

PXI Digitizers

PXD222

PXI Digitizers

LEADING FEATURES

- 200 MHz bandwidth
- 2.5 GS/s single shot sample rate
- Up to 1000 points in Normal Scope Mode
- Up to 27,500 points per record in MIN - MAX capture modes
- Independent floating isolated inputs (300V CAT II safety certified)
- Capture glitches as fast as 50ns in time-windows from 50us to 50s
- Advanced trigger modes including automatic, edge, video glitch and pulse width
- Supports PXI_TRIG and PXI_STAR triggers
- 3U PXI 2 slot form factor
- IVI scope drivers and quick start software



The LeCroy PXD222 provides a high performance digitizer solution for manufacturing test, defense, and research applications.

The PXD222 digitizer features 200 MHz and 2.5 GS/s single shot sampling in a 2 slot 3U PXI form factor. It also features advanced triggering and 300 V CAT II safety-certified isolated inputs for demanding applications.

In addition to the Normal acquisition mode where up to 1000 points are captured at up to 2.5GS/s, the module includes a Glitch Capture and Scope Record modes. The Glitch Capture Mode allows captures of glitches as fast as 5-ns in time windows from 50us to 10s. In Scope Record Mode, the PXD222 stores 27Kpts while sampling the data at up to 20MS/s. Both of these modes oversample the waveform and return the MIN and MAX values found in each time interval. The combination of these features allows for the capture of complex signals with excellent accuracy within the compact, sturdy, modular architecture of PXI.

The PXD222 digitizer is fully PXI compliant and is based on the desktop computer industry standard PCI bus. The plug and play functionality of the PXD222 digitizer provides ease of set-up and use.

The PXD222 digitizer includes several software tools to help you quickly get started and develop test software in LabView, CVI, Visual C++ or Visual Basic. The PXD series software includes an IVI-Scope Instrument driver and a quick start application program for interactive control. The LeCroy PXD222 digitizer provides a cost efficient, space efficient, high performance solution for production test applications including:

- High Energy Physics
- Radar and Lidar
- Disk Drive Testing
- Communications Test Systems
- Automotive
- Aerospace and Defense

PXD222 Technical Specifications

Vertical

Bandwidth, DC Coupled: 200 MHz (-3 dB)
Bandwidth Limiters: 20 MHz and 10 kHz
Input Coupling: AC, DC

Full Scale Ranges:
direct (4-8-16 sequence) beginning at 40 mV to 800 V

Positioning: Offset adjustable to 100% of full scale

Input Impedance on BNC:
DC Coupled 1 M Ω ($\pm 1\%$)/15 pF (± 2 pF)

Max. Input Voltage: direct (1:1) 300 V CAT II with 10:1 probe 1000V

Vertical Accuracy: $\pm 2\%$ of full range

Digitizer Resolution: 8 bits

HORIZONTAL General

Maximum Sample Rate

Single Shot: 2.5 GS/s

Digitizers: 2

Time Base Accuracy: ± 100 ppm

Acquisition Modes: Real Time, Single Sweep

Normal Acquisition Mode

Record Size: up to 1000 samples/ch

Recorded Time Span: 100ns to 10s

Glitch Capture Mode

Record Size: 250 points (Min and Max data arrays returned)

Recorded Time Span: 50us to 10s detect glitches as fast as 50ns by oversampling waveform

Sample Rate: up to 2.5 GS/s

Scope Record Mode

Record Size: 27K points (Min and Max data arrays returned)

Recorded Time Span: 11 s to 36 hours

Sample Rate: up to 20 MS/s

Trigger and Delay

Trigger Modes: Automatic, Normal, Single Shot

Trigger Delay: up to 100 times the recorded time span

Pre Trigger View: 90% of the recorded time span

Max. Delay: 10 seconds

Edge Trigger

Source: Ch1, Ch2, PXI_TRIG[n], PXI_STAR[n]

Slope: Positive, Negative

Trigger Level Control Range: 100% of full range

Video Trigger

Standards: PAL, PAL+, NTSC, SECAM

Modes: Lines, Line Select, Field 1 or Field 2

Source: Ch2

Polarity: Positive, Negative

Pulse Width Trigger

Trigger Conditions:
<T, >T — min 450ns =T ($\pm 10\%$), $\mp T$ ($\pm 10\%$) resolution of 50ns

Source: Ch2

Polarity: Positive or negative pulse

Glitch Trigger: Trigger Conditions <T, - min 300ns

Parameter Measurements

VDC, VAC rms, VAC+DC, Vpeak max, Vpeak min, Vpeak to peak, Frequency, Positive Pulse Width, Negative Pulse Width, Positive Duty Cycle, Negative Duty Cycle, Phase

Mechanical

Size: 3U height x 2 slots

Weight: 1.7 lbs.

Power requirements

+5 VDC 1.6 A

Environment and Safety

Temperature:

Operating 0°C to 50°C (32°F to 122°F) with specified cooling of PXI-rack
Nonoperating -40°C to +71°C.

Humidity:

Operating 5% to 95% max RH (non-condensing) up to +30°C, Upper limit derates to 45% RH (non-condensing) at 50 degrees C.
Nonoperating 5% to 95% RH (non-condensing) up to 30°C; Upper limit derates to 45% RH (non-condensing) at 60°C

Altitude:

Operating 15,092 ft. (4,600 m).
Nonoperating 39,377 ft. (12,000 m).

Shock & Vibration:

Conforms to MIL-PRF-28800 Class 3

Electromagnetic Compatibility:

Emissions and Immunity
EN 61326-1:1997 +A1:1998

Safety:

Safety specifications are only valid if the unit is properly installed.
Designed for measurements on 300V Category II Installations per:
EN 61010-1:1994
CAN/CSA-C22.2 No.1010.1-92
UL3111-1

Approvals:

CE Approved
UL and cUL approved

Warranty: 1 Year

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Ordering Information

PXI Digitizer 200 MHz, 2.5GS/s

Product Code

PXD222