

GX2472

DUAL CHANNEL, 70 MS/S DIGITIZER

- Two channel, 14 bit digitizer
- Differential or single ended inputs
- DC to >50 MHz analog bandwidth
- 1V to 20 Vpp full scale
- AC or DC coupling
- Excellent dynamic range and low distortion



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 512K 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.

SOFTWARE

The GX2472 is supplied with a virtual instrument panel, which includes a 32-bit DLL driver library and documentation. The virtual panel can be used to interactively adjust and control the instrument from a window that displays the instrument's current settings and measurements.

APPLICATIONS

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

GX2472

MODULE SPECIFICATIONS

HARDWARE	
INPUT CHANNELS	4 analog (A+, A-, B+, B-) 1 external clock, 1 external trigger
INPUT CONNECTORS	SMB
FORMAT	PXI, 3U single slot
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	512K samples per channel
ANALOG INPUT CHANNELS	
INPUT CONFIGURATION	Differential or single-ended
INPUT RANGE	1 Vpp, 2 Vpp, 4 Vpp With input attenuator: 5 Vpp, 10 Vpp, 20 Vpp
DC OFFSET	+/- 5 volts, 16 bit resolution +/- 25 volts, with attenuator
INPUT IMPEDANCE	10 Kohm, 50 ohms (AC or DC coupling)
ACCURACY	+/- (500 uV + .1% of range) With attenuator on: +/- (2.5 mV + .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 Vpp signal)
SINAD	68 dB, 1 MHz input 64 dB, 10 MHz input (50 MS/s, 2 Vpp signal)
TRIGGERING	
CONNECTOR	Front panel SMB
IMPEDANCE	10K ohm 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 ohm nominal
MAXIMUM FREQUENCY	100 MHz
THRESHOLD LEVEL	TTL
OUTPUT IMPEDANCE	50 ohms
OUTPUT LEVEL	V Lo: <.5 volts, V HI > 4.5 volts, no load
GENERAL	
CURRENT CONSUMPTION (MAX)	+5 V @ 650 mA +12 V @ 40 mA -12 V @ 40 mA +3.3 V @ 300 mA
WEIGHT	Approx. 210 grams
SIZE	3U, single slot
TEMPERATURE OPERATING	0° C to 50° C
STORAGE	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

ORDERING INFORMATION

GX2472	Dual channel digitizer
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