NI ELVIS II Pinout Description

Pin Number	SIDE A	SIDE B
1	+15V	-15V
2	+15V	-15V
3	+5V	GROUND
4	+5V	GROUND
5	+5V	GROUND
6	GROUND	GROUND
7	DIO 6	DIO 7
8	DIO 4	DIO 5
9	DIO 2	DIO 3
10	DIO 0	DIO 1
11	GROUND	GROUND
12	NC	NC
13	NC	NC
14	DIO 14	DIO 15
15	DIO 12	DIO 13
16	DIO 10	DIO 11
17	DIO 8	DIO 9
18	GROUND	GROUND
19	BoardID6	BoardID7
20	BoardID4	BoardID5
21	BoardID2	BoardID3
22	BoardID0	BoardID1
23	GROUND	GROUND
24	NC	DIO 23
25	DIO 22	DIO 21
26	DIO 20	DIO 19
27	DIO 18	DIO 17
28	DIO 16	SB_PRES
29	NC	PFI 6
30	PFI 5	PFI 7
31	PFI 2	PFI 10
32	PFI 11	PFI 1
33	PFI 0	PFI 3
34	PFI 4	PFI 13
35	PFI 8	PFI 9
36	PFI 12	PFI 14
37	GROUND	GROUND
38	reserved	reserved
39	AIGND	AIGND
40	AI 7+	AI 7-

41	AI 6+	AI 6-
42	AI 5+	AI 5-
43	AI 4+	AI 4-
44	AIGND	AIGND
45	AI 3+	AI 3-
46	AI 2+	AI 2-
47	AI 1+	AI 1-
48	AI 0+	AI 0-
49	AISENSE	NC
50	KEYWAY	KEYWAY
51	KEYWAY	KEYWAY
52	NC	NC
53	SYNC	FM
54	FGEN	AM
55	GROUND	VCC
56	NC	GROUND
57	DUT-	NC
58	Base	DUT+
59	GROUND	GROUND
60	AO0	AO1
61	GROUND	GROUND
62	Supply-	Supply+

NI ELVIS II Signal Description

Signal Name	Type	Description
+15V	DC Power Supplies	+15 V Fixed Power Supply
-15V	DC Power Supplies	-15 V Fixed Power Supply
+5V	DC Power Supplies	+5 V Fixed Power Supply
GROUND	DC Power Supplies	Ground
DIO<0..23>	Digital input/output	Digital Lines P0.0 through P0.23 — These channels are general purpose DIO lines that are used to read or write data.
BoardID<0..7>		These eight lines signify the unique ID of each type of prototyping board by shorting them to VCC or to GROUND.
SB_PRES		This signal is used to indicate whether the prototyping board is inserted completely or not. It should be connected to VCC directly without the pull-up resistor.
PFI <0..2>, <5..7>,<10..11>	Programmable Functions Interface	PFI Lines
PFI 8	Programmable Function Interface	PFI Lines - Default function: Counter 0 Source
PFI 9	Programmable Function Interface	PFI Lines - Default function: Counter 0 Gate
PFI 12	Programmable Function Interface	PFI Lines - Default function: Counter 0 Out
PFI 3	Programmable Function Interface	PFI Lines - Default function: Counter 1 Source
PFI 4	Programmable Function Interface	PFI Lines - Default function: Counter 1 Gate
PFI 13	Programmable Function Interface	PFI Lines - Default function: Counter 1 Out
PFI 14	Programmable Function Interface	PFI Lines - Default function: Frequency Output
AIGND	Analog Inputs	Analog Input Ground — Ground reference for the Analog Input signals.
AI <0..7> ±	Analog Inputs	Analog Input Channels 0 through 7 ± — Positive and negative input channels lines to differential AI channels.

AI SENSE	Analog Inputs	Analog Input Sense — Reference for the analog channels in nonreferenced single-ended (NRSE) mode.
FGEN	Function Generator	Function Generator Output
SYNC	Function Generator	TTL output synchronized to the FGEN signal.
AM	Function Generator	Amplitude Modulation Input — Analog input used to modulate the amplitude of the FGEN signal.
FM	Function Generator	Frequency Modulation Input — Analog input used to modulate the frequency of the FGEN signal.
Base	3-Wire Voltage/Current Analyzer	Base excitation for bipolar junction transistors.
DUT+	DMM, Impedance, 2- and 3-Wire Analyzers	Excitation terminal for Capacitance and Inductance measurements (DMM), Impedance Analyzer, 2-Wire Analyzer, and 3-Wire Analyzer.
DUT-	DMM, Impedance, 2- and 3-Wire Analyzers	Virtual ground and current measurement for capacitance and inductance measurements (DMM), the Impedance Analyzer,2-Wire Analyzer, and 3-Wire Analyzer.
AO <0..1>	Analog Outputs	Analog Output Channels 0 and 1 — Used for the Arbitrary Waveform Generator.
VCC	Pull-up signal	+5V Pull-up signal
SUPPLY+	Variable Power Supplies	Positive Variable Power Supply — Output of 0 to 12 V.
SUPPLY–	Variable Power Supplies	Negative Variable Power Supply — Output of –12 to 0 V.

Note: All the PFI lines can be configured as static digital I/O or Counter/Timer.
When PFI lines are configured as Static Digital I/O, the mapping relationship in DAQmx is as follows:
PFI<0..7> to P1.<0..7>
PFI<8..14> to P2.<0..6>

The diagram below shows the pin order of the connector with side B visible.