# Assembly Instructions & General Information

1 Mechanical: The Backplanes are intended for horizontal assembly.

2 Mounting: Attach the Backplane, using at least every second mounting hole at the top and the bottom, with M2.5 screws and isolating washers.
Note: Do not tighten the screws.
Align the Backplane by inserting Boards in the outer guide rails at the left and the right and tighten all screws.
Note: We recommend to use the Schroff mounting kit, see catalog or at www.schroff.biz.

3 Chassis GND: If noise reduction shall be achieved by connecting digital GND to Chassis GND, use conductive washers instead of isolating washers. Spring washers are recommended instead of flat washers. Creepage and clearance between screw and GND are in accordance with EN60950.

4 V(I/O): Check V(I/O) coding and V(I/O) power bridge. The default assembly is +5 V (blue key at connector P1 and power bridge between V(I/O) and +5 V). To set V(I/O) to 3,3 V, change the keys and set the power bridge between V(I/O) and 3,3 V.
(Conversion kit, order# 21101-658, including 8 yellow keys and tool)

5 Power input: The Backplane provide 47-position connectors to connect CPCI plug-in power supplies. The AC power is brought to the 47-position connectors by "feed through" contacts.

6 Power output: The Backplane provide power bugs to connect power output cables. M4 cable lugs should be used to connect the power output cables to the power bugs. Maximum 2 cables are allowed 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.

Correct orientation   Wrong orientation

Cable Lug   Cable Lug

Powerbug   Powerbug
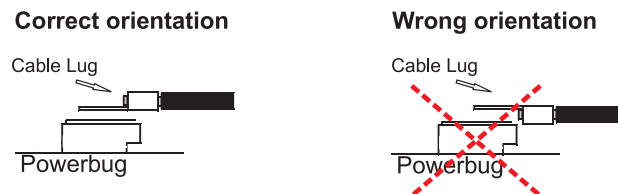
7 Backplane Topology

• 1 CPCI System Slot placed left (bottom, Backplane is horizontally orientated)

