

# PCIe Gen5 32GT/s Bus Extender Tests AI and GPU Boards

## Live Insertion Allows High Volume Testing of Gen5 Al Accelerator, GPU Boards

Orinda CA, Oct 9, 2024. Ultraview Corp (Berkeley CA). Designed to test the newest AI accelerator and GPU boards, the PCIeExt16HOT-G5 PCI-express Live-insertion bus extender board facilitates high-volume production testing and debug of PCIe Gen 5, 4 and 3 boards of any type and data width (x16, 8, 4 or 1). Live insertion enables bus boards to be removed and exchanged without powering down or rebooting the system. Full 32GT/s Gen5 speed, current sensing, reporting, overcurrent indication and shutdown make the PCIeExt16HOT-G5 the fastest bus extender produced to date.

### FIRST PCIe LIVE INSERTION EXTENDER WITH GEN5 SPEED CAPABILITY

"The PCIeExt16HOT-G5 is currently the only high-rise (6") PCIeBus live-insertion extender capable of full 32GT/s speed in Gen5 systems", according to Ultraview president Dr. Joel Libove. "Spurred by customer requests to test their new Gen5 AI accelerator boards, we used microwave design expertise taken from our ultrawideband radar and military PCIe DAQ products, to build the fastest bus extender in the industry. Using microwave RO4350B PCB material and differential coplanar microstrip traces with stitched side shields, we achieved under 3dB loss at 32GT/s, for reliable operation in 5-64GB/sec PCIe slots."

The PCIeExt16HOT-G5 allows boards to be run immediately on re-insertion under Windows11<sup>TM</sup>/10 <sup>TM</sup>. Initially a board is inserted and tested, then the extender's slot power switch is turned OFF and the board is removed, all with the system remaining running. A replacement board is then inserted, the slot power switch is turned ON, and the system can find the board, and run it. In this way, rapid production testing can be done without reboot delays. Included software also allows operation in most Linux systems.

Lubricated gold contacts in the PCIeExt16HOT-G5's top connector withstand thousands of insertions, facilitating production testing of PCIe boards. The PCIeExt16HOT-G5's 6" extension height brings boards-under-test completely out of most system chasses, for easy probing, debug, insertion and removal.

#### CURRENT MONITORING AND OVERCURRENT REPORTING AND SHUTDOWN

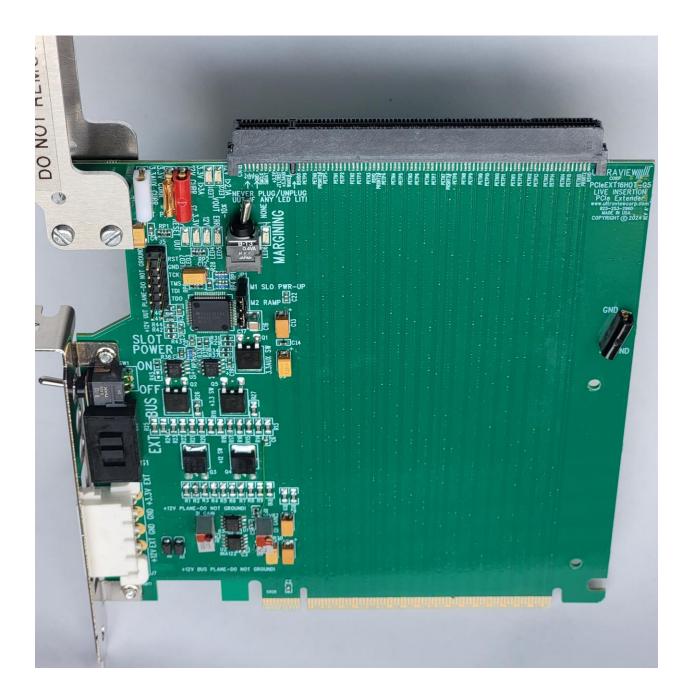
Precision <10 milliohm current sensing shunts, and instrumentation amplifiers provide real-time output voltages corresponding to the current drawn by the board-under-test, on the +3.3V, +12V and +3.3VAUX power rails. Test points with 1V/Ampere outputs are provided for all 3 supplies, for connection to oscilloscopes, ATE, etc. For example, if a board-under-test is drawing 2.4A and 4.3A respectively, from the +3.3V and +12V power supplies, the extender's "+3.3I" and "+12I" jacks will output 2.4V and 4.3V. If the board-under-test's +12V current draw exceeds 8A, a red "12I Overload" LED illuminates. If it is drawing more than 3.3A total on +3.3V and +3.3VAUX, the "3I Overload" LED lights. Exceeding 10A on any supply for more than 0.5 seconds will cause the extender to shut off power to the board, unless current limiting is disabled, which is sometimes necessary for high power-consumption AI accelerators.

### ENABLES BOARD-UNDER-TEST TO RUN OFF BUS OR EXTERNAL POWER.

A slide switch configures the PCIeExt16HOT-G5 to either run the board-under-test off internal power supplied by the motherboard slot or, alternatively, from external power supplied via a 4-pin connector.

The PCIEext16HOT-G5 PCIe extender is \$695 in single quantity. Delivery: Stock

Further information may be obtained at <a href="www.ultraviewcorp.com">www.ultraviewcorp.com</a>, or by contacting David Schriebman at 925-253-2960 or by email at <a href="dschriebman@ultraviewcorp.com">dschriebman@ultraviewcorp.com</a>. Product manuals, including photo are located at: <a href="http://www.ultraviewcorp.com/Documents/extenders/PCleEXT16HOT-G5\_Manual-v1.00.doc">http://www.ultraviewcorp.com/Documents/extenders/PCleEXT16HOT-G5\_Manual-v1.00.doc</a>



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