

CompactPCI Serial power backplane and power adapter boards



Front view



Rear view

63972-334 (User Guide CPCI Serial PowerBP Rev 1.91)

Information about producer

Schroff GmbH
D-75334 Straubenhardt

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About CompactPCI Serial

CompactPCI Serial is a new standard that supports the fast serial protocols PCI Express, Serial ATA, USB and Ethernet. The payload power is +12 V. For wake-up events an additional +5 V Standby voltage is defined.

The Schroff CompactPCI Serial power backplane accepts a pluggable power supply with FCI PwrBlade connector and the pinout is specified in this user guide. nVent offers a range of Schroff pluggable power supplies for CompactPCI Serial applications with AC and DC input and different output power that fit to the power backplanes. Please refer to schroff.nvent.com for further information.

The Schroff pluggable CompactPCI Serial power supplies and the Schroff CompactPCI Serial power backplane is developed in accordance to the power definition within the CompactPCI Serial Specification PICMG CPCI-S.0.

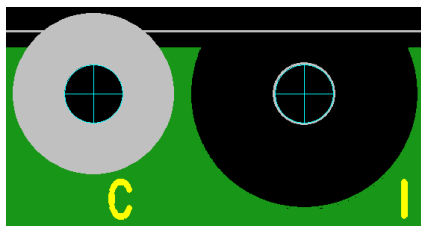
Assembly instructions & general information

Mounting

Attach the power backplane using every non-plated mounting hole at the top and the bottom to fix the backplane to the system / subrack with M2.5 screws.

Chassis GND

If only the non-plated mounting holes are used the digital GND (backplane GND) will be isolated from the chassis GND. On the top and bottom mounting hole rows there are 2 mounting holes near each other, one with plated pad, marked with a "C" (Connected to Chassis GND) and one non-plated, marked with an "I" (Isolated from Chassis GND).

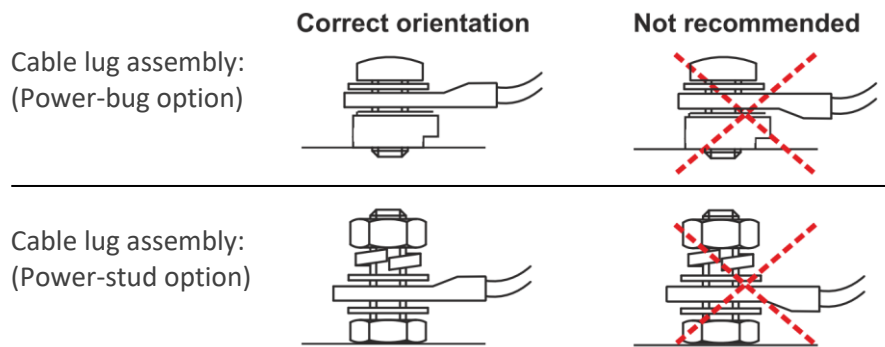


*Mounting holes for „I“
isolated or „C“ connected
mounting of backplane
GND to Chassis GND*

If a connection of digital GND (backplane GND) to chassis GND is required, please assemble screws in each mounting hole of the backplane marked with a "C". Spring washers are recommended instead of flat washers. If both grounds are isolated, creepage and clearance between screw and digital GND are in accordance to EN60950.

Power output

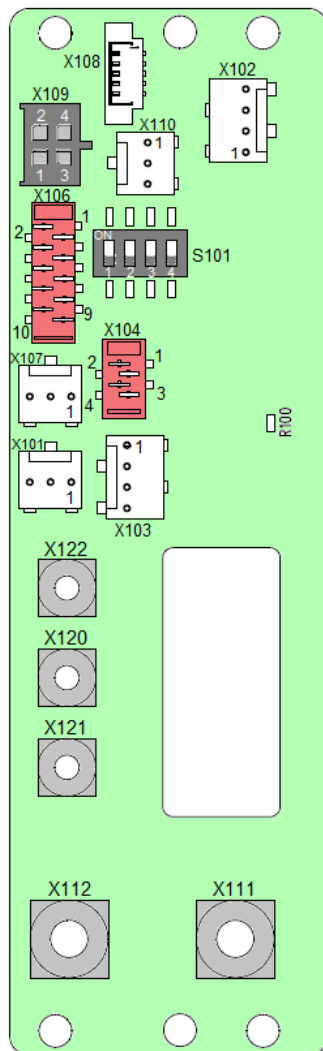
The backplane provides power terminals with M4 thread power bugs to connect power cables for +12 V and GND. M4 cable lugs should be used to connect the power cables to the power bugs. A maximum of 2 cable lugs are recommended per power bug. Please assemble the cable lugs with the flat side to the power bug to ensure the correct isolation distance between the not insulated part of the power cable and not insulated parts of the backplane.



