



6U-cPCI Load board  
Air cooled

**kontron**  
The Power of IoT

## Description LXH0000800, 6U- cPCI Loadboard





**6U-cPCI Load board  
Air cooled**

Rev:	Date
R0.1	09.01.2017
R0.2	12.01.2017
R0.3	16.01.2017

Kontron HARTMANN-WIENER GmbH  
Motorstrasse 43 , D-70499 Stuttgart Germany  
E: sales.khw@kontron.com  
P: +49 (711) 139890 F: +49 (711) 8661191

Kontron HARTMANN-WIENER GmbH  
Linde 18 , D-51399 Burscheid Germany  
E: sales.khw@kontron.com  
P: +49 (2174) 6780 F: +49 (2174) 678555

<https://www.kontron.com/kontron-hartmann-wiener>



## 6U-cPCI Load board Air cooled

### Table of Contents

1 GENERALDESCRIPTION	4
2 HEATPOINTSOFTHECARD	6
3 SIGNALDESCRIPTIONANDPINOUTOFFP1ANDP2CONNECTORS	8
4 AMBIENTCONDITIONS	8



## 1 General description

The cPCI Load board is designed in 4HP-6U form factor, in Air cooled version.

The load board serves to simulate loads on 6U-cPCI systems.

Both electrical and thermal conditions can be simulated.

The following load streams can be switched with the coding and tilt lever switches located on the front plate:

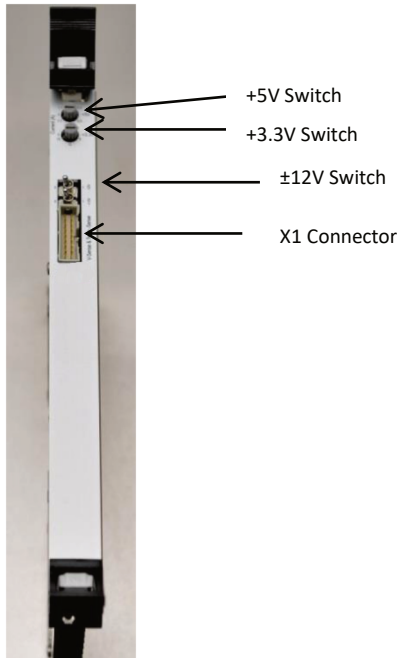


Figure 1, Frontpanel of Load board

5V must always be connected as control voltage.

Voltages are tapped at the cPCI bus via the P1 plug.

### Excess temperature protection

The load test card switches itself off at a temperature on the topside of the load test card of 120 °C +5 K.

Once cooled, it turns itself on again.

### Please note:

The Load board becomes hot during operation.

Voltages	Load current	Control options
5V	0A ... 8.25A	in 0.55A stages
3.3V	0A ... 10.36A	in 0.7A stages
+12V	1A	ON/OFF
-12V	1A	ON/OFF

Figure 2, possible settings on Load board switches



## 6U-cPCI Load board Air cooled

The incoming voltage levels for the voltages 5 V, +12 V, 3.3 V and -12 V can be measured at measuring points close to the plug P1.

These measuring points are run via the plug X1 (on the front plate).  
Furthermore, 4 PTC\_PT100 are attached to the load board: On the front on top and on back.  
It is possible to measure the temperature on the load test card via these.  
These Outputs connections are also run via the plug X1.

X1 Connector							
1	3	5	7	9	11	13	15
+5V-MP	+3V3-MP	+12V-MP	PTC1	PTC1	PTC2	PTC2	GND
2	4	6	8	10	12	14	16
+VIO-MP	NC	+12V-MP	PTC3	PTC3	PTC4	PTC4	GND

Figure 3, Pinout X1- Connector



## 2 Heatpoints of the card

The PCB is in tree area organized.

