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Find the *VX Instruments PXA(e)7321* at our website: ***Click HERE***

PXA(e)73xx
Arbitrary Current Generator Family

VX Instruments
the test solutions provider



TECHNICAL DATA SHEET

PXI
VXI
LAN
cPCI
PXIe
GPIB
USB
RS232
485
external
PCIe

Features

- Output currents up to 30 mA or ±20 mA
- Up to 200 MS/s with 16 Bit resolution
- Fully isolated design with up to two independent channels
- Complex waveform sequencing
- Multiple instrument and channel synchronization possibilities
- High configurable trigger engine
- On the fly amplitude and offset changing
- Two additional marker outputs
- Wide range of sample rates due to programmable internal PLL
- High bandwidth
- Based on VX Instruments FlexCPeP for easy custom design

Product Information

Flexible Configurable PXI(e) Platform

This family of Arbitrary Function Generators is based on the "Flexible Configurable PXI(e) Platform" (FlexCPeP). This platform allows many variations of customer configured Arbitrary Function Generators.

High speed, high resolution arbitrary waveform generator

The PXA(e)73xx ArbGen family features up to two simultaneously working channels with up to 200 MS/s, 16 Bit resolution and an output current up to 30 mA in sink mode (at up to 30 V) or ±20 mA in combined source/sink mode (at up to ±10 V).
Every channel is equipped with 2 MB memory. The whole amount of 1 million samples can be partitioned into one ore more waveform segments.
Depending on the number of channels and the floating option, the Arbitrary Function Generators are built into a compact 3U PXI(e) device for 1 or 2 slots.

Built-in waveform functions

Predefined waveforms (DC, sine, square, triangle, sawtooth) can be configured via software driver. Furthermore it is possible to load an user created waveform.

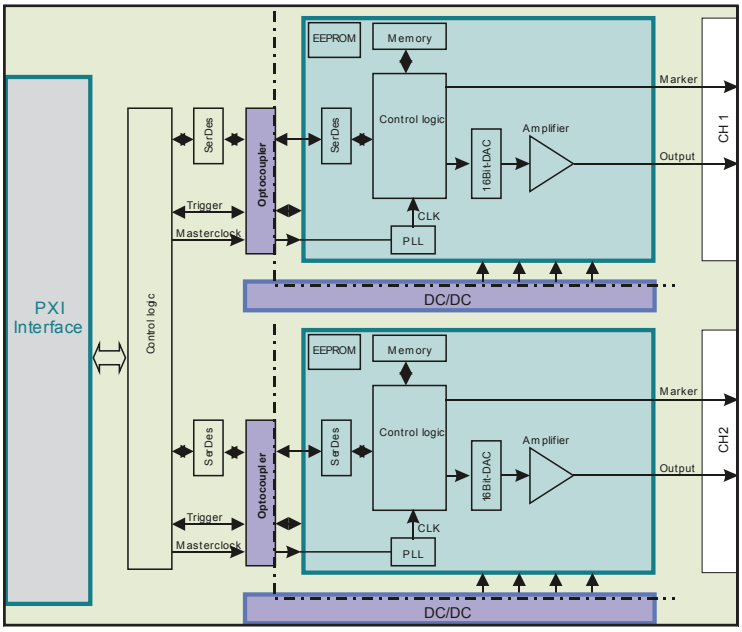
Fully independent channels

Each channel has its own clock-PLL, memory and state machine for START, STOP, TRIGGER, SAMPLING and SEQUENCING. This guarantees the 2 channels to work completely independent. A great amount of trigger capabilities results in multiple sophisticated instrument and channel synchronization possibilities.

Complex waveforms without memory reloading

Arbitrary waveforms can be loaded via data files into the on-board memories for 1 MS waveform data and 512 sequences. The memory can be segmented and sequenced in any desired order.

Furthermore amplitude and offset can be changed on the fly without writing new data into the memories.



