

DataSheet

MT-X900

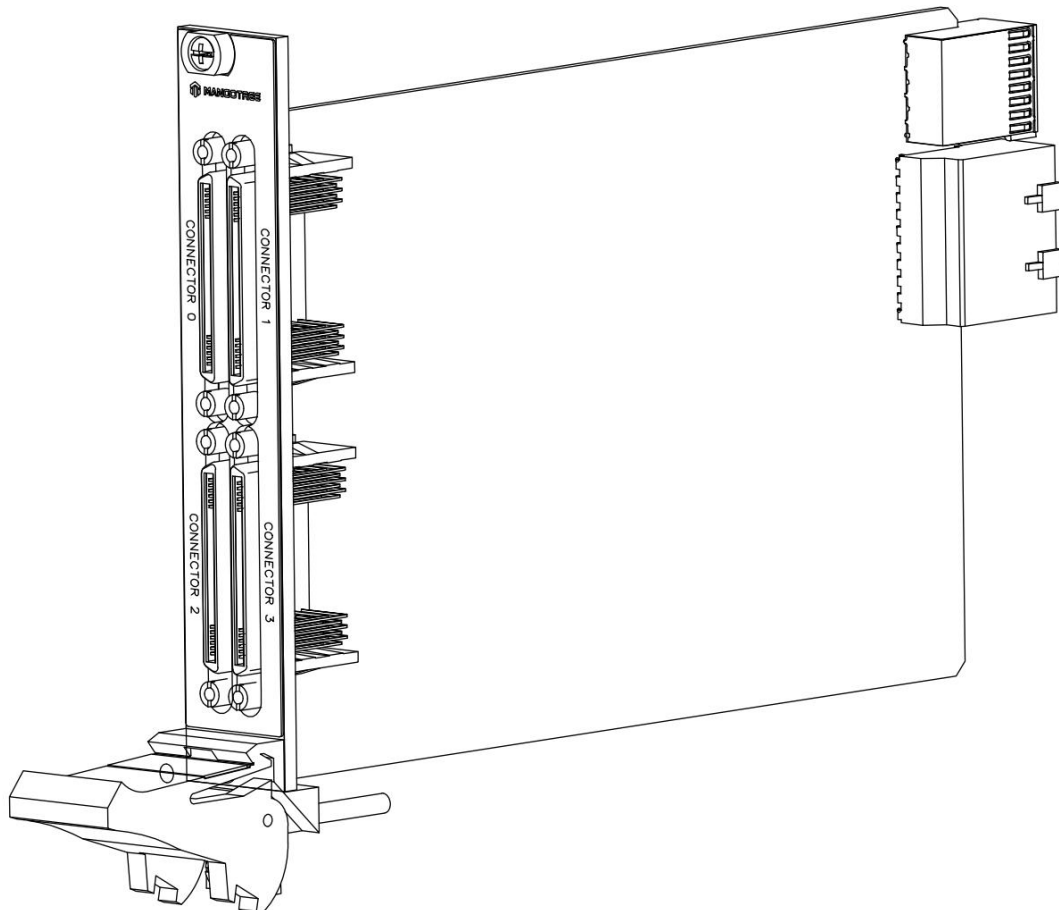
R Series for PXI Express Digital RIO with Kintex-7 160T

FPGA

This document contains the specifications for MT-X900. Specifications are typical at 25°C unless otherwise noted.



Caution Using the MT-X900 in a manner not described in this document may impair the protection the MT-X900 provides.



Digital I/O

Number of connectors	4
Number of channels per connector	32
Maximum frequency	80 MHz
Compatibility	LVTTL,LVCMOS
Logic family	Hardware-selectable
Default software setting	3.3V

Table 1. Digital Input Logic Levels

Logic Family	Input Low Voltage(VIL) Max	Input High Voltage(VIH) Max
1.2 V	0.42 V	0.84 V
1.5 V	0.51 V	1.01 V
1.8 V	0.61 V	1.21 V
2.5 V	0.70 V	1.60 V
3.3 V	0.80 V	2.00 V

Minimum input	-0.3 V
Maximum input	3.6V
Input leakage current	± 15uA maximum
Input impedance	50kΩ typical, pull-down