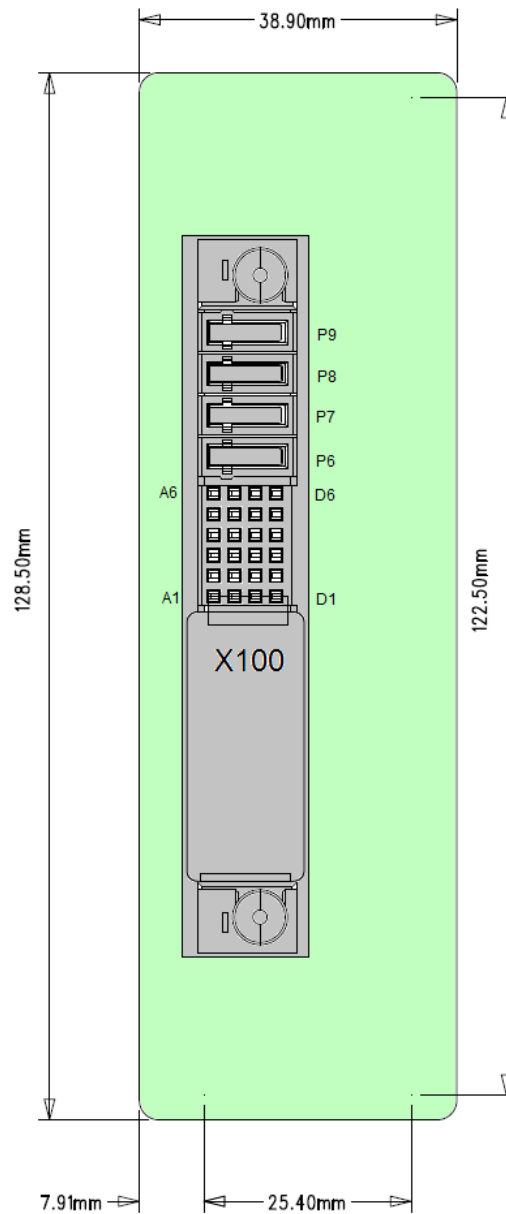
For harsh environments with very high shock and vibration values a power stud with nuts is recommended. Schroff CompactPCI Serial backplanes are already prepared to accept a power stud instead of the power bugs assembled as standard option. Please ask your Schroff sales contact for a configured version with M4 power studs assembled or send an inquiry to backplanes@nvent.com. The power stud accepts a maximum of two cable lugs.

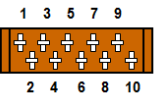
Power backplane connectors

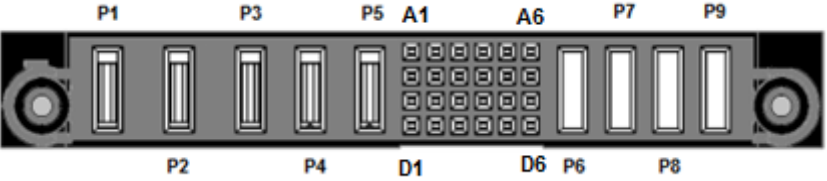
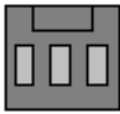
Rear view



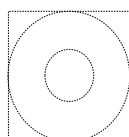
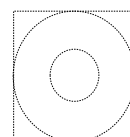
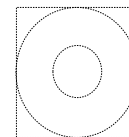
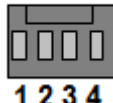
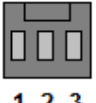
Front view



