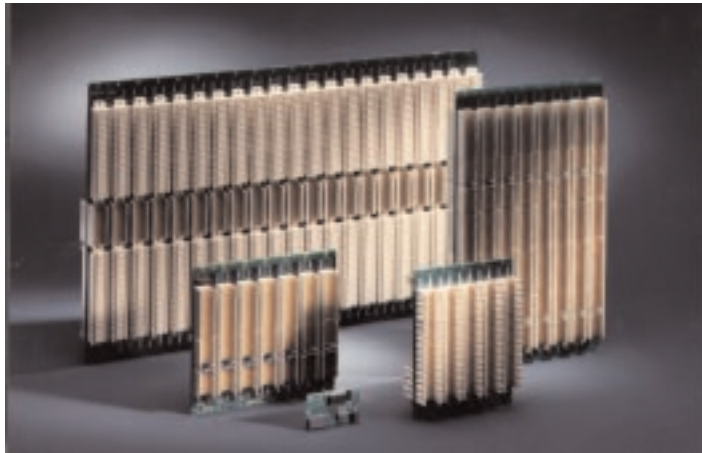
Assembly parts

Item	Part	Description	Notes	Required Quantity (per panel)				Qty.	Order No.
				3U		6U			
				<8 HP	>8 HP	<8 HP	>8HP		
1	Board retainer	Die-cast Zn		1	1	-	-	100	20827-072
2	Center PB Holder	PPO UL 94-V-O	Fixes PC board to front panel	-	-	1	1	100	21101-751
3	Cross recessed panhead screw	M 2.5 x 6 nickel plated St	Handle to PC board	2	2	2	2	100	21101-219
3a	Torx Screw	M 2.5 x 6	Self locking thread	2	2	2	2	100	24560-159
4	Washer	2.7 DIN 125 nickel plated St	Handle to PC board	2	2	2	2	100	21100-721
5	Cross recessed panhead screw	M 2.5 x 8 nickel plated St	PB Holder to panel	1	1	-	-	100	21100-429
5a	Torx Screw	M 2.5 x 5	Self locking thread	1	-	1	-	100	24560-146
6	Cross recessed collar screw	M 2.5 x 12.3 nickel plated St	Panel to Chassis	1	3	-	2	100	21101-101
6a	Phillips screw	M 2.5 x 12	Panel to Chassis	1	3	-	2	100	20827-172
7	Sleeve	Stainless steel front panel	For shielded filler panel	1	3	-	2	100	21100-662



Assembly Parts

Backplanes



- 3U or 6U configurations
- Right or left handed controller slots
- Designed to REV. 2.1 of the PICMG specification 2.0
- Special configurations

# of slots	3U/6U	Right/Left	Order No.
4	6U	Right	23091-603*
8	3U	Left	23006-548
8	3U	Right	23006-568
8	6U	Left	23006-658
8	6U	Right	23006-678

*Designed to REV. 3.0 of the PICMG specification 2.0

Technical Data

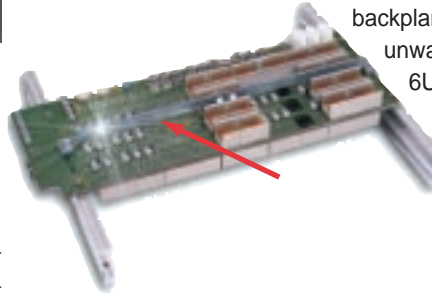
Data transfer rate		132/264 Mbytes for 32/64 bit version
Base material		249-2-12-FVO-IEC-EP-GC-CU
Design		10 layer multilayer, 4 signal layers, with microstrip on the outer and strip line on the inner layers
Line impedance on all bussed signal lines (populated backplane)		65 $\Omega \pm 5 \Omega$
Connections	Power Supply	Voltage V (I/O) can be configured for +3.3 V or +5 V
	Metric connectors shielded, can be keyed	Connectors for 64 bit PCI Bus expansion, 32 bit PCI Bus and I/O Bus expansion; specification complied with: IEC 60 917, IEC 61 076-4-101 Connection pitch 2 mm
Temperature range	Operation	-30 °C to 70 °C
	Storage	-55 °C to 125 °C
No. of slots		8, system slot right/left
Slot pitch		20.32 mm (center-center)

CompactPCI Backplane Solutions

Pentair Electronic Packaging offers a full line of Schroff CompactPCI backplanes in a variety of slot counts. As a customer's volume increases, Pentair provides build-to-print and custom backplane designs in a wide range of complexity. Our backplane design and testing facility offers 100% Level three testing and the capability to perform simulation and performance testing of backplanes.

Backplane Board Stiffener

The high forces required to insert a fully loaded 6U cPCI card may cause the backplane to bow. A backplane stiffener prevents unwanted bowing by stiffening the 6U cPCI backplane. Mounting holes in the backplane are required to secure the stiffener to the backplane.



Qty.	Description	Material	Order No.
1	Stiffening bar	Diecast zinc	64579-007

Power Backplane

For connecting plug-in power supply with Positronic 47 Pin connector according to PICMG 2.11 CompactPCI standard.

- 3U high x 8HP wide form factor
- Output via ATX connector on rear
- Designed to mount in with or without .10" offset



Description	Order No.
3U power bus for P47 connector	23030-195



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