

GX2472

DUAL CHANNEL DIGITIZER PXI CARD

- Two channel, 70 MS/s, 14-bit digitizer
- Differential or single ended inputs
- 1 V to 20 Vpp full scale (GX2472)
- Hi voltage option: 75 V to 600 Vp-p full scale (GX2475)



DESCRIPTION

The GX2472 is a high performance, dual differential channel, 14-bit digitizer offering high dynamic range and excellent SFDR. The module's differential inputs, coupled with its low distortion makes it an ideal instrument for analyzing high performance or low level analog signals. Each channel offers 3 selectable low pass filters, a 14 bit, 70 MS/s ADC, and 512 KB of memory. A 50 MHz or 70 MHz clock with a divider provides a common acquisition clock source for both channels.

FEATURES

The GX2472 provides two, differential inputs offering the ability to make low level measurements in the presence of common mode or noisy signals. The inputs can also be configured for single-ended operation. The input impedance is selectable for 10 K ohm or 50 ohm. The 50 ohm configuration supports AC or DC coupling. Each channel can also add an offset to the input signal, providing the ability to maximize the A to D's dynamic range.

Both channels offer three, 3-pole, low pass, butterworth filters providing the ability to band limit signal noise and minimize aliasing effects. The filters can also be bypassed to take advantage of the input amplifier's full bandwidth.

Clocking of the digitizer is provided by a 10 MHz, 50 MHz or 70 MHz clock which can be divided by 1 to 256. Each channel can be independently triggered to start a measurement from an external or internal source.

PROGRAMMING AND SOFTWARE

The board is supplied with a 32-bit DLL driver. Various interface files provide access to the DLL from programming tools and languages such as ATEasy, LabVIEW, C/C++, Microsoft Visual Basic®, Delphi, and more. The available virtual panel can be used to interactively adjust and control the instrument from a window that displays the instrument's current settings and measurements.

An On-Line help file and PDF User's Guide provides documentation that includes instructions for installing, using and programming the board.

APPLICATIONS

- Automotive testing
- High performance baseband testing
- Medical device and module test
- ATE systems

GX2472

SPECIFICATIONS

HARDWARE	
Input Channels	4 analog (A+, A-, B+, B-) 1 external clock, 1 external trigger
Input Connectors	SMB
A/D CONVERTER	
Resolution	14 bits
Sampling Rate	500 KS/s to 70 MS/s
Clock Source	External or Internal
Internal Clock	70 MS/s, or 50 MS/s, 100 ppm
Clock Divider	1 to 256
Memory	512 K samples per channel
ANALOG INPUT CHANNELS	
Input Configuration	Differential or single-ended
Input Range	1 V _{pp} , 2 V _{pp} , 4 V _{pp} With input attenuator: 5 V _{pp} , 10 V _{pp} , 20 V _{pp}
DC Offset	±5 V, 16 bit resolution ±25 V, with attenuator
Input Impedance	10 K Ω , 50 Ω (AC or DC coupling)
Resolution	1 Hz
Accuracy	±(500 μ V + 0.1% of range) With attenuator on: ±(2.5 mV + 0.2% of range)
Relative Accuracy	±0.025% of range
Bandwidth	70 MHz (-3dB)
Low Pass Filters	3-pole Butterworth, selectable: None, 6 MHz, 15 MHz, 30 MHz
Channel Crosstalk	<80 dB at 1 MHz
SFDR	80 dB, 1 MHz input 72 dB, 10 MHz input (50 MS/s, 2 V _{pp} signal)
SINAD	68 dB, 1 MHz input 64 dB, 10 MHz input (50 MS/s, 2 V _{pp} signal)

TRIGGERING	
Connector	Front panel SMB
Impedance	10 K Ω nominal
Threshold Level	TTL
Sources	Front panel, PXI trigger 0 -5, PXI Star trigger, software trigger, input signal
Modes	Positive / negative level or edge, Positive / negative edge continuous
EXTERNAL CLOCK	
Connector	Front panel SMB
Input Impedance	50 Ω nominal
Maximum Frequency	100 MHz
Threshold Level	TTL
Output Impedance	50 Ω
Output Level	V _{Lo} < 0.5 V, V _{Hi} > 4.5 V, no load
GENERAL	
Current Consumption (Maximum)	+5 V @ 650 mA +12 V @ 40 mA -12 V @ 40 mA +3.3 V @ 300 mA
Weight	Approx. 210 g
Size	3U, single slot
Operating Temperature	0 °C to +50 °C
Storage Temperature	0 °C to +70 °C
Humidity (Non-Condensing)	10% to 80%
Safety	EN61010-1:2001
CE Labeled	Yes EN61000-6-1:2001, EN55011:1998

Note: Specifications are subject to change without notice

GX2472

ORDERING INFORMATION

GX2472	Dual Channel, Differential, 14-bit 70MS/S Digitizer
ACCESSORY	
GX92101	SMA-M to BNC-F Adapter (for Frequencies < 1 GHz)
GX92102	SMA-M to SMA-M Cable - Low Loss, 36 inches: (RG142 Cable)
GX92103	SMA-M to Type N-M Cable, Low Loss, 36 inches (RG142 Cable)
GX92104	SMB Plug to BNC-M Cable, 36 inches (RG188 Cable)
GX92105	Dual SMB to BNC Cable, 12 inches
GX2472-CAL	GX2472 Calibration/Verification Service. Includes pre-verification data (post calibration data provided if applicable)
GX2472-CAL-3	GX2472 Calibration/Verification Service - 3 Years. Includes pre-verification data (post calibration data provided if applicable)
GX2472-CAL-5	GX2472 Calibration/Verification Service - 5 Years. Includes pre-verification data (post calibration data provided if applicable)
GX2475-CAL	GX2475 Calibration/Verification Service. Includes pre-verification data (post calibration data provided if applicable)
GX2475-CAL-3	GX2475 Calibration/Verification Service -3 Years. Includes pre-verification data (post calibration data provided if applicable)
GX2475-CAL-5	GX2475 Calibration/Verification Service - 5 Years. Includes pre-verification data (post calibration data provided if applicable)

Note: The GX2472 is supplied by a 3rd party and resold by Marvin Test Solutions.