

SPECIFICATIONS

MT PXIe-X614

8 AI, ± 10 V, 32 bit, 192 kS/s/ch Simultaneous

This document contains the specifications for MT PXIe-X614. Specifications are typical at 25°C unless otherwise noted.



Caution Using the MT PXIe-X614 in a manner not described in this document may impair the protection the MT PXIe-X614 provides.

Input Characteristics

Number of channels	8 differential input channels
ADC resolution	32bits
Sampling mode	Simultaneous
Support Sample rate	192k / 96k / 48k
Input coupling	AC/DC(hardware-selectable)
Input range	$\pm 10V$
AC voltage full-scale range	
Minimum	$\pm 10V_{pk}$
Typical	$\pm 10.05V_{pk}$
Maximum	$\pm 10.15V_{pk}$
IEPE excitation current	
Minimum	2.0 mA
Typical	2.1 mA
IEPE compliance voltage	24V maximum
Crosstalk (1 kHz)	$> 110dB$
Differential input impedance	$22k\Omega$
Signal-to-noise ratio(SNR)	$> 120dB$
Frequency response	$\pm 0.1dB @ 20Hz \sim 20kHz$
THD	-115dB
THD+N	-110dB

Table 1. AC/DC Configuration

Configuration	Dial Switch	
	S1	S2
DC Coupling	ON	OFF
AC Coupling	OFF	OFF
AC Coupling with IEPE	OFF	ON

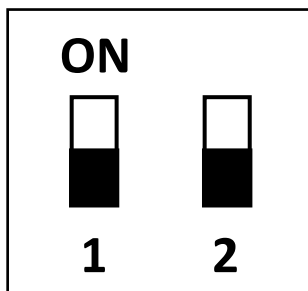


Table 2. Accuracy

Measurement Conditions		Percent of Reading (Gain Error)	Percent of Range (Offset Error)
Calibrated	Maximum (-40 °C to 70 °C)	0.034%	±0.014%
	Typical (25 °C ±5 °C)	0.007%	±0.005%

Power Requirements

Power consumption from chassis: 900mW maximum

Thermal dissipation (at 70 °C) 930mW maximum

Safety Voltages

Connect only voltages that are within the following limits:

Channel-to-earth ground ±30 V maximum, Measurement Category I

Isolation

Channel-to-channel None

Channel-to-earth ground None

Measurement Category I is for measurements performed on circuits not directly connected to the electrical distribution system referred to as MAINS voltage. MAINS is a hazardous live electrical supply system that powers equipment. This category is for measurements of voltages from specially protected secondary circuits. Such voltage measurements include signal levels, special equipment, limited-energy parts of equipment, circuits powered by regulated low- voltage sources, and electronics.

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 (IEC 60068-2-1, IEC 60068-2-2)	-40 °C to 70 °C
Storage temperature (IEC 60068-2-1, IEC 60068-2-2)	-40 °C to 85 °C
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	500m

Indoors use only.