

## Specifications for the National Instruments PXI system

PXI chassis, fiber optics interface, multi-chassis interface and 16 24-bit sigma-delta A-to-D converter cards with the following specifications:

1. The chassis shall be a 3U PXI form factor unit with a total of 18 slots and accept both 3U PXI and 3U Compact PCI modules, and be PXI Hybrid compatible.
2. The chassis shall have a system bandwidth of 132 MB/s.
3. The chassis shall have 600W total available power.
4. The chassis shall have a 10MHz reference clock for device synchronization, with less than 5 ps jitter.
5. The chassis shall have a fiber optic interface with link performance of 132MB/s peak and 78 MB/s sustained, and a 10-meter fiber optic cable shall be supplied.
6. The chassis should be able to accept existing National Instruments PXI cards installed.
7. The multi-chassis interface shall allow for synchronization of two or more PXI chassis.
8. The multi-chassis interface shall have SMB connectors on the front panel.
9. The multi-chassis interface shall have timing accuracy 55 ppb.
10. The multi-chassis shall work with existing NI-Sync software to allow synchronization with existing National Instruments hardware.
11. The A-to-D cards shall be 24-bit, sigma-delta ADC's with at least a 204.8 MS/sec maximum sample rate, with at least four BNC differential front panel inputs with simultaneous sampling.
12. The A-to-D cards shall have input ranges from a minimum of at +/- 316 mV to a maximum of +/- 42.4 V.
13. The A-to-D cards shall have software-selectable AC/DC coupling and IEPE conditioning, and at least 118dB of dynamic range.
14. The A-to-D cards shall have anti-aliasing filtering and at least 2047 samples of on-board memory.
15. The A-to-D cards shall have digital and analog triggering and a RTSI synchronization bus.
16. The A-to-D cards shall accept accelerometer or voltage inputs and provide corresponding current excitation.