VXInstruments®

the test solutions provider

Fully isolated

- Output up to 40V$_{pp}$
- 40MS/sec, 14 Bit
- Floating design

VX2026 Arbitrary Waveform Generator

Features

▸ Output voltages up to ±20V (40V$_{pp}$)

▸ Output channels operating independently

▸ Fully isolated, floating outputs

▸ High bandwidth

▸ Wide range of sample rates due to programmable internal PLL

▸ Additional marker output

▸ Designed for high throughput testing

Product information:

The VX2026 is a high speed (40MS/s), 14Bit, Arbitrary Waveform Generator for high performance testing. Built-in functions for pre-defined waveforms (sine, square, triangle, sawtooth) are available via software driver. Arbitrary waveforms are loaded using the on-board memory.

The VX2026, C-size single slot VXI module is designed for high-throughput testing.

Each channel has its own Clock-PLL, memory and state machine for START, STOP, TRIGGER, SAMPLING and SEQUENCING. Therefore the two channels are working independently.

Both channels have 512kS (1MByte) of memory each and can be upgraded to 2MS (4MByte) or 4MS (8MByte).

The maximum output signal voltage is ±20V (40V$_{PP}$) in-to high impedance load. This allows high voltage waveform stimulation without additional signal conditioning.

The instrument calibration is done digitally. The calibration data is stored in an on-board EEPORM. Each channel is fully isolated to PE.
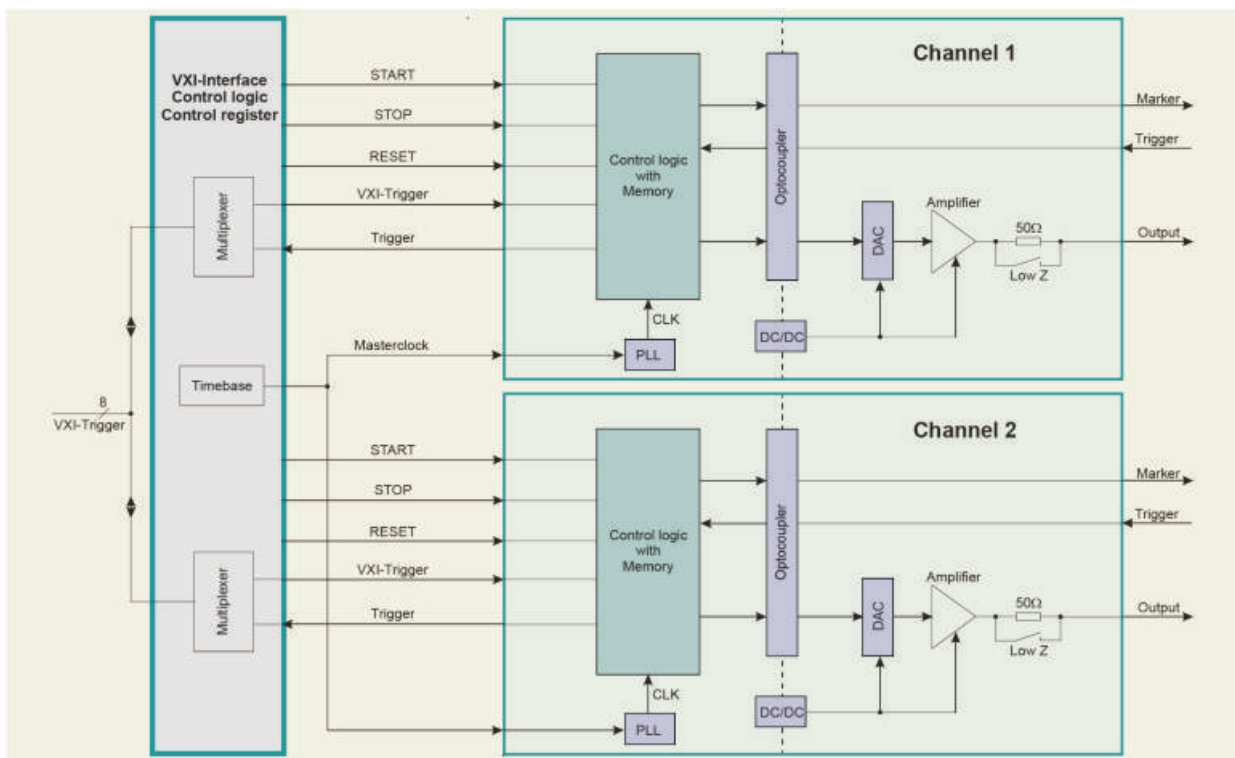
All product data[1] are specified for an ambient temperature of 23℃ ±5℃, after 1 hour warm-up time!