• 64-bit CompactPCI bus (PICMG2.0 R.3.0) is implemented at Slots

• PSU Slots with 47-position CPCI connectors acc. to PICMG 2.11 for 3 U PSUs

• Power connector for additional disk drives

• Power bugs providing power output of all CPCI system voltages

• Connector for fan tray

• IPMB-0, IPMB-1 connectors

• Utility connector

8 Applicable Specifications:

• PICMG 2.0R3.0 CPCI Core Specification

• PICMG 2.01 R2.0 Hot Swap

• PICMG 2.09 R1.0 System Management Bus

• PICMG 2.10 R1.0 Keying

• PICMG 2.11 R1.0 Power Interface Specification

Figure 1: Backplane Front View

Figure 2: Backplane Rear View
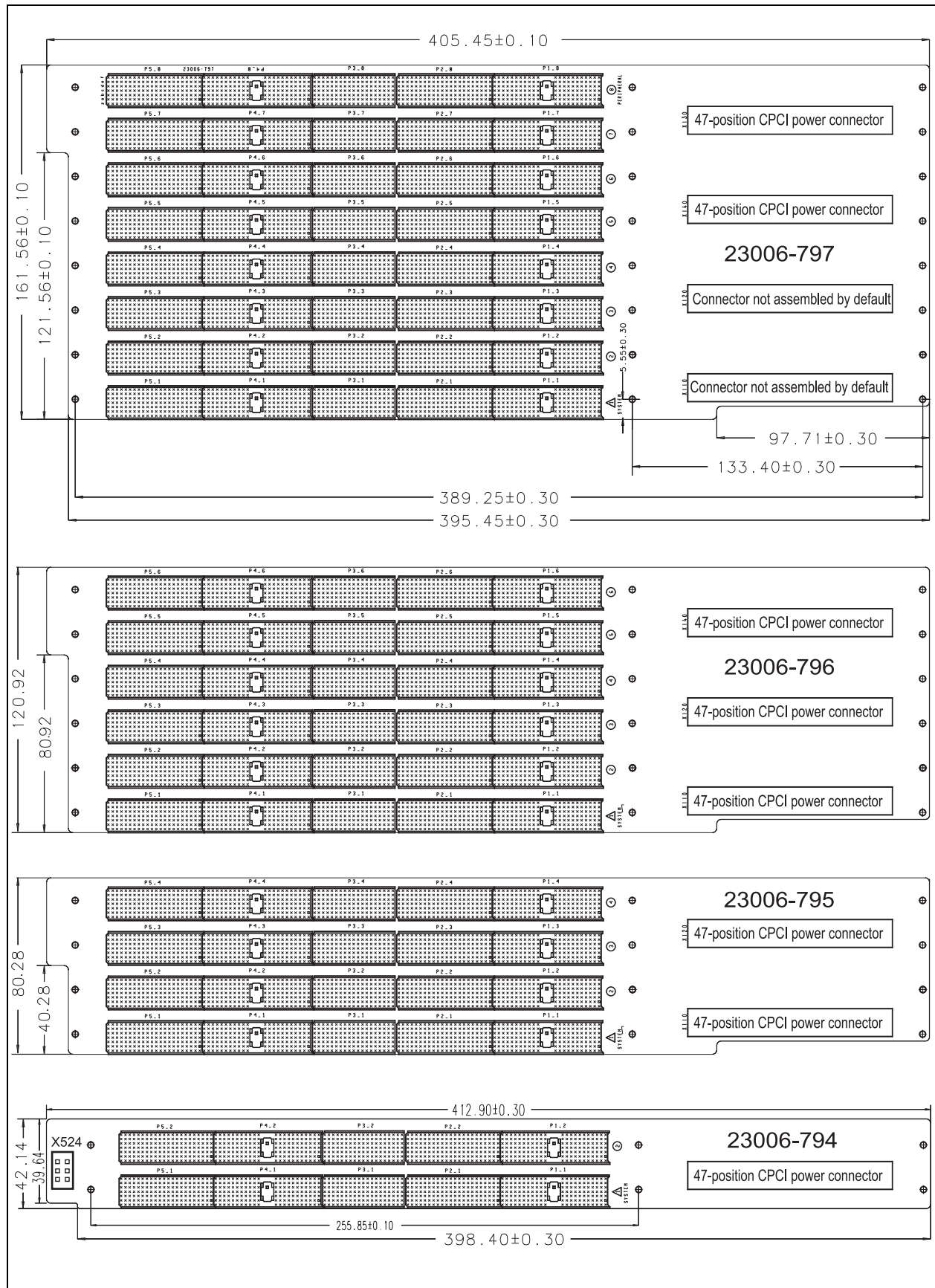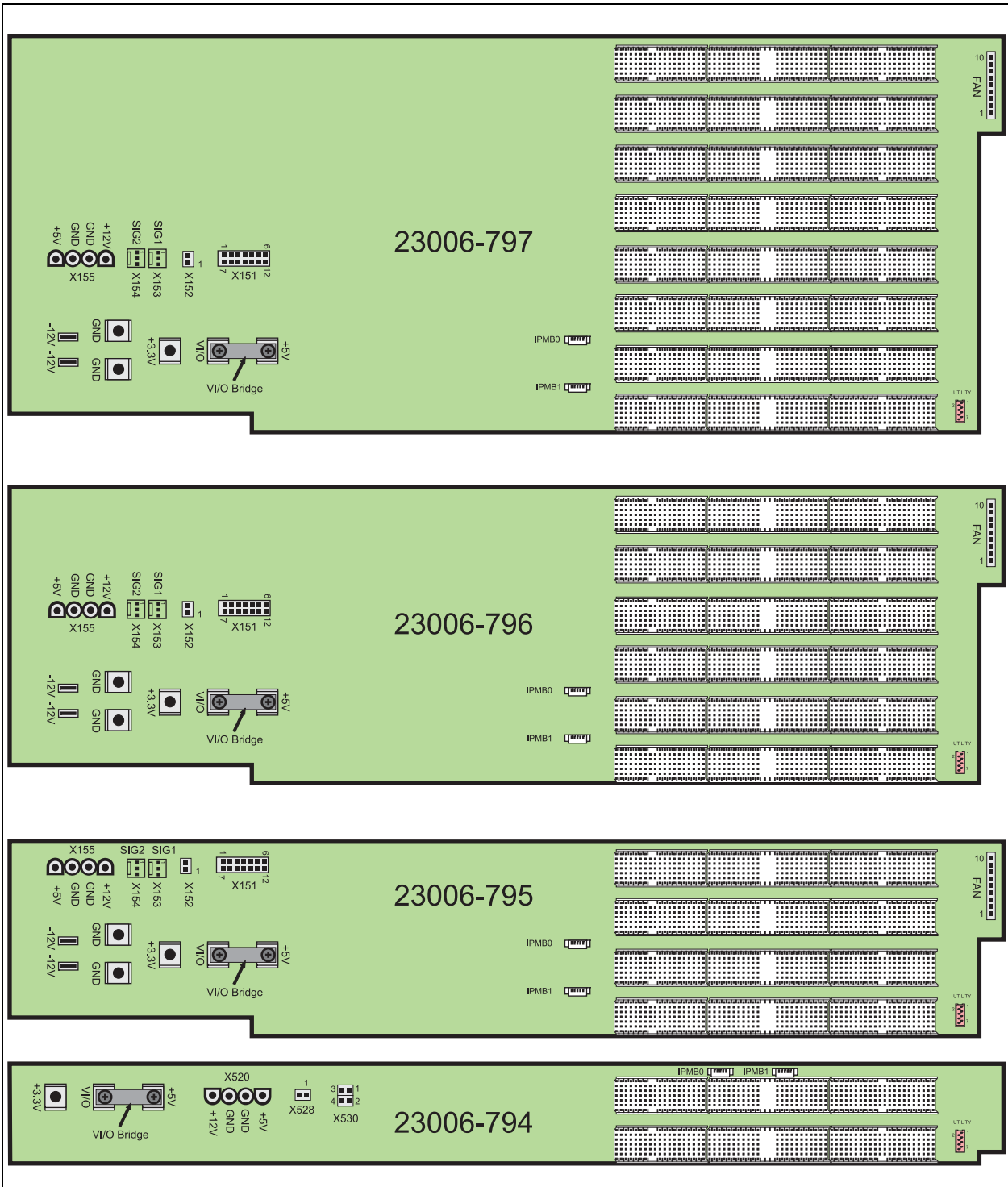
Connectors

