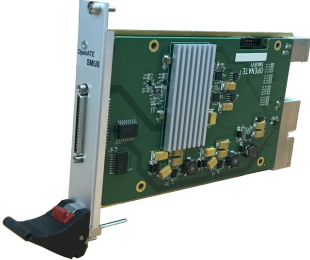


# OpenATE DPS16

<p>* Interface      3U PXI ( V )      USB ( -- )</p> <p>* 16-bit source/16-bit measure resolution</p> <p>* 0 ~ +12 V per channel</p> <p>* 4 Wire Measurement</p> <p>* 16 DPS / 0.3A per channel</p> <p>* 16 CHs V/I pulsing output</p> <p>* 16-CH digitizers designed</p> <p>* 4M Samples data memory per channel</p> <p>* High measurement speed (250k s/S)</p> <p>* External trigger</p> <p>* 16-CH 16-bit high resolution A/D converter</p> <p>* Software average measurement function for small signal</p> <p>* Win10 API</p>	<p>3U PXI</p> 
<p><b>Description</b></p> <p>The DPS16 offers high voltage DPS in a compact, 3U PXI form factor.</p> <p>The DPS16 supports 0V to +4V 0.3A or 0V to 12V 25.6mA with FVMI, FVMV, FIMV, FIMI modes.</p> <p>16 channel can be ganged to support high current driving.</p>	<p><b>Compatibility</b></p> <p>All OpenATE Interfaces PXI cards comply with the PXI Specification 2.0 (issued Aug. 2000)</p> <p>All OpenATE Interfaces USB case comply with the Universal Serial Bus Specification 2.0</p>
<p><b>Software</b></p> <p>The DPS16 is supported operating system on Windows XP / 7 / 8 / 10 x64 / x86</p>	<p><b>Application</b></p> <ul style="list-style-type: none"> <li>• Automatic Test Equipment (ATE)</li> <li>• Power supply for electronics device</li> <li>• Semiconductor test</li> <li>• LED / laser diode test</li> <li>• Battery test</li> <li>• Solar cell test</li> <li>• Power vehicle test</li> <li>• Power electronics test</li> <li>• Avionics test</li> <li>• Sensor test</li> </ul>

# OpenATE DPS16

## Specifications

<b>• DPS</b>		
Number of DPS		16
Accuracy	FI	0.1%+10nA
	MI	0.05%+2.56nA
	FV	0.1%+10mV
	MV	0.025%+1mV
Number of IRange x 4		IR1: $\pm 2.56\mu\text{A}$
		R2: $\pm 256\mu\text{A}$
		IR3: +25.6mA
		IR4: +300mA
Number of VRange x 2		VR1: 0V ~ +4V
		VR2: 0V ~ +12V
<b>• Physical Properties</b>		
Dimensions		3U
Power Requirements		3.3V@8A, 5V@3A 12V@2A
Bus & Signals		8 PXI Trigger bus lines for digitizer test
<b>• Environmental</b>		
Operating Temperature		0 ~ 50°C
Storage Temperature		-20°C ~ 70°C
<b>• Maximum boards in one system</b>		16
<b>• PXI Compliance</b>		All OpenATE Interfaces PXI cards comply with the PXI Specification 2.0 (issued Aug, 2000)

# OpenATE DPS16

## Description

The OpenATE DPS16 is a PXI based DPS (Device Power Supply) card, designed for highly accurate source or load simulation with precision voltage and current measurements. Its compact size, easy level of integration, and high flexibility make the DPS16 ideal for multi-channel power supplies.

OpenATE DPS16 offers high current DPS in a 3U PXI compact. It supports 0V to +4V 0.3A or 0V to 12V 25.6mA with FVMI, FVMV, FIMV, FIMI modes and 16 channel can be ganged to support high current driving. The multiple current measurement ranges with 16 bits DAC and 16 bits ADC provide the highest resolution and accuracy.

OpenATE DPS16 is 250KS/s sampling 16-bit 16-CH digitizers designed for digitizing high frequency and wide dynamic range signals with an input frequency up to 100KHz .

OpenATE DPS16 offers a Pulse mode, 16 channels of voltage pulsing with integrated simultaneous V or I measurement on each channel includes programmable delays, and provides a test sequencer that allows you to set up and execute tests without PC intervention.

## Gang Mode Operation

Current sharing is achieved by one channel operating as the Master under Force Voltage mode while the Slaves operate in Force Current mode. The Master channel is programmed in voltage mode while the Slaves are set to current mode. The Slaves will follow the Master's set voltage. The wiring diagram for current sharing in master/slave control is shown to above.

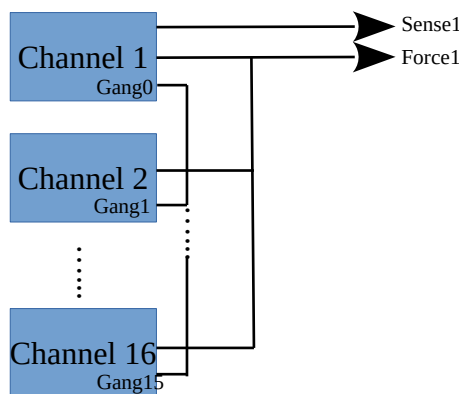


Figure 1. Gang mode ( High Current Output )

## Compatibility

All OpenATE Interfaces PXI cards comply with the PXI Specification 2.0 (issued Aug. 2000)

## Software

The DPS16 is supplied with API .