Utility connector (X106) Tyco 8-338069-0		+5 V standby (X109) Molex: 44914-0401		IPMB connector (X108) Molex: 53398-0571		UPS connector (X101)	
							
not assembled by default		not assembled by default		not assembled by default		not assembled by default	
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	RTN_Sense (GND)	1	GND	1	IPMB_SCL	1	UPS_TX
2	STNDBY / IPMB_PWR (+5V)	2	STNDBY / IPMB_PWR (+5V)	2	GND	2	GND
3	+12V Sense	3	GND	3	IPMB_SDA	3	UPS_RX
4	INH/PS_ON#	4	STNDBY / IPMB_PWR (+5V)	4	STNDBY / IPMB_PWR (+5V)		
5	PWRBTN#			5	n.c.		
6	PWR_FAIL#						
7	WAKE_IN#						
8	PRST#						
9	IPMB_SDA						
10	IPMB_SCL						
		Max. 8.55 Amp per contact					

Power connector (X100) FCI: 51940-473ULLH						Power button (X107)	
							
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
P1	L	D6	STNDBY/IPMB_PWR (+5V)	B6	GND	1	PWRBTN#
P2	N	D5	DEG#	B5	IPMB_SCL	2	GND
P3	PE	D4	GND	B4	A1	3	PRST#
P4	DC_RTN	D3	PSPRESENT	B3	INH/PS_ON#		
P5	DC_IN	D2	PWR_FAIL#	B2	+12V_SHARE		
P6	GND	D1	DIO1	B1	DIO3		
P7	GND	C6	STNDBY/IPMB_PWR (+5V)	A6	EN#		
P8	+12 V	C5	STNDBY/IPMB_PWR (+5V)	A5	IPMB_SDA		
P9	+12 V	C4	A0	A4	A2		
		C3	UPS_TX	A3	+12V_Sense		
		C2	UPS_RX	A2	RTN_Sense (GND)		
		C1	DIO2	A1	DIO4		

PSU address (S101)			+12 V Current share (X104)		+12 V connector (X112)		GND connector (X111)	
								
Signal	Switch	default	Pin	Signal	Pin	Signal	Pin	Signal
A0	1  8	open	1	+12V_SHARE	1	+12 V	1	GND
A1	2  7	open	2	+12V_SHARE	max. 120 Amp		max. 120 Amp	
A2	3  6	open	3	GND				
INH/ PS_ON#	4  5	closed (GND)	4	GND				

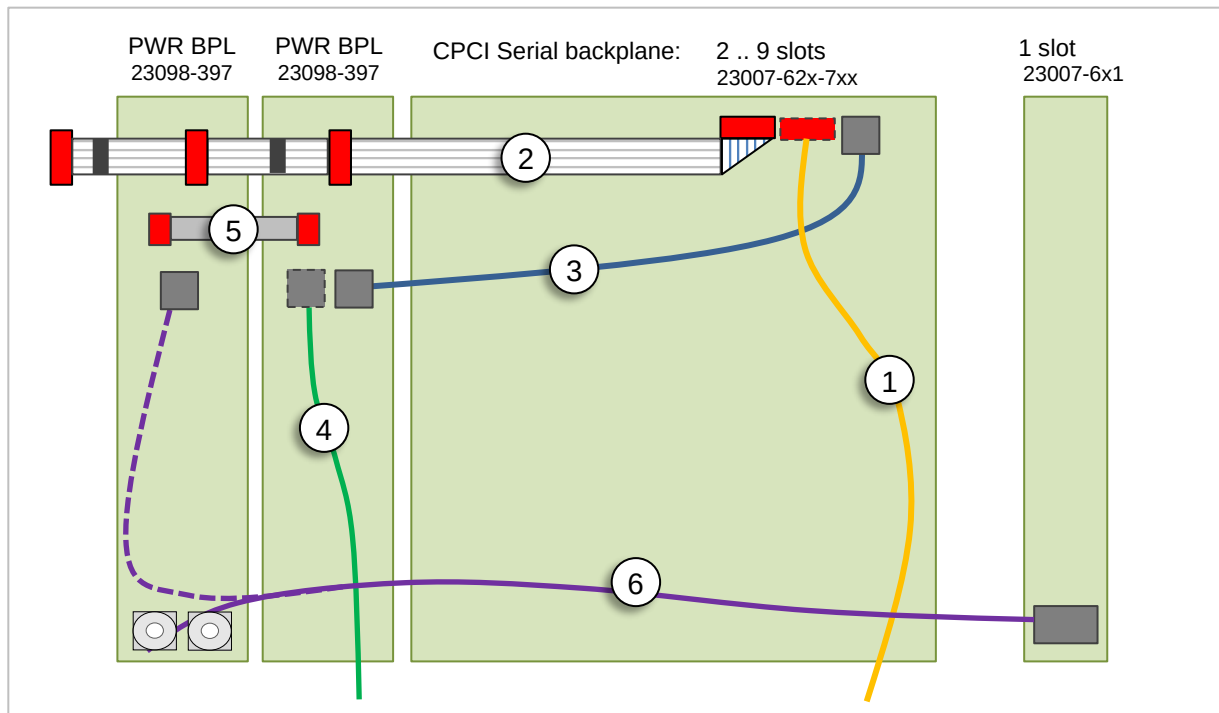
+12 V connector (X120)		GND connector (X121)		STNDBY connector (X122)		PWR status connector (X103)		PWR PSU ON/OFF (X110)	
 not assembled by default		 not assembled by default		 not assembled by default					
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	+12 V	1	GND	1	STNDBY / IPMB_PWR (+5V)	1	DEG#	1	INH/PS_ON#
						2	PSPRESENT	2	GND
						3	STNDBY / IPMB_PWR (+5V)	3	EN#
						4	PWR_FAIL#		

