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Find the *VX Instruments PXD7113* at our website: *Click HERE*

PXD7113
FlexRay Digitizer

VXI instruments
the test solutions provider



TECHNICAL DATA SHEET

PXI
VXI
LAN
cPCI
PXIe
GPIB
USB
RS232
485
external
PCIe

Features

- Designed for FlexRay measurements
- 100 MS/s with 16 Bit resolution
- Fully isolated design with two selectable inputs in differential or single ended mode
- Multiple instrument and channel synchronization possibilities
- Built-in timer/counter engine for high speed timer/counter
- Built-in DVM function for high precision measurement

Product Information

High resolution FlexRay Digitizer
The PXD7113 FlexRay Digitizer features a 100 MS/s input with 16 Bit resolution, input voltages up to ±10 V and a bandwidth up to 10 MHz.

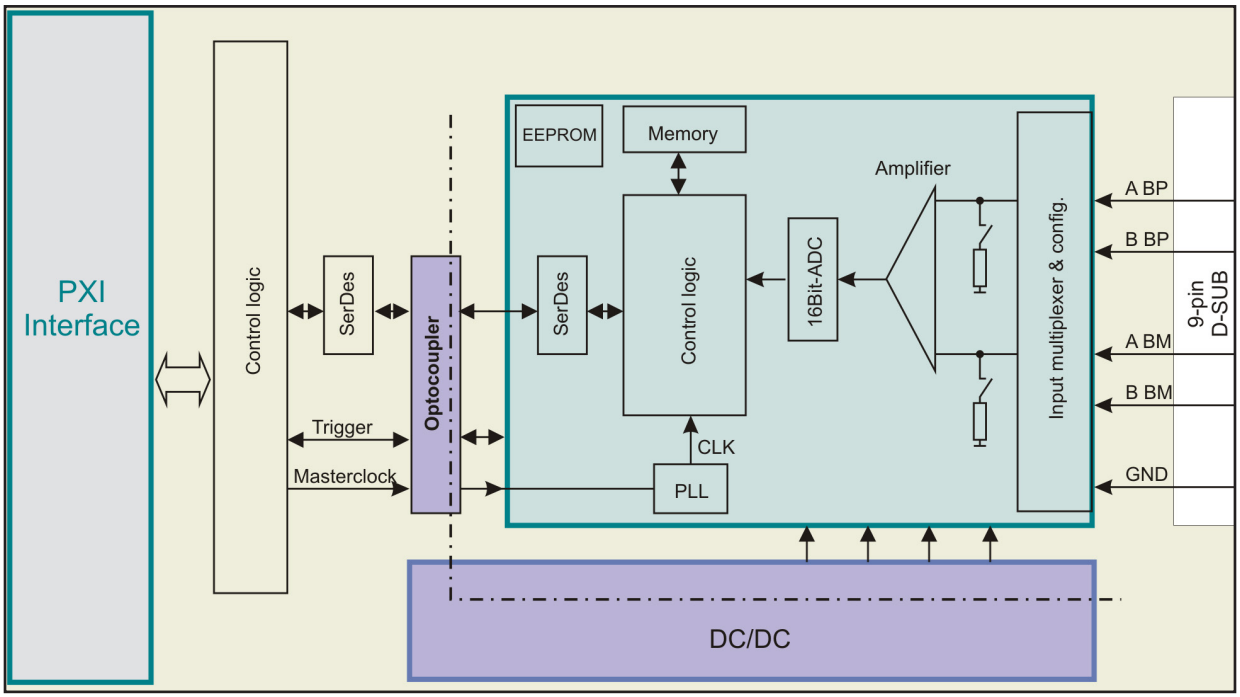
The PXD7113 FleyRay Digitizer has a 2 MB memory which allows up to 1 million samples. The device has a high common mode rejection ratio (CMRR).