Ordering Option	Comment
PXA(e)732x	100 MS/s
PXA(e)734x	200 MS/s
Option TCXO	Temperature compensated crystal oscillator

General	Specification	Comment
Module size	1 slot, 3U 2 slots, 3U	PXA(e)73x1, PXA(e)73x2, PXA(e)73x3 PXA(e)73x4
Module weight	<0.7 kg	
Front connector type	SMA	
Operating temperature	0 ... 40°C	
Operating altitude	<2 000 m	
Relative humidity	Up to 85% at 35°C	
Storage temperature range	-25 ... 70°C	
Electrical safety	According EN61010-1	
Isolation output to PE	60V CAT I, Pollution Degree 2	

Waveform	Specification	Comment
Output current resolution	16 Bit	
Output current ranges		
Bipolar source/sink	±20 mA	At up to ±10 V
Unipolar sink	0 ... 30 mA	At up to 30 V
AC Bandwidth[1]		
Bipolar source/sink	3 MHz (3 dB)	R_{load} = 5 Ω
Unipolar sink	500 kHz (3 dB)	R_{load} = 5 Ω
Slewrate		For all ranges; R = 10 Ω
Bipolar source/sink	>250 mA/µs	
Unipolar sink	>50 mA/µs	
DC Accuracy		For all ranges; R = 50 Ω
DC-Offset	<0.25% of full scale	
DC-Gain	<0.25% of value	
AC Accuracy		Sine wave; R = 50 Ω
f <1 kHz	<0.5% of full scale	
f <10 kHz	<1.0% of full scale	
f <30 kHz	<2.0% of full scale	
Waveform memory	2 MB, 1 MS	

Time Base	Specification	Comment
Accuracy	50 ppm, 1 ppm with option TCXO	In operating temperature range
Aging per year	5 ppm, 1 ppm with option TCXO	
Sampling frequency	0.10 S/s ... 100 MS/s 0.10 S/s ... 200 MS/s	PXA(e)732x PXA(e)734x
Output frequency resolution	100 ppm	Of programmed value (frequency)

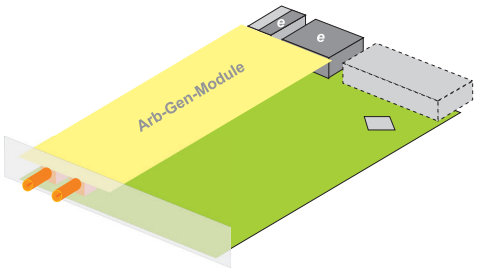
[1] At 50% amplitude of chosen range.

Notes: All product data are specified for an ambient temperature of 23°C ± 5°C (after 1 hour warm-up time).
Product specification and description in this document are subject to change without notice.

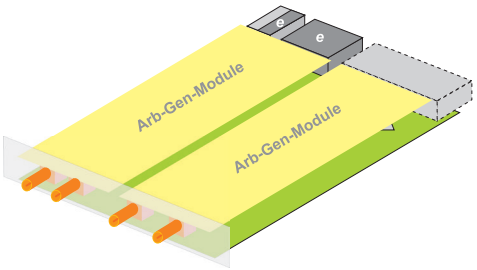
Trigger System	Specification	Comment
Input from		
Internal function module	One function module can trigger the other channel	E. g. trigger on marker-bit
Software	Via software command	
PXI trigger	Trigger 0 ... 7 and star trigger	From the PXI backplane
Output to		
Internal function module	Output to the other channel	E. g. marker-bit
PXI trigger	Output of each channel trigger source to the trigger lines of the PXI backplane	
System delay	Max. 1 sample clock + 120 ns	Trigger to waveform output

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

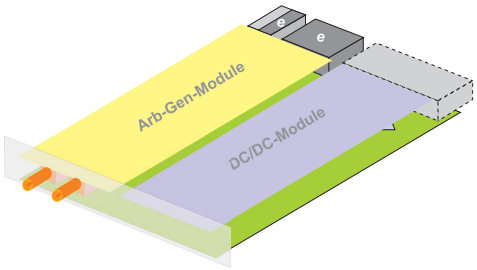
PXI Capabilities	Specification	Comment
PXI 10 MHz usage	Supported	Then time base accuracy depends on PXI rack
PXI trigger usage	Supported	PXI trigger 0 ... 7; input and output
PXI star trigger usage	Supported	Input only



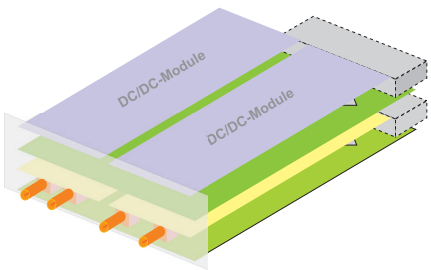
PXA(e)73x1
1 channel non-isolated ArbGen in 1 slot



PXA(e)73x2
2 channel non-isolated ArbGen in 1 slot



PXA(e)73x3
1 channel isolated ArbGen in 1 slot



PXA(e)73x4
2 channel isolated ArbGen in 2 slot

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