Signal description

- **+12V_SHARE:** Cable between PSU1-> PSU2. Current share connects several PSU's of the same type. The current share bus ensures load balancing for a constant output voltage and increases the life span of the PSU's.
- **EN#:** Tied to GND by default on PWR BPL. If En# (Enable) and INH/PS_ON# are tied to GND -> operational!
- **INH/PS_ON#:** Tied to GND on PWR BPL via Switch S101 by default. When PS_ON# is connected to GND, the 12V operating voltage is switched on. When PS_ON# is high, only 5V-Standby is active. The 12V can also be activated with an external switch attached to X110. In this case, the switch S101 must be pulled into the position open.
- **PWRBTN# (X107):** Connector for power button / push button. If this signal is temporary tied to GND the System board gets the command to activate PS_ON# to activate the operating voltage.
- **PRST#:** If tied to GND the System board will reboot.
- **PSPRESENT (X103):** indicating that the PSU is plugged. The PSU pulls this signal low.
- **FAL#/PWR_FAIL:** Open Collector, driven high when outputs are inside the tolerances. It will go low a minimum of 1 ms prior to output going out of its tolerances. The intention of this signal is to create a warning for the System Board to allow actions before the main voltage gets switched off.

Accessories

Pos	Item number	Description	Connector 1	Connector 2	Connector 3	Connector 4	Cable type	Length mm
1	23204-852	Utility cable	10 pin Micromatch	Open end	-	-	Discrete wire	600
2	23204-875	Utility cable	10 pin Micromatch	10 pin Micromatch	10 pin Micromatch	10 pin Micromatch	Ribbon cable	650
3	23204-866	Standby cable	4 pin Microfit	4 pin Microfit	4 pin Microfit	-	Discrete wire	400
4	23204-853	Standby cable	4 pin Microfit	2x loop terminal	-	-	Discrete wire	600
5	23204-867	Current share cable	4 pin Micromatch	4 pin Micromatch	-	-	Ribbon cable	150
6	23204-869	1 slot power cable	6 pin Microfit	2x loop terminal	4 pin Microfit	-	Discrete wire	600



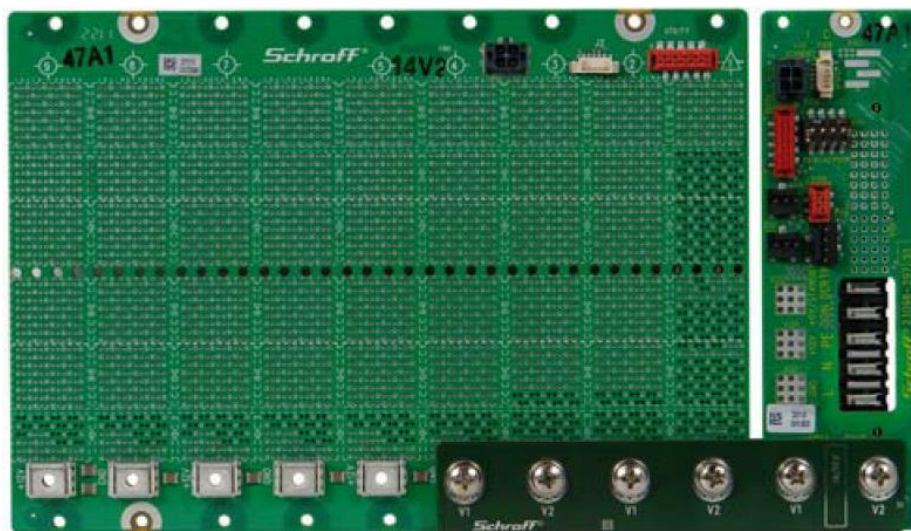
Cable connectors on the backplane rear side

