FURAXA

PCIeEXT-16
Smart PCIe Bus Extender

Product Specification and Manual – v1.01

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2. INTRODUCTION:

The PCIeEXT-16 is a high-speed 16 lane PCI-express (PCIe) Bus Extender Card supporting x16, x8, x4, x2 and x1 PCIe Cards (referred to as Units-Under-Test, or UUTs). PCIe signal integrity requirements are met with high-speed trace layout parameters (controlled high impedance and low ground inductance). The PCIeEXT-16 offers power monitoring and overcurrent indication, facilitating rapid troubleshooting and testing.

3. FEATURES:

General:

Lubricated x16 top connector enables thousands of insertions

Controlled-Impedance traces for all high-speed signals

Current Indicating test points with 1V/A output, indicate current consumption of UUT on 12 Volt, 3.3 Volt, and 3.3Vaux supplies.

Two Green LEDs indicate presence of +12V and +3.3V power.

Two red LEDs indicate overcurrent on +12V and +3.3V supplies.

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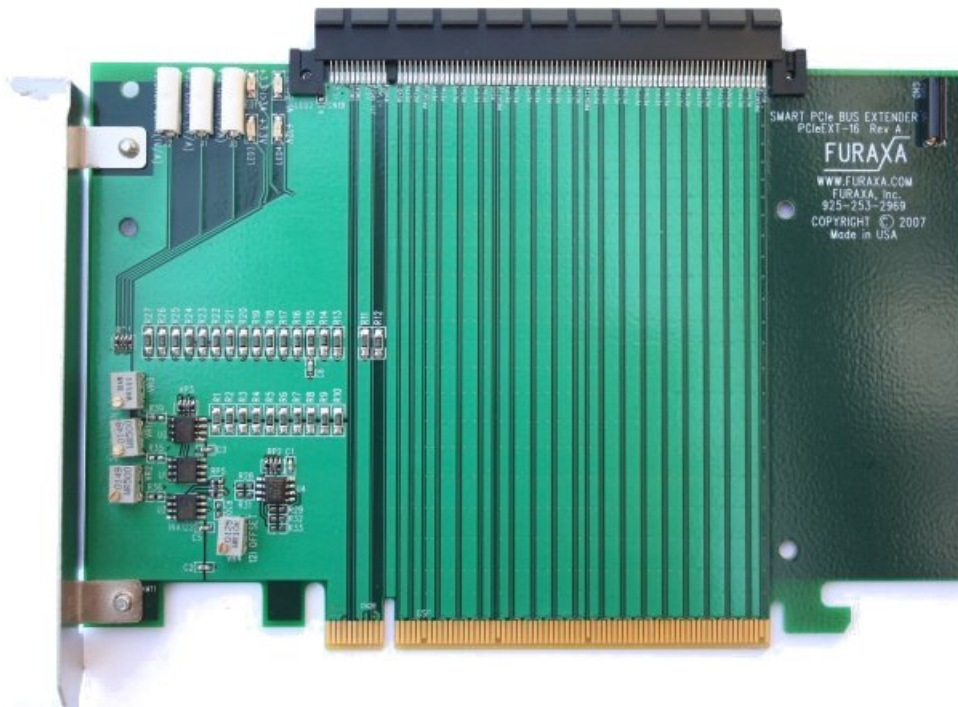
Current Measurement Test Points:

The PCIeEXT-16 allows real-time measurement of power consumption during board operation. A voltmeter or oscilloscope can be connected with its "+" lead to either the +12 CURR, +3.3 CURR or +3.3AUX CURR white test points, and its "-" lead to the black GND test point. The voltage output on these test points has a 1:1 Volt-to-Ampere correspondence. Hence, a reading of 2.4V on the +3.3 CURR test point indicates that the UUT is drawing 2.4 *amperes* from the +3.3V supply.

4. Installing the PCIeEXT-16 into a system:

To install the PCIe extender, power down the host computer and install the PCIeEXT-16 into a x16 PCIe slot. **Secure the extender using a screw in the metal bracket, and engage the retention mechanism (if present)**. Power up the host computer. Note that **for proper operation, the PCIeEXT-16 must be installed in a PCIe slot with all PCIe voltages (+12, +3.3, +3.3aux) present.**

After insuring that the computer is operating correctly, power down the computer and plug in a **known good** Unit Under Test (UUT) into top of the extender card. Repeat the power-up process to verify that the UUT is functioning correctly.