Table 2. Digital Output Logic Levels

Logic Family	Current	Output Low Voltage(VoL) Max	Output High Voltage(VoH) Max
1.2 V	100 uA	0.20 V	1.00 V
1.5 V	100 uA	0.20 V	1.25 V
1.8 V	100 uA	0.20 V	1.54 V
2.5 V	100 uA	0.20 V	2.22 V
3.3 V	100 uA	0.20 V	3.00 V
	4 mA	0.40 V	2.40 V

Maximum DC output current per channel

Source	4.0 mA
Sink	4.0 mA
Output impedance	50 Ω
Direction control of digital I/O channels	Per Channel
Minimum I/O pulse width	6.25 ns
Minimum sampling period	5 ns
Digital I/O voltage selection	Programmable, all connectors

Reconfigurable FPGA

FPGA type	Kintex-7 160T
Number of flip-flops	202,800
Number of LUTs	101,400
Embedded Block RAM	11,700 kbits
Number of DSP48 slices	600

Maximum Power Requirements

Power requirements are dependent on the digital output loads and configuration of the LabVIEW FPGA VI used in your application.

+3.3V	3 A
+12 V	2 A

Safety Voltages

This product is designed to meet the requirements of the following electrical equipment safety standards for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1, CSA C22.2 No. 61010-1

CE Compliance

This product meets the essential requirements of applicable European Directives, as follows:

- 2014/35/EU; Low-Voltage Directive (safety)
- 2014/30/EU; Electromagnetic Compatibility Directive (EMC)
- 2014/34/EU; Potentially Explosive Atmospheres (ATEX)

Shock and Vibration

To meet these specifications, you must panel mount the system.

Operating vibration

Random (IEC 60068-2-64)	5 g _{rms} , 10 Hz to 500 Hz
Sinusoidal (IEC 60068-2-6)	5 g, 10 Hz to 500 Hz
Operating shock (IEC 60068-2-27)	30 g, 11 ms half sine; 50 g, 3 ms half sine; 18 shocks at 6 orientations

Environmental

Refer to the manual for the chassis you are using for more information about meeting these specifications.

Operating temperature	-40 °C to 70 °C (IEC 60068-2-1, IEC 60068-2-2)
Storage temperature	-40 °C to 85 °C (IEC 60068-2-1, IEC 60068-2-2)
Ingress protection	IP40
Operating humidity (IEC 60068-2-78)	10% RH to 90% RH, noncondensing Storage
humidity (IEC 60068-2-78)	5% RH to 95% RH, noncondensing Pollution
Degree	2
Maximum altitude	4,000 m

Indoor use only.

Support

MT-Master上手指南:

<https://server.mangotree.cn:9900/WebFile/Downloads/上手指南/MT-Master/>

MT-Master视频教程:

<https://server.mangotree.cn:9900/WebFile/Downloads/视频教程/MT-Master/>



Master上手指南



Master视频教程

MT-RIO上手指南:

<https://server.mangotree.cn:9900/WebFile/Downloads/上手指南/MT-RIO/>

MT-RIO视频教程:

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RIO上手指南



RIO视频教程

MT-Veristand上手指南:

<https://server.mangotree.cn:9900/WebFile/Downloads/上手指南/MT-VeriStand/>

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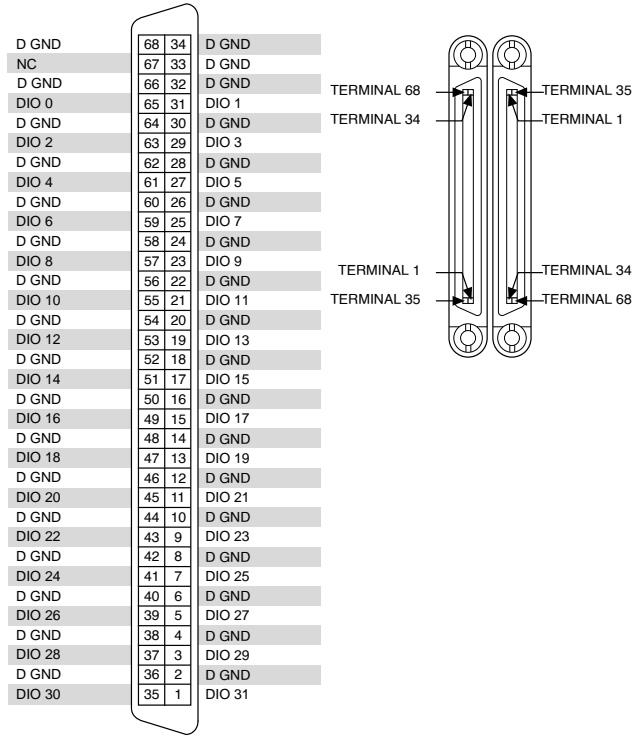
VeriStand上手指南