Connection of two or more PSU's:

- If two or more Power Supplies shall be used in parallel to increase the power for the CPCI Serial boards a 12V current share cable should be used to connect the Power Backplanes.
- If 2 or more Power Supplies should run in redundant mode the 12V current share cable is not required but recommended.

Power adapter boards

The easiest way to connect the 12 V payload power between the CompactPCI Serial backplanes and the corresponding power backplane is the use of the Schroff power adapter boards. Those PCBs have voltage rails for 2 voltages inside (12 V and GND). They are mounted on the power bugs of the backplane and power backplane.



3U CompactPCI Serial backplane with power backplane connected by power adapter board, rear view

Description	Item number
Power adapter board, 3x V1, 3x V2, 121212	23098-399
Power adapter board, 2x V1, 2x V2, 1212	23098-400
Power adapter board, 3x V1, 3x V2, 122121	23098-401
Power adapter board, 2x V1, 2x V2, 1221	23098-402
Power adapter board, 4x V1, 4x V2, 12121212	23098-405
Power adapter board, 4x V1, 4x V2, 12122121	23098-406

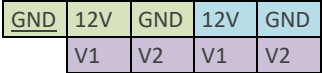
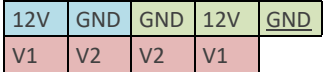
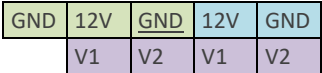
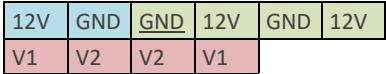
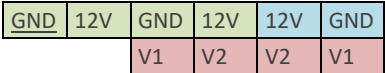
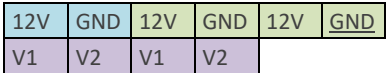
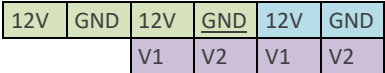
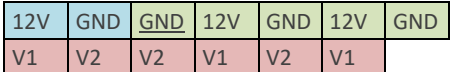
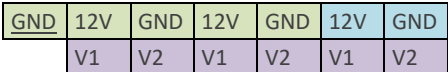
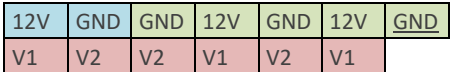
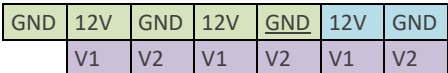
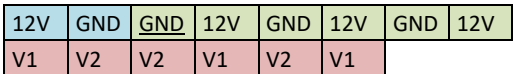
Current carrying capacity

Power adapter boards: 60 Amp with < 25 K temperature rise, 70 Amp with < 32 K temperature rise

Power backplane power bug (X111, X112): 120 Amp

CompactPCI Serial backplane power bug: 30 Amp

2 slot backplane system slot right, power backplane on right-hand side	PAB orientation	Item number										
<table><tr><td>12V</td><td>GND</td><td>GND</td><td>12V</td></tr><tr><td>V1</td><td>V2</td><td>V2</td><td>V1</td></tr></table>	12V	GND	GND	12V	V1	V2	V2	V1	-	23098-402		
12V	GND	GND	12V									
V1	V2	V2	V1									
2 slot backplane system slot right, power backplane on left-hand side	PAB orientation	Item number										
<table><tr><td>GND</td><td>12V</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V2</td><td>V1</td></tr></table>	GND	12V	12V	GND	V1	V2	V2	V1	-	23098-402		
GND	12V	12V	GND									
V1	V2	V2	V1									
2 slot backplane system slot left, power backplane on right-hand side	PAB orientation	Item number										
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td></tr></table>	12V	GND	12V	GND	V1	V2	V1	V2	-	23098-400		
12V	GND	12V	GND									
V1	V2	V1	V2									
2 slot backplane system slot left, power backplane on left-hand side	PAB orientation	Item number										
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12V	GND	12V	GND									
V1	V2	V1	V2									
3 slot backplane system slot right, power backplane on right-hand side	PAB orientation	Item number										
<table><tr><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td></td></tr></table>	12V	GND	GND	12V	GND	V1	V2	V2	V1		-	23098-402
12V	GND	GND	12V	GND								
V1	V2	V2	V1									

