

**3U cPCI Power BACKPLANE**  
**4 Slot – universal voltage**

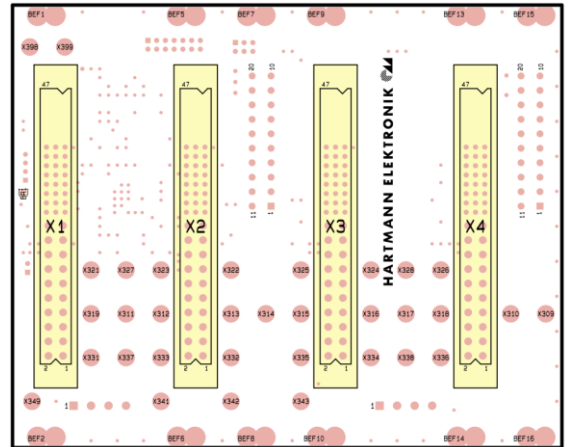
**PICMG 2.0**  
**PICMG 2.11**



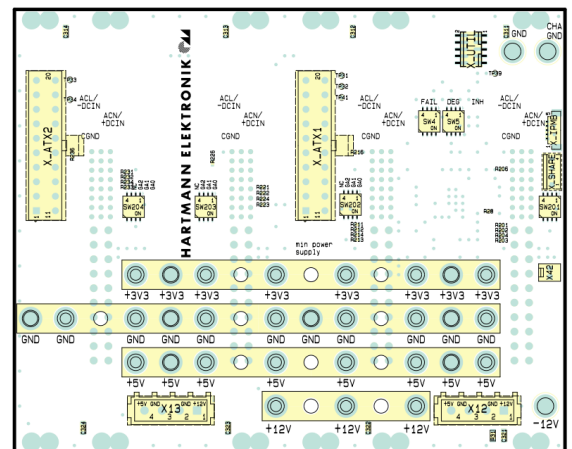
## Key Features:

- Compliant to PICMG 2.0 + 2.11 baseline specification
- 4 Slots 3U P47 Connector
- Input Voltage 85-265VAC, 18-36VDC
- Max Current 23A per slot
- Max Output Power 4 x 600W
- power rails for VS1/5V (max. 200A), VS2/3.3V (max. 200A), VS3/+12V (max. 75A) and V4/-12V (max. 25A)
- PCB size 128.50mm x 159.57mm x 3.2 mm
- Fail, Reset and Sense signals
- System Management Interface on the backplane
- Compatible to standard Compact PCI 3U AC and DC PSUs, such as the Hartmann 300W AC Power Supply part num. D575.00361 or the Hartmann 250W DC Power Supply part num. D575.00251
- Current share signals for parallel use of power supplies
- Additional ATX connectors for output voltages
- Operating temperature: -40° - +85°C
- Storage temperature: -55°C - +85°C
- Flammability rating: UL94-V0
- Custom assembly or modification on request