Two multiplexed inputs – selectable as differential or single ended inputs
The PXD7113 FlexRay Digitizer can be configured in differential or single ended mode. In both modes, an optional 95 Ohm termination resistor can be activated. This allows a FlexRay signal measurement without additional signal conditioning.

Data can be acquired before and after the trigger event with a programmable sample counter, that controls the number of data points.

Multiple instrument synchronization possibilities
A great amount of trigger capabilities results in multiple instrument synchronization possibilities.
Furthermore the PXD7113 FlexRay Digitizer has a built-in timer/counter and voltage measurement engine.

High throughput design for many applications
The PXD7113 FlexRay Digitizer is designed for high throughput testing.
This design guarantees highest quality measurements and is perfect for a wide range of application areas including automotive, communications, scientific applications, military/aerospace and consumer electronics.



General	Specification	Comment
Module size	1 slot, 3U	
Module weight	<0.7 kg	
Front connector type	9-pin D-SUB male	
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	250V CAT I, Pollution Degree 2	

Acquisition	Specification	Comment
Maximum sample rate	100 MS/s	
Bandwidth	>10 MHz	2 V_{pp} input signal; no filter
Vertical resolution	16 Bit	
Sampling times	10ns, 20ns, 50ns, 100ns, 200ns, 500ns, 1µs, 2µs, 5µs, 10µs, 20µs, 50µs, 100µs, 200µs, 500µs, 1ms, 2ms, 5ms, 10ms, 20ms, 50ms, 100ms, 200ms, 500ms.	Software selectable
Input impedance	1 MΩ // <20 pF, 95 Ω	Software selectable
Input coupling	DC	
Maximum input voltage	1 MΩ: 10 V_p 95 Ω: 5 V_p	
Input range	10 V	
DC accuracy[1]	0.2% of input + 0.1% of full scale	
Filter	30 kHz, 100 kHz, 300 kHz, 1 MHz, 20 MHz	Software selectable
Waveform memory	2 MB, 1 MS	

Time Base	Specification	Comment
Accuracy	1 ppm	In operating temperature range
Aging per year	1 ppm	

DVM	Specification	Comment
DC accuracy[2]	0.2% of input + 0.05% of full scale	With auto offset correction
Measurement time	1...500 ms	Software programmable

[1] DC accuracy specified for an average value of 100 samples with a sample rate of 5 kS/s and active 30 kHz filter.
[2] DC accuracy specified with measurement time of 100 ms.

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.

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

Trigger System	Specification	Comment
Input from		
Software	Via software command	
PXI trigger	Trigger 0 ... 7 and star trigger	From the PXI backplane
Output to		
PXI trigger	Output to PXI trigger 0 ... 7	
Level resolution	16 Bit	
Level accuracy	0.6% + 0.3%	±(of programmed value + of full range)
Trigger delay	0 ... 10 s	Programmable delay, 10 ns resolution
Trigger slope	Positive or negative	
Trigger hysteresis	0 ... 100% of signal range	Programmable via software
Pre-Trigger	0 ... 100% of full record length	Trigger is armed after all pre-samples are captured; post-samples are captured after trigger
Post-Trigger	0 ... 100% of full record length	Number of samples captured after trigger event

T/C Measurement Modes	Specification
Frequency	
Counter width	40 Bit
Range	0.1 Hz ... 10 MHz
Minimum pulse width	50 ns
Period	
Resolution	10 ns
Accuracy[1,2]	±10 ns
Range	50 ns ... 10 s
Time interval and pulse width	
Resolution	10 ns
Accuracy[1,2]	±10 ns
Range	50 ns ... 10 s
Rise and fall time	
Resolution	10 ns
Accuracy[2]	±10 ns
Range	50 ns ... 10 s
Totalize (edge count)	
Minimum pulse width	50 ns
Range	0 ... 2^{40}-1

1 Square wave signal with T_{Rise} <1 ns and T_{Fall} <1 ns.
2 Trigger comparator error not included.

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