

# PXI-5405 16-Channel Function Generator Module

16-bit 500 kSa CPCI/PXI waveform output module with sixteen independent channels

## At a Glance

PXI-5405 is a 16-channel 16-bit function generator module for 3U CPCI/PXI signal generation systems.

Each channel can independently output sine, square, triangle, or DC waveforms with  $\pm 10$  V output capability.

The module supports a 500 kSa conversion rate, 1 to 20 kHz output frequency range, DC coupling, and 50 ohm output impedance.



# PXI-5405 16-Channel Function Generator Module

## Product Overview

PXI-5405 provides sixteen independent waveform-output channels in a compact 3U CPCI/PXI module.

The module is designed for automated test systems that require multi-channel low-frequency function generation with software-controlled waveform output.



## Key Features

- **Sixteen Output Channels**

Sixteen mutually independent signal channels support dense multi-point waveform generation.

- **16-Bit DAC Resolution**

Each channel provides 16-bit digital-to-analog output resolution.

- **Standard Waveforms**

Sine, square, triangle, and DC output modes are supported.

- **500 kSa Conversion Rate**

The module supports up to 500 kSa conversion rate for waveform output.

- **20 kHz Output Range**

Output frequency can be configured from 1 to 20 kHz.

- **PXI Integration**

The 3U single-width 4HP form factor supports chassis-based test-system integration.

# Technical Specifications

| Signal Output       |                                            |
|---------------------|--------------------------------------------|
| Channel Count       | 16 channels                                |
| Resolution          | 16 bits                                    |
| Conversion Rate     | 500 kSa                                    |
| Output Voltage      | +/-10 V                                    |
| Frequency Range     | 1 to 20 kHz                                |
| Waveform Types      | Sine, square, triangle, DC                 |
| Output Impedance    | 50 ohm                                     |
| Coupling            | DC                                         |
| Accuracy and System |                                            |
| Voltage Accuracy    | reading x 0.5% +/-1 mV @ 25 deg C          |
| Frequency Accuracy  | reading x 0.1% +/-0.2 Hz @ 25 deg C        |
| Operating System    | Windows 7 / Windows 8 / Windows 10 / Linux |
| Driver Support      | VISA-based PNP driver                      |
| Form Factor         | 3U single-width, 4HP                       |

## Environmental Grades

| Condition             | Commercial C                   | Industrial I                   | Military J                     |
|-----------------------|--------------------------------|--------------------------------|--------------------------------|
| Operating Temperature | 0 to +50 deg C                 | -20 to +50 deg C               | -40 to +50 deg C               |
| Storage Temperature   | -20 to +70 deg C               | -40 to +70 deg C               | -55 to +85 deg C               |
| Humidity              | 95% @ 25 deg C, non-condensing | 95% @ 25 deg C, non-condensing | 95% @ 25 deg C, non-condensing |

Temperature values are specified in degrees Celsius.

## Ordering Information

| Model                 | Description                                               | Availability |
|-----------------------|-----------------------------------------------------------|--------------|
| Default Configuration |                                                           |              |
| PXI-5405              | 16 channels; 16 bits; 20 kHz; +/-10 V; commercial grade   | Standard     |
| PXI-5405-I            | 16 channels; 16 bits; 20 kHz; +/-10 V; industrial grade   | Optional     |
| PXI-5405-J            | 16 channels; 16 bits; 20 kHz; +/-10 V; military grade     | Optional     |
| 3002027               | J30J-21ZKL-A cable, 50 cm length, with wire-number labels | Standard     |

Default configuration is PXI-5405, 16 channels, 16 bits, 20 kHz, +/-10 V, commercial grade.

Ordering format is PXI-5405-X, where X selects the temperature grade: C for commercial grade, I for industrial grade, and J for military grade.

# Packing List

| Item                                 | Description                                               | Quantity |
|--------------------------------------|-----------------------------------------------------------|----------|
| 16-Channel Function Generator Module | 16 channels; 16 bits; 20 kHz; +/-10 V; commercial grade   | 1 unit   |
| Accessory Cable                      | J30J-21ZKL-A cable, 50 cm length, with wire-number labels | 1 set    |
| User Manual                          | Product use and maintenance information                   | 1 copy   |
| Certificate of Conformance           | Factory inspection certificate                            | 1 copy   |

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*Specifications subject to change without notice. Per AS/NZS standards.*