VeriStand视频教程

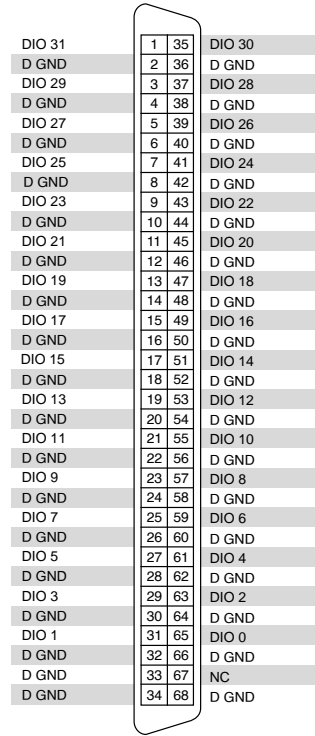
MT-X900 Pinout

CONNECTOR 0



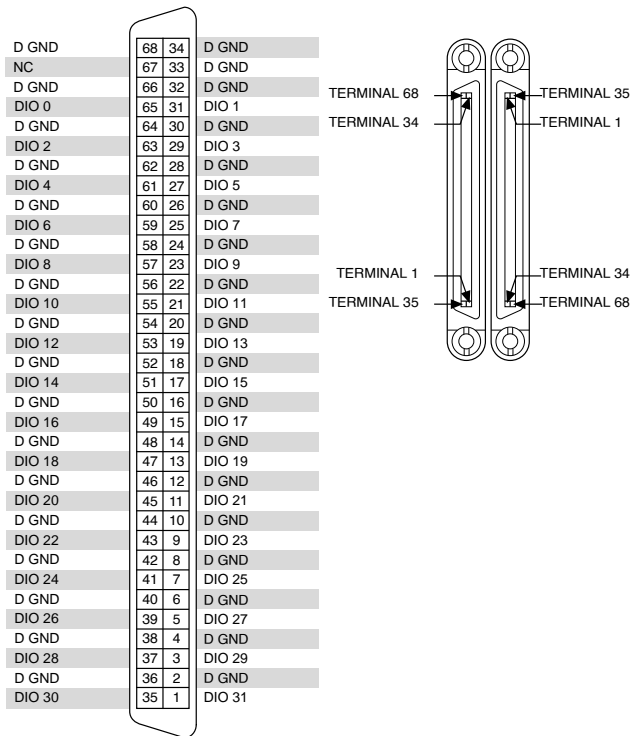
NC = No Connect

CONNECTOR 1



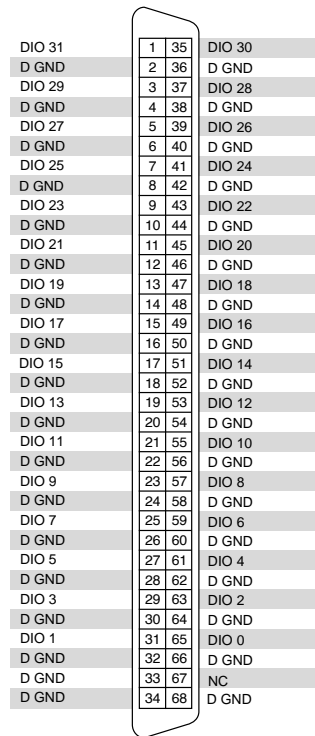
NC = No Connect

CONNECTOR 2



NC = No Connect

CONNECTOR 3



NC = No Connect

Dimensions:(mm)