3 slot backplane system slot right, power backplane on left-hand side 	PAB orientation	Item number
	-	23098-400
3 slot backplane system slot left, power backplane on right-hand side 	PAB orientation	Item number
	-	23098-402
3 slot backplane system slot left, power backplane on left-hand side 	PAB orientation	Item number
	-	23098-400
4 slot backplane system slot right, power backplane on right-hand side 	PAB orientation	Item number
	-	23098-402
4 slot backplane system slot right, power backplane on left-hand side 	PAB orientation	Item number
	-	23098-402
4 slot backplane system slot left, power backplane on right-hand side 	PAB orientation	Item number
	-	23098-400
4 slot backplane system slot left, power backplane on left-hand side 	PAB orientation	Item number
	-	23098-400
5 slot backplane system slot right, power backplane on right-hand side 	PAB orientation	Item number
	-	23098-401
5 slot backplane system slot right, power backplane on left-hand side 	PAB orientation	Item number
	-	23098-399
5 slot backplane system slot left, power backplane on right-hand side 	PAB orientation	Item number
	Label visible	23098-401
5 slot backplane system slot left, power backplane on left-hand side 	PAB orientation	Item number
	-	23098-399
6 slot backplane system slot right, power backplane on right-hand side 	PAB orientation	Item number
	Label visible	23098-401

6 slot backplane system slot right, power backplane on left-hand side <table><tr><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>12V</td><td>GND</td></tr><tr><td></td><td></td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td><td>V1</td></tr></table>	GND	12V	GND	12V	GND	12V	12V	GND			V1	V2	V1	V2	V2	V1	PAB orientation Label to backplane	Item number 23098-401						
GND	12V	GND	12V	GND	12V	12V	GND																	
		V1	V2	V1	V2	V2	V1																	
6 slot backplane system slot left, power backplane on right-hand side <table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td></td><td></td></tr></table>	12V	GND	12V	GND	12V	GND	12V	GND	V1	V2	V1	V2	V1	V2			PAB orientation -	Item number 23098-399						
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V1	V2	V1	V2	V1	V2																			
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12V	GND	12V	GND	12V	GND	12V	GND																	
		V1	V2	V1	V2	V1	V2																	
7 slot backplane system slot right, power backplane on right-hand side <table><tr><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td></td><td></td><td></td></tr></table>	12V	GND	GND	12V	GND	12V	GND	12V	GND	V1	V2	V2	V1	V2	V1				PAB orientation Label visible	Item number 23098-401				
12V	GND	GND	12V	GND	12V	GND	12V	GND																
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GND	12V	GND	12V	GND	12V	GND	12V	GND																
			V1	V2	V1	V2	V1	V2																
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GND	12V	GND	12V	GND	12V	GND	12V	GND																
			V1	V2	V1	V2	V1	V2																
8 slot backplane system slot right, power backplane on right-hand side <table><tr><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td></tr><tr><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td></td><td></td><td></td><td></td></tr></table>	12V	GND	GND	12V	GND	12V	GND	12V	GND	12V	V1	V2	V2	V1	V2	V1					PAB orientation Label visible	Item number 23098-401		
12V	GND	GND	12V	GND	12V	GND	12V	GND	12V															
V1	V2	V2	V1	V2	V1																			
8 slot backplane system slot right, power backplane on left-hand side <table><tr><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>12V</td><td>GND</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td></tr></table>	GND	12V	GND	12V	GND	12V	GND	12V	12V	GND						V1	V2	V1	V2	V1	PAB orientation Label to backplane	Item number 23098-401		
GND	12V	GND	12V	GND	12V	GND	12V	12V	GND															
					V1	V2	V1	V2	V1															
8 slot backplane system slot left, power backplane on right-hand side <table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td></td><td></td><td></td><td></td></tr></table>	12V	GND	12V	GND	12V	GND	12V	GND	12V	GND	V1	V2	V1	V2	V1	V2					PAB orientation -	Item number 23098-399		
12V	GND	12V	GND	12V	GND	12V	GND	12V	GND															
V1	V2	V1	V2	V1	V2																			
8 slot backplane system slot left, power backplane on left-hand side <table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td></tr></table>	12V	GND	12V	GND	12V	GND	12V	GND	12V	GND						V1	V2	V1	V2	V2	PAB orientation -	Item number 23098-399		
12V	GND	12V	GND	12V	GND	12V	GND	12V	GND															
					V1	V2	V1	V2	V2															
9 slot backplane system slot right, power backplane on right-hand side <table><tr><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td></td><td></td><td></td><td></td><td></td></tr></table>	12V	GND	GND	12V	GND	12V	GND	12V	GND	12V	GND	V1	V2	V2	V1	V2	V1						PAB orientation Label visible	Item number 23098-401
12V	GND	GND	12V	GND	12V	GND	12V	GND	12V	GND														
V1	V2	V2	V1	V2	V1																			