Front side



Back side



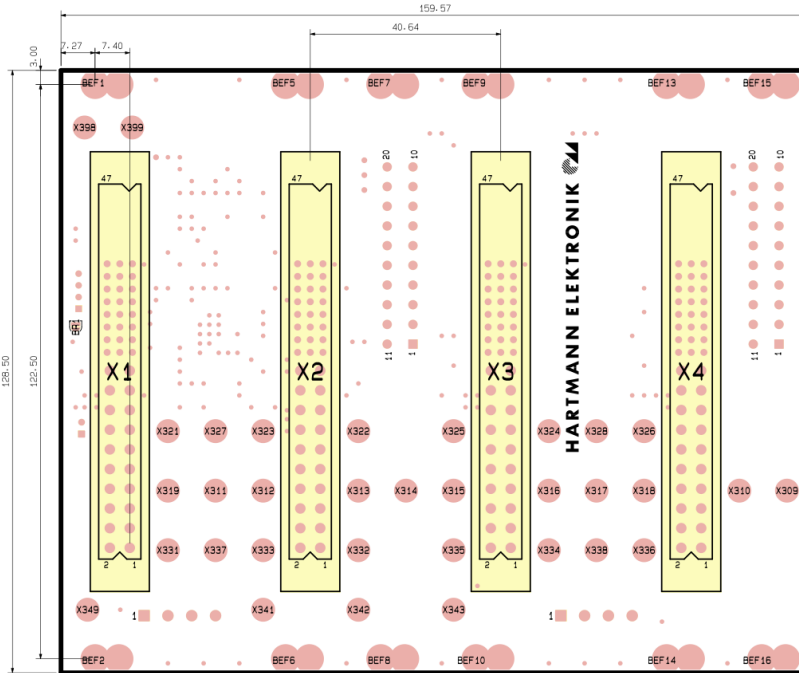
▪ **Order number: 33L0040024**

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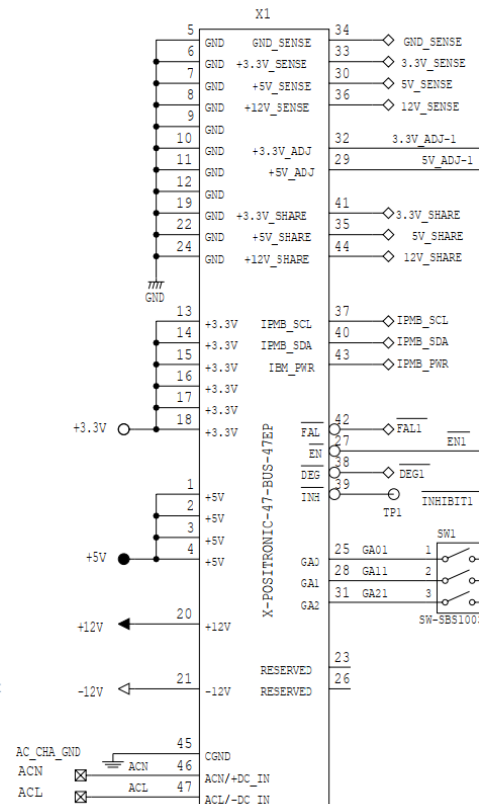
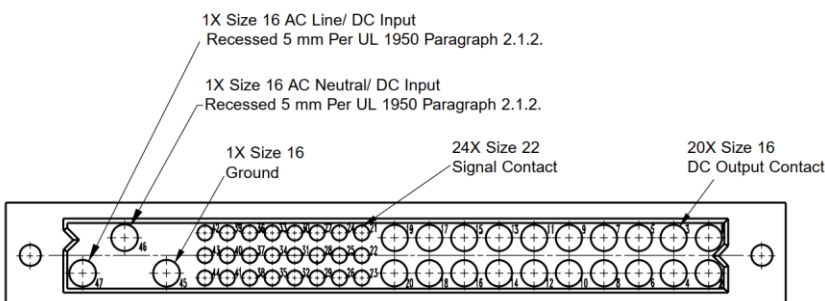
## 1) Drawing



## 2) 4x P47 Power Connector (X1+X2+X3+X4)

For 3U PSU Plug-In Modules with P47 connector according to PICMG specification.

Connector Conec CPH47W23FGE3SK9X



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### 3) Pinout of P47 Power Connector (X1+X2+X3+X4)

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

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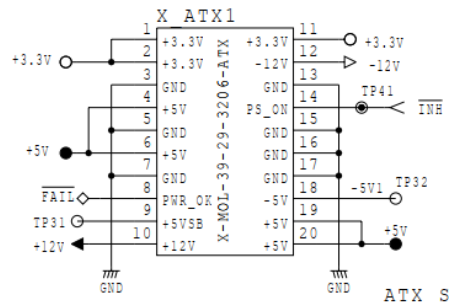
## 4) Current Capability:

- VS1: +5V                      64A per slot
- VS2: +3.3V                    64A per slot
- VS3: +12V                    16A per slot
- VS4: -12V                    2A per slot

## 5) ATX Connector

Alternatively to the power studs the main voltages 5V, 3.3V and the auxiliary voltages +12V and -12V can be accessed via two ATX connectors. This way a simple and cost efficient power supply connection to the backplane is possible with keyed and preassembled ATX cables (e.g. Hartmann F006.00225 25cm or F006.00240 40cm)

Connector Würth Elektronik 64902021122

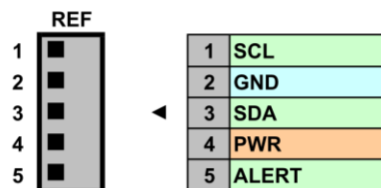


## 6) IMPB Connector

The separate 5-pin connector for IPMB extension is implemented on the backplane.

- 1,3: Serial clock
- 4: IPMB-Power
- 5: Not available from PSU

Connector Molex 53398-0571



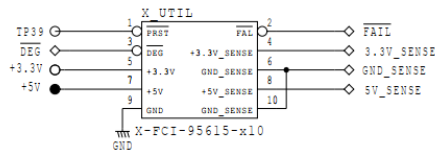
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## 7) Utility Connectors X UTIL

The special signals from the power supply are transferred via connector X\_UTIL to the backplane which is powered.



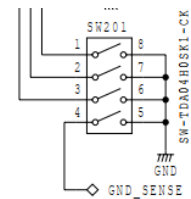
Connector FCI 95615-010TRLF

## 8) Switch SW1, SW2, SW3, SW4 – PSU geographic addressing

With switch SW1, SW2, SW3 and SW4 each power backplane in the system can be assigned a unique logical address. Configure GA0-GA2 to set a unique address.

The geographic address is available to the power supply unit which is of great importance when multiple equivalent components are used in regard to HOT-SWAP operations.

GA0  
GA1  
GA2



| Power Supply Slot Number | GA2  | GA1  | GA0  |
|--------------------------|------|------|------|
| 1                        | GND  | GND  | GND  |
| 2                        | GND  | GND  | Open |
| 3                        | GND  | Open | GND  |
| 4                        | GND  | Open | Open |
| 5                        | Open | GND  | GND  |
| 6                        | Open | GND  | Open |
| 7                        | Open | Open | GND  |
| 8                        | Open | Open | Open |

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