# OpenATE DPS16

## Device Capabilities

The following table and figure illustrate the voltage and current source and sink ranges of the DPS16.

DC Voltage Ranges	DC Current Source and Sink Ranges
0 ~ 4V 0 ~ 12V	2.56uA 256uA 25.6mA 300mA

Table1. Current Source and Sink Ranges

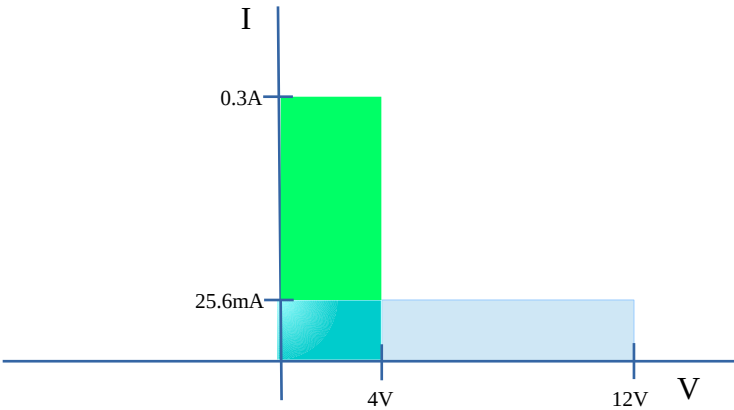


Figure 2. Quadrant Diagram ( Voltage Mode )

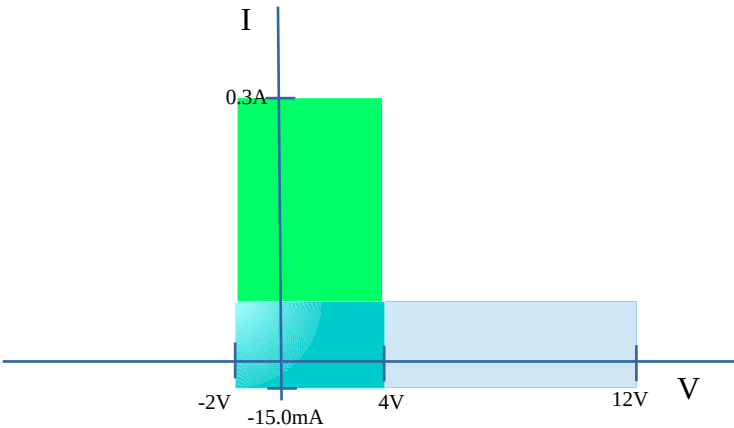


Figure 3. Quadrant Diagram ( Current Mode )

# OpenATE DPS16

## Voltage Programming Accuracy/Resolution

Range	Resolution	Accuracy (25 °C) ±(% of voltage + offset)	Offset
4V	122uV	0.1% + 10mV	±10mV
12V	244uV	0.1% + 15mV	±15mV

Table 2. Voltage Programming and Measurement Accuracy/Resolution

## Voltage Measurement Accuracy/Resolution

Range	Resolution	Accuracy (25 °C) ±(% of voltage + offset)	Offset
4V	122uV	0.025% + 1mV	±1mV
12V	244uV	0.05% + 2mV	±2mV

Table 3. Voltage Programming and Measurement Accuracy/Resolution

## Current Programming Accuracy/Resolution

Range	Resolution	Accuracy (25 °C) ±(% of current + offset)	Offset
2.56uA	58.6pA	0.1% + 10nA	±10nA
256uA	5.86nA	0.1% + 0.5uA	
25.6mA	586nA	0.1% + 50uA	
300mA	58.6uA	0.1% + 1mA	

Table 4. Current Programming and Measurement Accuracy/Resolution

## Measurement Accuracy/Resolution

Range	Resolution	Accuracy (25 °C) ±(% of current + offset)	Offset
2.56uA	58.6pA	0.05% + 2.56nA	±2.56nA
256uA	5.86nA	0.1% + 0.5uA	
25.6mA	586nA	0.1% + 50uA	
300mA	58.6uA	0.1% + 1mA	

Table 5. Current Programming and Measurement Accuracy/Resolution

# OpenATE DPS16

## Pulse Generator

The OpenATE DPS16 is high performance programmable pulse generators for testing digital systems and circuits based on TTL, or CMOS technologies. Both instruments generate clean and accurate pulses at 16 bit resolution, variable pulse widths from 1ms to 60 s, and pulse delays from 0 ns to 60 s. Output levels are adjustable from 0 V to +4 V. Apart from full control of the timing parameters, you can also adjust levels as needed.

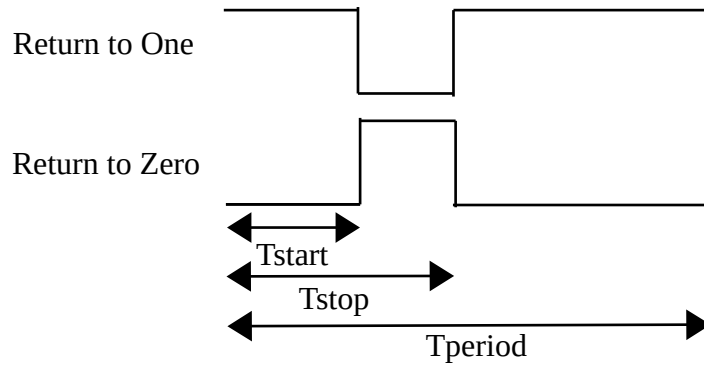


Figure 4. Pulse Mode Diagram

**OpenATE Inc.**

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