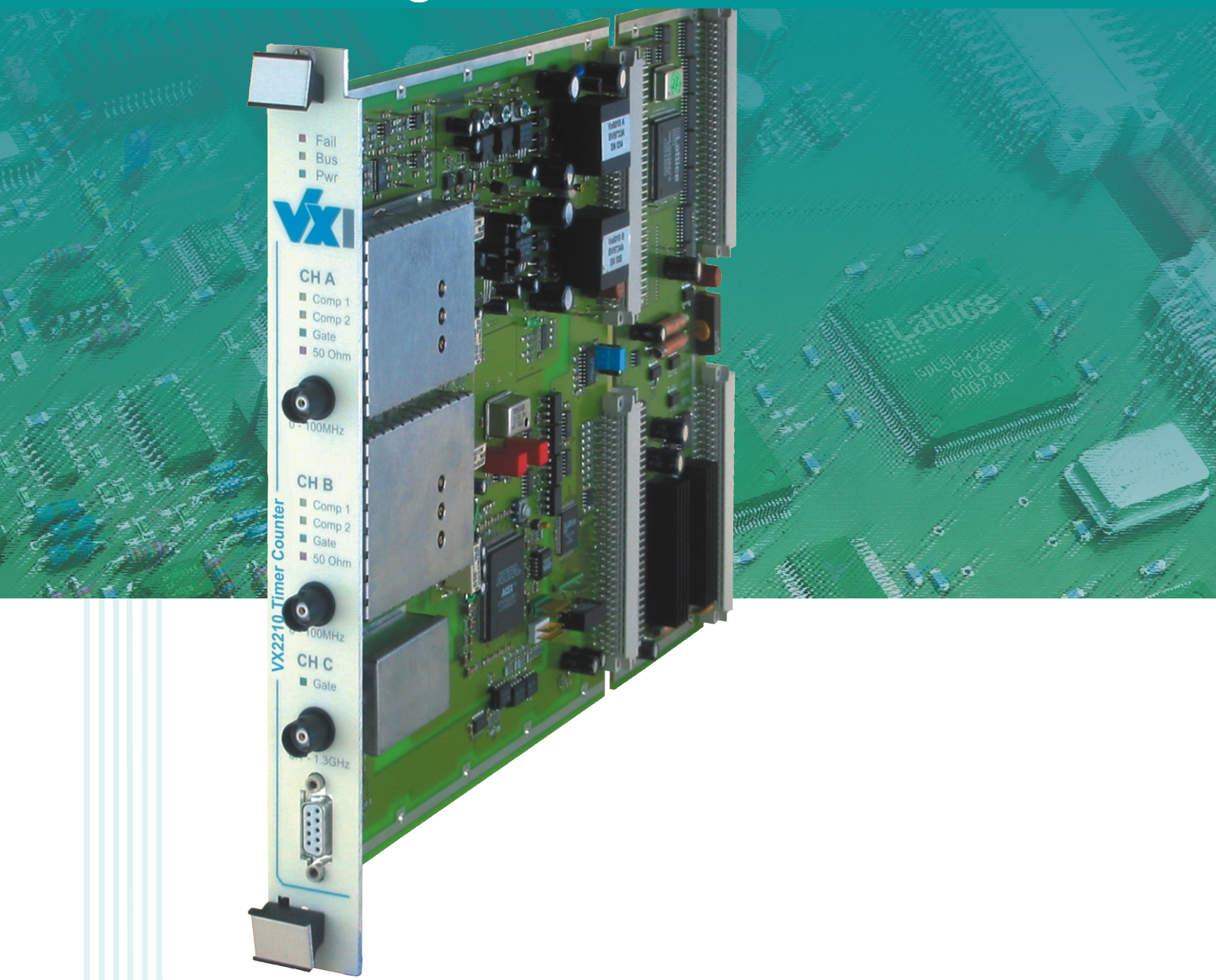
VXI Instruments®
the test solutions provider

VX2210 High Precision Timer Counter



Features

- ✓ Two channel (A, B) 100MHz High Precision Timer Counter
- ✓ Optional channel C for frequency measurements up to 1.3GHz
- ✓ Fully isolated, floating inputs
- ✓ Designed for high throughput testing
- ✓ Input voltages up to ±250V (500V_{PP})
- ✓ Six counter functions
- ✓ Digital calibration

VX2210 High Precision Timer Counter

Product information:

The VX2210 is a high precision, 9 digits, 100MHz Timer Counter for high performance measurements. The two input channels (A and B) can be used independently and providing capabilities needed for electronic test applications. Counter functions include frequency, period, pulse width, time interval, rise and fall time and totalize measurements. An optional third channel (C) can be used for frequency measurements of up to 1.3GHz.