FAN (X156)

1	+12V
2	+12V
3	GND
4	GND
5	+5V
6	fanfail
7	tempfail
8	GND
9	Signal 1
10	Signal 2

INH# (X152)

1	INH#
2	GND

SIG1 (X153)

1	nc
2	GND
3	Signal 1

SIG2 (X154)

1	nc
2	GND
3	Signal 2

Drive (X155)

1	+5V
2	GND
3	GND
4	+12V

IPMB

1	SCL
	GND
	SDA
	PWR
5	Alert

47-position power connector (X156)

Pin#	Signal Name	Description
1	V1	V1 Output (+5V)
2	V1	V1 Output (+5V)
3	V1	V1 Output (+5V)
4	V1	V1 Output (+5V)
5	RTN	V1 and V2 Return (GND)
5	RTN	V1 and V2 Return (GND)
7	RTN	V1 and V2 Return (GND)
8	RTN	V1 and V2 Return (GND)
9	RTN	V1 and V2 Return (GND)
10	RTN	V1 and V2 Return (GND)
11	RTN	V1 and V2 Return (GND)
12	RTN	V1 and V2 Return (GND)
13	V2	V2 Output (3,3V)
14	V2	V2 Output (3,3V)
15	V2	V2 Output (3,3V)
16	V2	V2 Output (3,3V)
17	V2	V2 Output (3,3V)
18	V2	V2 Output (3,3V)
19	RTN	V3 Return (GND)
20	V3	V3 Output (+12V)
21	V4	V4 Output (-12V)
22	RTN	Signal Return (GND)
23	RESERVED	Reserved
24	RTN V4	V4 Return (GND)
25	GA0	Geographic Address Bit 0
26	RESERVED	Reserved
27	EN#	Enable (set to GND)
28	GA1	Geographic Address Bit 1
29	V1ADJ	V1 Adjust
30	V1SENSE	V1 Remote Sense
31	GA2	Geographic Address Bit 2
32	V2ADJ	V2 Adjust
33	V2 SENSE	V2 Remote Sense
34	S RTN	Sense Return
35	V1SHARE	V1 Current Share
36	V3 SENSE	V3 Remote Sense
37	IPMB_SCL	System Management Bus
38	DEG#	Degrade Signal
39	INH#	Inhibit
40	IPMB_SDA	System Management Bus
41	V2 SHARE	V2 Current Share
42	FAL#	Fail Signal
43	IPMB_PWR	System Management Bus
44	V3 SHARE	V3 Current Share
45	CGND	Chassis Ground (safety ground)
46	ACN/+DC IN	AC Input – Neutral; +DC Input
47	ACL/-DC IN	AC Input – Line; =-DC Input

STATUS (X151)

UTILITY

	A	B
6	nc	nc.
5	nc	-12V
4	+12V	3,3V
3	GND	+5V
2	FAL#	DEG#
1	nc	PRST#

3.3V, 5V, -12V, +12V, GND
Connected to the CPCI voltages on the Backplane. These outputs can be used for sensing purposes, e.g. for power supplies.

FAL#
Connected to the FAL# output of the PSUs. Indicates that at least 1 output has failed.

DEG#
Connected to the DEG# output of the PSUs. Indicates that at least 1 output begins to derate.

Connector types mating to the board connectors

X151: MOLEX 43025-1200
X152: MOLEX 43025-0200
X153: PANCON CE100F22-03
X154: PANCON CE100F22-03
X155: Tyco/AMP 350779-4

Utility: ERNI 124260