

# PXI520x Bit-Pattern Generator Family



## TECHNICAL DATA SHEET

PXI

### Features

VXI

- Based on VX Instruments FlexCPP for easy custom design

LAN

- Up to 2 independent modules with 4 simultaneously working channels

cPCI

- 6.6 MS/s with 8 Bit pattern width
- High configurable trigger engine

PXIe

GPIB

USB

RS232  
485

external  
PCIe

- Multiple instrument and channel synchronization possibilities
- Additional reference clock output
- Wide range of sample rates due to programmable internal PLL

## Product Information

### Flexible configurable PXI Platform

This family of bit-pattern generators is based on the "Flexible Configurable PXI Platform" (FlexCPP). This platform allows a couple of customer configured bit-pattern generators.

### Bit-Pattern Generator

The PXI520x Bit-Pattern Generator family features up to 8 simultaneously working channels divided into 2 modules with 4 channels. Every channel provides a 8Bit TTL digital output. Each module is equipped with an on-board memory holding the arbitrary Bit-Pattern for up to 4 channels.

### Sample clock

The sample clock of the PXI520x Bit-Pattern Generator is derived from a programmable master clock provided by the internal PLL. This allows a highly accurate setting of the sample clock. A post divider offers an additional integer division of the master clock frequency for output generation.

### Reference clock output

The PXI520x Bit-Pattern Generator provides a reference clock signal for every generator

module on the output connector. This signal can be used for synchronization purpose of a following signal chain.

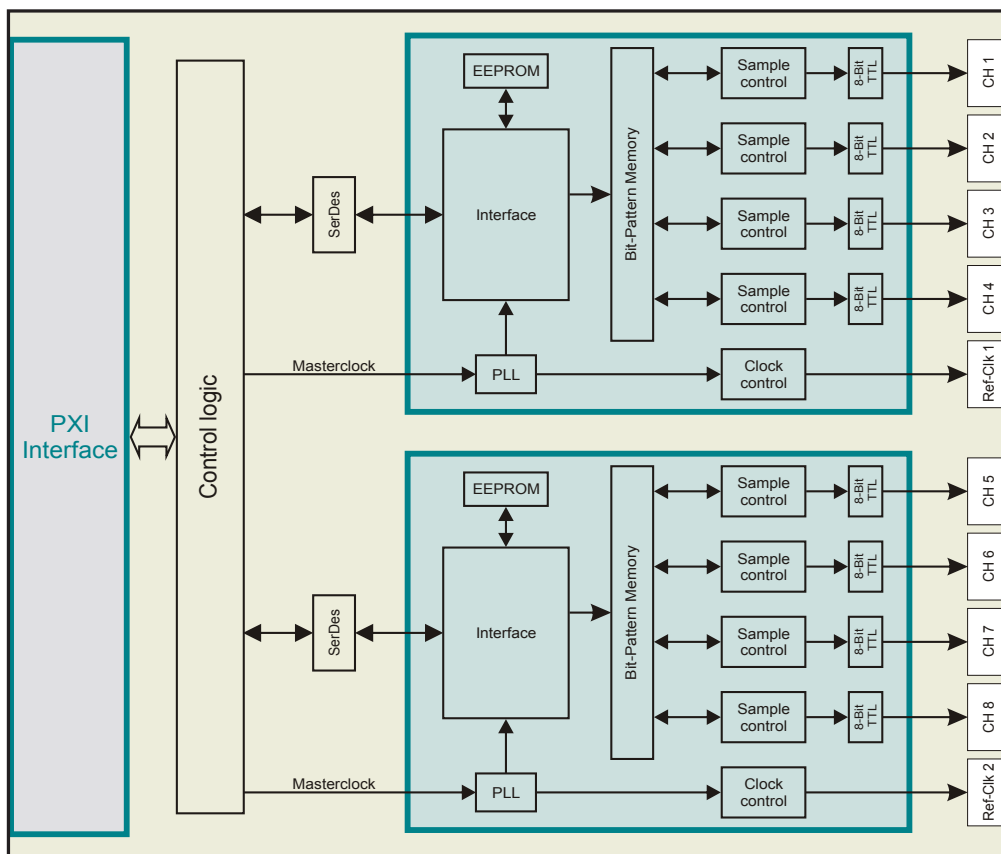
### Digital output

Every channel of the PXI520x Bit-Pattern Generator is equipped with an 8Bit digital bus driver. So digital output signals compliant to TTL standard are provided to the user. All digital output ports are referenced to a common ground.

### User specific daughter board

The PXI520x Bit-Pattern Generator devices feature a connector interface to a user specific daughter board. For fixture of the board various mounting studs are available. So the whole placement area of the right adjacent slot within a PXI chassis is provided to the user.

In addition to the digital outputs and the reference clock signal the connector interface contains two supply voltages (+3.3V and +12V) with their according common ground. This features the user a solid base for his circuit design.



General	Specification	Comment
Module size	1 slot, 3U	
Module weight	<0.7 kg	
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	

Bit-Pattern	Specification	Comment
Width	8 Bit	
Memory	2 MB, 2 MS	For one module (4 channels)

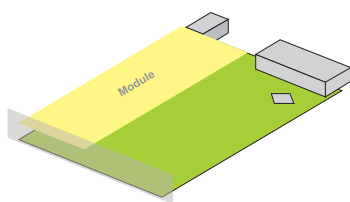
Connector Interface	Specification	Comment
Power supply		
+12 V	<200 mA	
+3.3 V	<400 mA	
Digital output	TTL	$I_{\max} = 24 \text{ mA}$

Time Base	Specification	Comment
Accuracy	50 ppm	In operating temperature range
Aging per year	5 ppm	
Sampling frequency	0.10 S/s ... 6.6 MS/s	
Reference clock	3.4 MHz ... 6.6 MHz	
Output frequency resolution	100 ppm	Of programmed value (frequency)

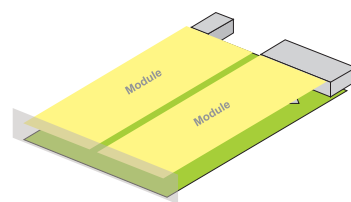
Trigger System	Specification	Comment
Input from		
Software	Via software command	
PXI trigger	Trigger 0 ... 7 and star trigger	From the PXI backplane
Output to		
PXI trigger	Trigger 0 ... 7	To the PXI backplane

PXI Capabilities	Specification	Comment
PXI trigger usage	Supported	PXI trigger 0 ... 7; input and output
PXI star trigger usage	Supported	Input only

**Notes:** All product data are specified for 1 year at 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.



**PXI5204**  
4 channel Bit-Pattern Generator



**PXI5208**  
8 channel Bit-Pattern Generator