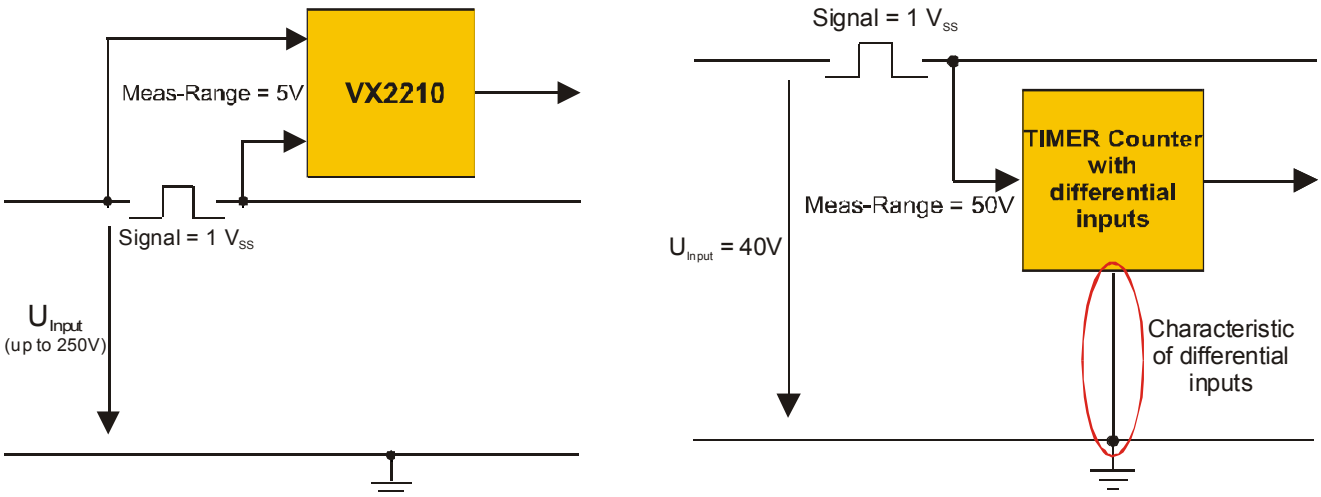
The VX2210, "C" size single slot VXI module, is designed for high throughput testing.

The maximum voltage for each signal input is ±250V. This allows high voltage measurements without signal conditioning.

The instrument calibration is done digital and fully automatic. The calibration data are stored in on-board EEPORM.

The channels are floating and isolated. This results in a very high common mode rejection ratio (CMRR) compared to differential inputs. It allows low level signals to be measured with a very high accuracy and a maximum of resolution. This design of the VX2210 guarantees highest quality measurements. All channels are connected to the same ground.

The advantage of floating input compared to differential input



All product data[1] are specified for an ambient temperature of 23°C ± 5°C, after 1 hour warm-up time

Input A, B	Specification
Input Coupling	DC, AC
Bandwidth	
DC-Coupling	0 … 100MHz
AC-Coupling	20 … 100MHz
Time base accuracy	1ppm (Standard) 0.1ppm (Option)
Counter width	40 Bits
Signal operating ranges	
	$250V_{rms}$
	$50V_{rms}$
	$5V_{rms}$
Input Impedance	
250V range	1MΩ//50pF
50V range	1MΩ//50pF
5V range	1MΩ//50pF or 50Ω
Maximum input voltage	
250V range	f < 20KHz: $250V_{rms}$ 20KHz … 1MHz: $5x10^6V_{rms}/f$ 1MHz …10MHz: $5V_{rms}$
50V range	f < 100KHz: $50V_{rms}$ 100KHz … 1MHz: $5x10^6V_{rms}/f$ 1MHz …10MHz: $5V_{rms}$
5V range	$5V_{rms}$

Trigger (A, B)	Specification
Sensitivity	
250V range	1,250V_{rms}, f < 10MHz
50V range	0,25V_{rms}, f < 10MHz
5V range or 50Ω	25mV, f < 30MHz 50mV, f > 30MHz
Level	
programmable	0 … full scale (12 Bit)
automatic	mean value of AC signal

Input C	Specification
Input-Coupling	AC
Bandwidth	100MHz … 1,3GHz
Time base accuracy	1ppm 0.1ppm (Option)
Input Impedance	50Ω
Maximum input voltage	$5V_{rms}$
Maximum operating voltage	$1V_{rms}$
Trigger sensitivity	$50mV_{rms}$

Measurement Modes (C)	
Frequency	
Counter width	40 Bits
Pre-divider	128
Measurement resolution	13Hz at 10s gate time
Period	Calculated from frequency

VX2210 High Precision Timer Counter

Input A, B Measurement Modes	Specification	Comment
Frequency		
Counter width	128	
Range	0,1HZ … 100MHz	
Minimum pulse width	5ns	
Period		
Resolution	10ns	
Accuracy(2)(3)	±10ns	
Range	20ns … 1000s	
Time Interval and Pulse Width		
Resolution	10ns	
Accuracy(2)(3)	±10ns	
Range	20ns … 1000s	
Rise and Fall Time		
Resolution	10ns	
Accuracy(2)(3)	±10ns	
Range	20ns … 1000s	
Totalize		
Minimum pulse width	5ns	
Range	0 … 2^{16}	

Ordering information	Option	Comment
	Option A	Channel C for frequency measurements up to 1,3GHz
	Option B	OCXO Oscillator (0.1ppm)

Instrument Driver:

The instrument integration is simplified with VXI*plug&play* drivers. A soft front panel is included to control and verify the instrument without writing a user program.

Quality:

All VX Instruments products are designed and built with ISO-9001 certified quality at VX Instruments facility in Landshut, Germany. VX Instruments stands behind their products with a full two-year warranty.

(1) Product specification and description in this document are subject to change without notice
(2) Square wave signal with T_{Rise} < 1ns and T_{Fall} < 1ns
(3) Trigger comparator error not included

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