General	Specification	Comment
Module size	VXI: 1 slot „C"-Size	
Module weight	< 2.0kg	
Front connector type	Isolated BNC	
Operating temperature	0 ... 40℃	
Operating altitude	<2000 m	
Humidity	To 90% relative humidity below 30℃ To 45% relative humidity up to 50℃	
Storage temperature range	-25 ... 70℃	
Electrical safety	According EN61010-1	
Isolation output to PE	60V CAT I, Pollution Degree 2	

Output	Specification	Comment
Max. sampling frequency	40MS/s	Sample rate without waveform seq.
	40MS/s	Sample rate with waveform seq.[4]
Min. sampling frequency	0,001S/min	
Time base	Internal 10MHz oscillator	
	Internal PLL or external clock	Programmable from 100KHz to 40MHz
	VXI CLK10	
Time base accuracy	100ppm (Standard)	
	1ppm (TCXO Option)	
Output voltage range	-20V … +20V ($40V_{PP}$)	Output voltage into high impedance load
	-9V … +9V ($18V_{PP}$)	Into 50Ω (R_{out} = low Z)
	-9V … +9V ($18V_{PP}$)	Into 50Ω (R_{out} = 50Ω)
Output voltage resolution	14 Bit	
Maximum output current	$180mA_P$[2]	Into 50Ω (R_{out} = low Z)
	$180mA_P$[3]	Into 50Ω (R_{out} = 50Ω)
	$200mA_P$	Output shorted
Output impedance	50Ω or low Z	
AC-Bandwidth	10MHz (3dB)	
Rise and fall time	<50ns	50Ω load (Rout = 50Ω or low Z)

Filter	F_{3dB}	Comment
Filter 1	1MHz	
Filter 2	100kHz	

[1] Product specification and description in this document are subject to change without notice!
[2] Output impedance Rout = low Z
[3] Output impedance Rout = 50Ω
[4] Minimum 20 segments/sequence

AC-Accuracy	Specification	Comment
f <10kHz	<0,5%	Of full scale, sine wave into Hi-Z
f <100kHz	<1,0%	Of full scale, sine wave into Hi-Z
f <2MHz	<2,0%	Of full scale, sine wave into Hi-Z

Trigger	Specification	Comment
Source	External	TTL input via front BNC
	VXI-TTL	Synchronous trigger mode protocol
	Software	
Output	VXI-TTL	Synchronous trigger mode protocol

Marker-Output	Specification	Comment
Output voltage	TTL	TTL output via front BNC
Output current (low state)	25mA	
Output current (high state)	25mA	

DC-Accuracy	Specification	Comment
DC-Offset	<0,1%	Of full scale
DC-Gain	<0,2%	Of programmed output voltage at output impedance=low Z & load >1KΩ
	<2,5%	Of programmed output voltage at output impedance =50Ω and load =50Ω

Ordering information	Option	Comment
	Option A	4MByte (2MS) memory/channel
	Option B	8MByte (4MS) memory/channel
	Option C	TCXO Oscillator (1ppm)
	Option D	1 channel C-size module

Calibration:
Software calibration, calibration interval 1 year.

Quality:
All VX Instruments products are designed and built with ISO-9001 certified quality at VX Instruments facility in Landshut, Germany.

Warranty Period:
The warranty period is two years.

Instrument Drivers:
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.