On the primary side, we have the 3.3V and 5V Area with a heatsink and PTCs

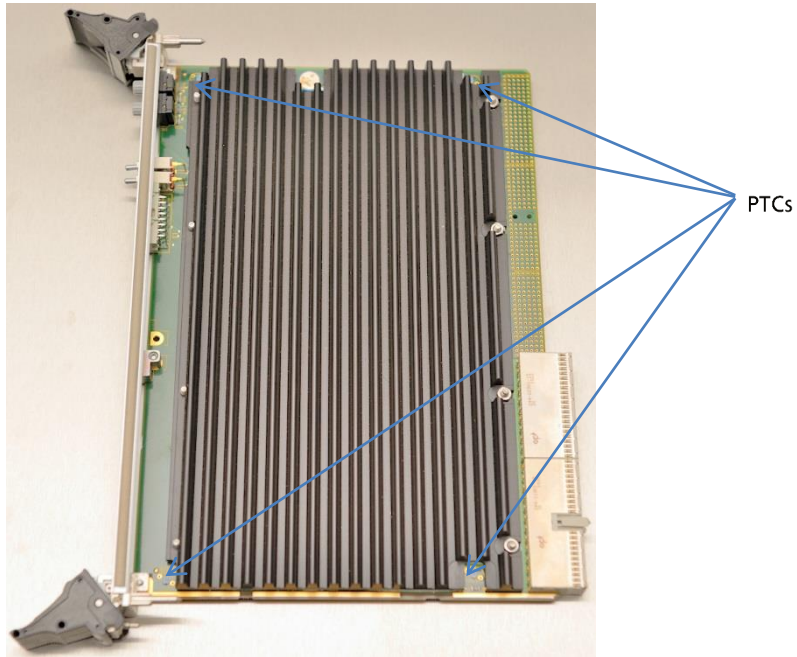
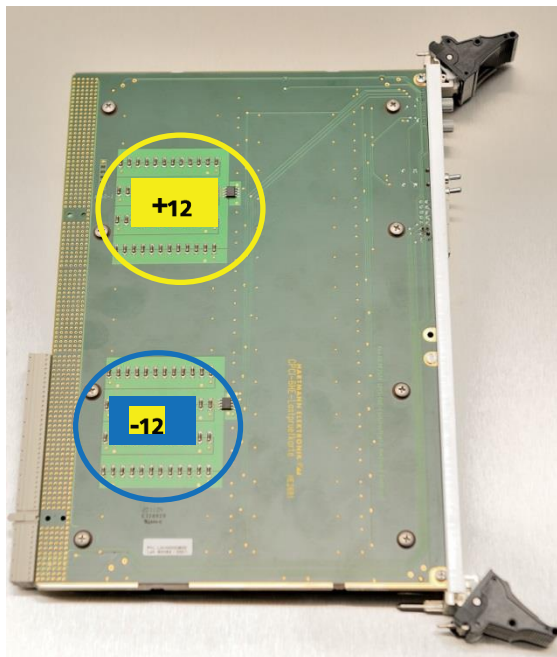


Figure 4, Primary Side of Load board



## 6U-cPCI Load board Air cooled

On the secondary Side, we have +12V and -12V with a 1 Amps Load



*Figure 5, Secondary Side of Load board*



### 3 Signal description and pinout of P1 and P2 connectors

The incoming voltage levels for the voltages +5V+3.3V,  $\pm 12$  V, can be measured at measuring points close to the plugs P1 and P2.

These measuring points are run via the plug X1 (on the front plate).

P1-A Connector	
Voltage	Pin
+5V	A1, E1, B2, D3, D22, B24, E24, A25
+3V3	C6, A15, C10, A17, C18, A19, A21, C22, A23, D25
+12V	D1
-12V	B1
VIO	C4, C8, C16, C20, C24
GND	D5, B6, D7, B8, D9, B10, D10, D15, D17, B18, D19, B20, B22

Figure 6, Pin assignments connector P1-A

P2-A Connector	
Voltage	Pin
VIO	A4, C5, C7, C9, C11, C13
GND	B1, B3, D4, B5, D6, B7, D8, B9, D10, B11, D12, B13, D14, B15, D16, B17, D18, D20

Figure 7, Pin assignments connector P2-A

Therefore, Connector P1-B, all Pins F1 to F25 are connected to GND.

Connector P2-B, all Pins F1 to F22 are connected to GND.

### 4 Ambient conditions

Operational temperature:

Min.: -20°C

Max.: +85°C

Storage temperature:

Min.: -40°C

Max: +100°C

Relative humidity, non-condensing 5 – 95%