

PXITM -5

**PXI Express
Hardware Specification
Revision 1.0 ECN 1**

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PXI
Systems Alliance

IMPORTANT INFORMATION

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1. Background

The *PXI Express Hardware Specification* allows 6U PXI Express Peripheral and System Timing Modules to have an optional eHM connector in the XJ8 position for additional power. The corresponding connector for 6U PXI Express Peripheral, Hybrid, and System Timing Slots, XP8, is required to be populated on 6U backplanes. Revision 1.0 of the PXI Express Hardware Specification did not explicitly define the pin assignments for these connectors. Also, Revision 1.0 of the PXI Express Hardware Specification did not include the additional current handling provided by the XP8 connector in the table showing the PXI Express backplane continuous current capability. This table also had requirements for the System Slot that were too high.

This ECN provides the XP8/XJ8 pin assignments and provides an updated table showing the PXI Express backplane continuous current capability that includes the XP8 connector along with the lowered System Slot requirements. PXI Express module and backplane suppliers will need to comply with any PXI Express Hardware Specification ECNs and the PXI Express Hardware Specification to claim compliance with PXI Express. The content of this ECN will be incorporated into the next revision of the PXI Express Hardware Specification.

2. XP8/XJ8 Connector Pin Assignments

RULE: 6U PXI Express Peripheral, Hybrid, and System Timing Slots and 6U PXI Express Peripheral and System Timing Modules SHALL use the pin assignments in Table 2-1.

Table 2-1 XP8/XJ8 Pin Assignments

| Pin | Z | A | B | C | D | E | F | XP8 / XJ8 Connector |
|-----|-----|-------|-----|------|------|------|-----|---------------------|
| 1 | GND | RSV | RSV | RSV | RSV | RSV | GND | |
| 2 | GND | 5Vaux | GND | RSV | RSV | RSV | GND | |
| 3 | GND | 12V | 12V | GND | GND | GND | GND | |
| 4 | GND | GND | GND | 3.3V | 3.3V | 3.3V | GND | |
| 5 | GND | RSV | RSV | RSV | GND | RSV | GND | |
| 6 | GND | RSV | GND | RSV | RSV | RSV | GND | |
| 7 | GND | RSV | RSV | RSV | GND | RSV | GND | |
| 8 | GND | RSV | GND | RSV | RSV | RSV | GND | |

OBSERVATION: The XP8 pin assignments are only used if a 6U PXI Express Peripheral, Hybrid, or System Timing slot does not support stacking 3U modules. 6U PXI Express slots that support stacking 3U Modules route the signals and follow the pin assignments for the upper and lower 3U Slots according to the type of 3U Slots being implemented within the 6U Slot (System, Hybrid, PXI Express Peripheral, PXI-1 or System Timing Slot).

3. PXI Express Backplane Continuous Current Capability

RULE: A PXI Express Chassis backplane and connectors SHALL be capable of transferring the amount of current to each slot specified in Table 3-1 below instead of Table 4-15 in the PXI Express Hardware Specification Revision 1.0.

OBSERVATION: Table 3-1 below supersedes Table 4-15 in the PXI Express Hardware Specification Revision 1.0.

RULE: The backplane and connectors SHALL be capable of receiving as much return current as they are capable of delivering.

Table 3-1 PXI Express Backplane Continuous Current Capability

| | 5 V | V(I/O) | 3.3 V | +12 V | -12 V | 5V _{AUX} |
|---|-----|--------|-------|-------|-------|-------------------|
| PXI Express System Controller Slot | 9 A | 0 A | 9 A | 11 A | 0 A | 1 A |
| 3U PXI Express Peripheral Slot | 0 A | 0 A | 3 A | 2 A | 0 A | 1 A |
| 6U PXI Express Peripheral Slot | 0 A | 0 A | 6 A | 4 A | 0 A | 2 A |
| 3U Hybrid Slot | 6 A | 5 A | 6 A | 2 A | 1 A | 1 A |
| 6U Hybrid Slot | 6 A | 5 A | 6 A | 4 A | 1 A | 2 A |
| PXI-1 Peripheral Slot | 6 A | 11 A | 6 A | 1 A | 1 A | 0 A |