9 slot backplane system slot right, power backplane on left-hand side	PAB orientation	Item number																						
<table><tr><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td></tr></table>	GND	12V	GND	12V	GND	12V	GND	12V	GND	12V	GND						V1	V2	V1	V2	V1	V2	-	23098-399
GND	12V	GND	12V	GND	12V	GND	12V	GND	12V	GND														
					V1	V2	V1	V2	V1	V2														
9 slot backplane system slot left, power backplane on right-hand side	PAB orientation	Item number																						
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9 slot backplane system slot left, power backplane on left-hand side	PAB orientation	Item number																						
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GND	12V	GND	12V	GND	12V	GND	12V	GND	12V	GND														
					V1	V2	V1	V2	V1	V2														

Configurations with two power backplanes

2 slot backplane system slot right, power backplanes on right-hand side	PAB orientation	Item number																
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>GND</td><td>12V</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td><td>V1</td></tr></table>	12V	GND	12V	GND	GND	12V	V1	V2	V1	V2	V2	V1	Label to BPL	23098-401				
12V	GND	12V	GND	GND	12V													
V1	V2	V1	V2	V2	V1													
2 slot backplane system slot right, power backplanes on left-hand side	PAB orientation	Item number																
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GND	12V	12V	GND	12V	GND													
V1	V2	V2	V1	V2	V1													
2 slot backplane system slot left, power backplanes on right-hand side	PAB orientation	Item number																
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td></tr></table>	12V	GND	12V	GND	12V	GND	V1	V2	V1	V2	V1	V2	-	23098-399				
12V	GND	12V	GND	12V	GND													
V1	V2	V1	V2	V1	V2													
2 slot backplane system slot left, power backplanes on left-hand side	PAB orientation	Item number																
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td></tr></table>	12V	GND	12V	GND	12V	GND	V1	V2	V1	V2	V1	V2	-	23098-399				
12V	GND	12V	GND	12V	GND													
V1	V2	V1	V2	V1	V2													
3 slot backplane system slot right, power backplanes on right-hand side	PAB orientation	Item number																
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td></td></tr></table>	12V	GND	12V	GND	GND	12V	GND	V1	V2	V1	V2	V2	V1		Label to BPL	23098-401		
12V	GND	12V	GND	GND	12V	GND												
V1	V2	V1	V2	V2	V1													
3 slot backplane system slot right, power backplanes on left-hand side	PAB orientation	Item number																
<table><tr><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td></td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td></tr></table>	GND	12V	GND	12V	GND	12V	GND		V1	V2	V1	V2	V1	V2	-	23098-399		
GND	12V	GND	12V	GND	12V	GND												
	V1	V2	V1	V2	V1	V2												
3 slot backplane system slot left, power backplanes on right-hand side	PAB orientation	Item number																
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12V	GND	12V	GND	GND	12V	GND												
V1	V2	V1	V2	V2	V1													
3 slot backplane system slot left, power backplanes on left-hand side	PAB orientation	Item number																
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GND	12V	GND	12V	GND	12V	GND												
	V1	V2	V1	V2	V1	V2												
4 slot backplane system slot right, power backplanes on right-hand side	PAB orientation	Item number																
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td></tr></table>	12V	GND	12V	GND	GND	12V	GND	12V	V1	V2	V1	V2	V2	V1	V2	V1	-	23098-406
12V	GND	12V	GND	GND	12V	GND	12V											
V1	V2	V1	V2	V2	V1	V2	V1											

