

PXIe-6368

Features



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PXIe, 16 AI (16-Bit, 2 MS/s/ch), 4 AO, 48 DIO, PXI Multifunction I/O Module

- 16 simultaneous DIFF AI channels; ± 10 V to ± 1 V input range
- Four 16-bit, 3.33 MSamples/s AO channels; ± 10 V output range
- 48 5 V TTL DIO lines; 32 hardware-timed up to 10 MHz
- Four 32-bit, 100 MHz counters
- Two 68-pin female VHDCI connectors

Cables and Accessories

[63xx Models : DAQ Multifunction I/O Cable and Accessory Compatibility](#)

PXIe-6368 Pinout



Counter/Timer Signal	Default PFI Terminal
CTR 0 SRC	PFI 8
CTR 0 GATE	PFI 9
CTR 0 AUX	PFI 10
CTR 0 OUT	PFI 12
CTR 0 A	PFI 8
CTR 0 Z	PFI 9
CTR 0 B	PFI 10
CTR 1 SRC	PFI 3
CTR 1 GATE	PFI 4
CTR 1 AUX	PFI 11
CTR 1 OUT	PFI 13
CTR 1 A	PFI 3
CTR 1 Z	PFI 4

Counter/Timer Signal	Default PFI Terminal
CTR 1 B	PFI 11
CTR 2 SRC	PFI 0
CTR 2 GATE	PFI 1
CTR 2 AUX	PFI 2
CTR 2 OUT	PFI 14
CTR 2 A	PFI 0
CTR 2 Z	PFI 1
CTR 2 B	PFI 2
CTR 3 SRC	PFI 5
CTR 3 GATE	PFI 6
CTR 3 AUX	PFI 7
CTR 3 OUT	PFI 15
CTR 3 A	PFI 5
CTR 3 Z	PFI 6
CTR 3 B	PFI 7
FREQ OUT	PFI 14

Table 2. Signal Descriptions

Signal	Reference	Description
AI GND <0..15>	—	Analog Input Ground—These terminals are the bias current return point for AI DIFF measurements. All ground references—AI GND, AO GND and D GND—are connected on the device. Though AI GND, AO GND, and D GND are connected on the device, they are connected by small traces to reduce crosstalk between subsystems. Each ground has a slight difference in potential.
AI <0..15>+, AI <0..15>-	—	Analog Input Channels—For differential measurements, AI+ and AI- are the positive and negative inputs of a differential analog input channel.
AO <0,1>	AO GND	Analog Output Channels—These terminals supply voltage output.
AO GND	—	Analog Output Ground—AO GND is the reference for AO. All ground references—AI GND, AO GND, and D GND—are connected on the device. Though AI GND, AO GND, and D GND are connected on the

Signal	Reference	Description
		device, they are connected by small traces to reduce crosstalk between subsystems. Each ground has a slight difference in potential.
D GND	—	Digital Ground—D GND supplies the reference for port 0, port 1, port 2 digital channels, PFI, and +5 V. All ground reference—AI GND, AO GND, D GND—are connected on the device, they are connected by small traces to reduce crosstalk between subsystems. Each ground has a slight difference in potential.
P0.<0..31>	D GND	Port 0 Digital I/O Channels—You can configure each signal individually as an input or output.
APFI <0,1>	AO GND or AI GND	Analog Programmable Function Interface Channels—Each APFI signal can be used as AO external reference inputs for AO, or as an analog trigger input. APFI are referenced to AI GND when they are used as analog trigger inputs. APFI are referenced to AO GND when they are used as AO external offset or reference inputs.
+5 V	D GND	+5 V Power Source—These terminals provide a fused +5 V power source.
PFI <0..7>/ P1.<0..7>, PFI <8..15>/ P2.<0..7>	D GND	Programmable Function Interface or Digital I/O Channels—Each of these terminals can be individually configured as a PFI terminal or a digital I/O terminal. As an input, each PFI terminal can be used to supply an external source for AI, AO, DI, and DO timing signals or counter/timer inputs. As a PFI output, you can route many different internal AI, AO, DI, or DO timing signals to each PFI terminal. You can also route the counter/timer outputs to each PFI terminal. As a port 1 or port 2 digital I/O signal, you can individually configure each signal as an input or output.
NC	—	No connect—Do not connect signals to this terminal.

PXIe-6368 Specifications

The following document provides specifications for the PXIe-6368.

- [NI 6368 Device Specifications](#)