

PXD821x High Performance Digitizer Family



TECHNICAL DATA SHEET

PXI

Features

VXI

LAN

cPCI

PXIe

GPIB

USB

RS232
485

external
PCIe

- 1 GS/s with 12 Bit resolution
- High input voltage range up to 120 V_{pp}
- Fully isolated design with up to two independent channels
- Multiple instrument and channel synchronization possibilities
- Built-in DVM function for high precision measurement

Product Information

High speed, high resolution waveform digitizer

The PXD821x High Performance Digitizer family features up to two 1GS/s simultaneously sampled input channels with 12 Bit resolution, input voltages up to $\pm 60V$ and a bandwidth up to 125 MHz.

Every digitizer channel has its own memory which allows up to 50k samples.

All PXD821x High Performance Digitizer family devices have a high common mode rejection ratio (CMRR).

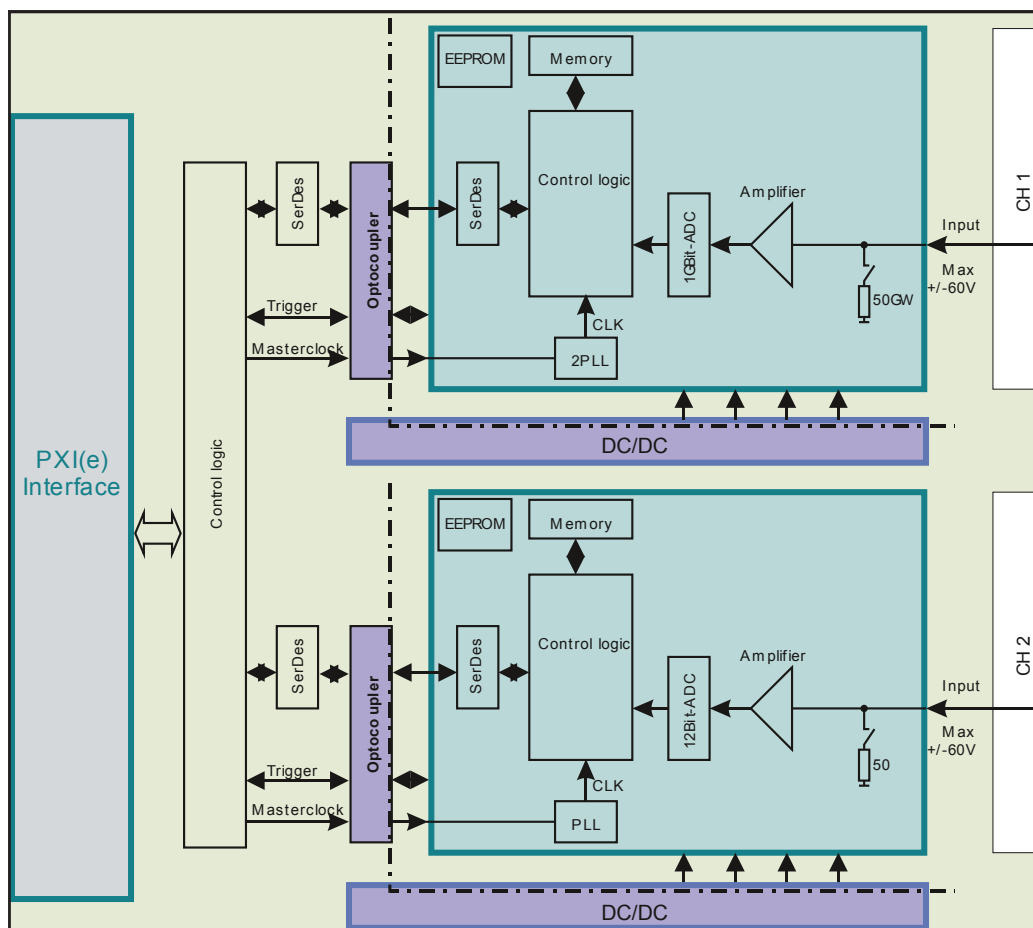
High throughput design for many applications

The digitizers of the PXD821x family are designed for high throughput testing.

This design guarantees highest quality measurements and is ideal for a wide range of application areas including automotive, communications, scientific applications, military/aerospace and consumer electronics.

Available with 1 and 2 channels

The single-channel device PXD8213 High Performance Waveform Digitizer uses only 1 PXI-slot (3U). The dual channel device PXD8214 High Performance Waveform Digitizer needs 2 PXI-slots (3U).



General	Specification	Comment
Module size	1 slot, 3U	PXD8213
	2 slots, 3U	PXD8214
Module weight	<0.4 kg	PXD8213
	<0.6 kg	PXD8214
Front connector type	BNC (isolated)	
Operating temperature	0 ... 40°C	
Operating altitude	<2 000 m	
Relative humidity	Up to 85% at 35°C	
Storage temperature range	-25 ... 70°C	
Electrical safety	According EN61010-1	
Isolation input to PE	60V CAT I, Pollution Degree 2	

Acquisition	Specification	Comment
Maximum sample rate	1 GS/s	
Bandwidth	Range 300 mV	0.5 V _{pp} input signal; no filter
	Range 1 V	2 V _{pp} input signal; no filter
	Range 3 V, 10 V	2 V _{pp} input signal; no filter
	All other ranges	20 V _{pp} input signal; no filter
Vertical resolution	12 Bit	
Sampling times	1 ns, 2 ns, 5 ns, 10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 μs, 2 μs, 5 μs, 10 μs, 20 μs, 50 μs, 100 μs, 200 μs, 500 μs, 1 ms, 2 ms, 5 ms, 10 ms, 20 ms, 50 ms, 100 ms, 200 ms, 500 ms, 1 s, 2 s, 5 s, 10 s	Software selectable
Input impedance	1 MΩ <20 pF, 50 Ω	Software selectable
Input coupling	DC	
Input ranges	50 Ω: 300 mV, 1 V, 3 V	
	1 MΩ: 300 mV, 1 V, 3 V, 10 V, 30 V, 100 V	
DC accuracy¹	0.25% of input + 0.25% of full scale	
Filter	300 kHz, 1 MHz, 20 MHz, 100 MHz	Software selectable

¹ DC accuracy specified for an average value of 1 000 samples with a sample rate of 50 kS/s and active 300 kHz.

Notes: All product data are specified for 1 year at an ambient temperature of 23°C ±5°C (after 1 hour warm-up time). Product specification and description in this document are subject to change without notice.

Trigger System	Specification	Comment
Input from		
Internal function module	One function module can trigger itself and the other module	
Software	Via software command	
PXI trigger	Trigger 0...7 and star trigger	From the PXI backplane
Output to		
Internal function module	Output to the other module	For example marker-bit
PXI trigger	Output each channels trigger to PXI trigger 0...7	
Level resolution	12 Bit	
Level accuracy	0.6% + 0.3%	±(of programmed value + of full range)
Trigger slope	Positive or negative	

DVM	Specification	Comment
DC accuracy¹	0.25% + 0.25%	±(of reading value + of full range)
Measurement time	1...500 ms	Software programmable

PXI Capabilities	Specification	Comment
PXI trigger usage	Possible	PXI trigger 0...7; input and output
PXI star trigger usage	Possible	Input only

¹ DC accuracy specified with measurement time of 100 ms.