4 slot backplane system slot right, power backplanes on left-hand side	PAB orientation	Item number																						
<table><tr><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td></tr></table>	GND	12V	GND	12V	12V	GND	12V	GND	V1	V2	V1	V2	V2	V1	V2	V1	-	23098-406						
GND	12V	GND	12V	12V	GND	12V	GND																	
V1	V2	V1	V2	V2	V1	V2	V1																	
4 slot backplane system slot left, power backplanes on right-hand side	PAB orientation	Item number																						
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td></tr></table>	12V	GND	12V	GND	12V	GND	12V	GND	V1	V2	V1	V2	V1	V2	V1	V2	-	23098-405						
12V	GND	12V	GND	12V	GND	12V	GND																	
V1	V2	V1	V2	V1	V2	V1	V2																	
4 slot backplane system slot left, power backplanes on left-hand side	PAB orientation	Item number																						
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td>V2</td></tr></table>	12V	GND	12V	GND	12V	GND	12V	GND	V1	V2	V1	V2	V1	V2	V1	V2	-	23098-405						
12V	GND	12V	GND	12V	GND	12V	GND																	
V1	V2	V1	V2	V1	V2	V1	V2																	
5 slot backplane system slot right, power backplanes on right-hand side	PAB orientation	Item number																						
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td></td></tr></table>	12V	GND	12V	GND	GND	12V	GND	12V	GND	V1	V2	V1	V2	V2	V1	V2	V1		-	23098-406				
12V	GND	12V	GND	GND	12V	GND	12V	GND																
V1	V2	V1	V2	V2	V1	V2	V1																	
5 slot backplane system slot right, power backplanes on left-hand side	PAB orientation	Item number																						
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GND	12V	GND	12V	GND	12V	GND	12V	GND																
	V1	V2	V1	V2	V1	V2	V1	V2																
5 slot backplane system slot left, power backplanes on right-hand side	PAB orientation	Item number																						
<table><tr><td>12V</td><td>GND</td><td>12V</td><td>GND</td><td>GND</td><td>12V</td><td>GND</td><td>12V</td><td>GND</td></tr><tr><td>V1</td><td>V2</td><td>V1</td><td>V2</td><td>V2</td><td>V1</td><td>V2</td><td>V1</td><td></td></tr></table>	12V	GND	12V	GND	GND	12V	GND	12V	GND	V1	V2	V1	V2	V2	V1	V2	V1		-	23098-406				
12V	GND	12V	GND	GND	12V	GND	12V	GND																
V1	V2	V1	V2	V2	V1	V2	V1																	
5 slot backplane system slot left, power backplanes on left-hand side	PAB orientation	Item number																						
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GND	12V	GND	12V	GND	12V	GND	12V	GND																
	V1	V2	V1	V2	V1	V2	V1	V2																
6 slot backplane system slot right, power backplanes on right-hand side	PAB orientation	Item number																						
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12V	GND	12V	GND	GND	12V	GND	12V	GND	12V															
V1	V2	V1	V2	V2	V1	V2	V1																	
6 slot backplane system slot right, power backplanes on left-hand side	PAB orientation	Item number																						
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GND	12V	GND	12V	GND	12V	12V	GND	12V	GND															
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6 slot backplane system slot left, power backplanes on right-hand side	PAB orientation	Item number																						
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6 slot backplane system slot left, power backplanes on left-hand side	PAB orientation	Item number																						
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12V	GND	12V	GND	12V	GND	12V	GND	12V	GND															
	V1	V2	V1	V2	V1	V2	V1	V2	V2															
7 slot backplane system slot right, power backplanes on right-hand side	PAB orientation	Item number																						
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12V	GND	12V	GND	GND	12V	GND	12V	GND	12V	GND														
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7 slot backplane system slot right, power backplanes on left-hand side	PAB orientation	Item number																						
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GND	12V	GND	12V	GND	12V	GND	12V	GND	12V	GND														
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Revision history

	Date	Description
R1.0		
R1.1		
R1.2		
R1.3		
R1.4		
R1.5		
R1.6	June 2016	Removed legal information about entity from footer
R1.7	March 2017	Correction of errors in connector pinouts
R1.8	Sept 2018	Correction of errors in connector pinout, cable drawings
R1.9	Dec 2018	Correction of I/O connector pinouts and signal description added
R1.91	March 2020	Pinout DC input on CPCI Serial Power connector corrected