

VX6620 cPCI System Power Supply



TECHNICAL DATA SHEET

PXI

Features

VXI

LAN

cPCI

PXIe

GPIB

USB

RS232
485

external
PCIe

- CompactPCI system power supply, single output ($\pm 10\text{V}/\pm 1\text{A}$, $\pm 20\text{V}/\pm 500\text{mA}$, $\pm 40\text{V}/\pm 250\text{mA}$ and $\pm 60\text{V}/\pm 200\text{mA}$)
- Supports current source and sink
- No external power source required
- Dual mode, provides two power ranges
- Readback function for output voltage and current (measurement functions)
- Very fast rise and fall times
- Sense inputs for superior load regulation
- Autosensing to protect DUTs reliably
- Digital calibration via system interface

Product Information

The VX6620 is a 2 slot 3U register based cPCI source and measurement unit with a single programmable output. The output is isolated. The power supply is specially designed for Automated Test Equipment (ATE). An auto-sensing feature is integrated as a built-in security to protect Devices Under Test (DUT).

The programmable output voltage and current is available in various ranges ($\pm 10\text{V}/\pm 1\text{A}$, $\pm 20\text{V}/\pm 500\text{mA}$, $\pm 40\text{V}/\pm 250\text{mA}$ and $\pm 60\text{V}/\pm 200\text{mA}$). The VX6620 supports current source and sink in all 4 quadrants.

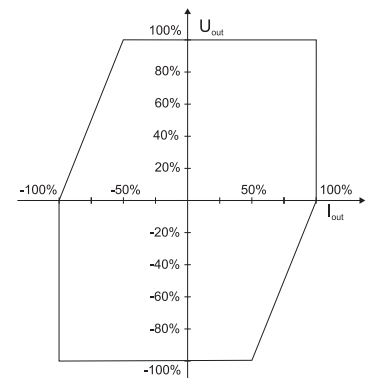
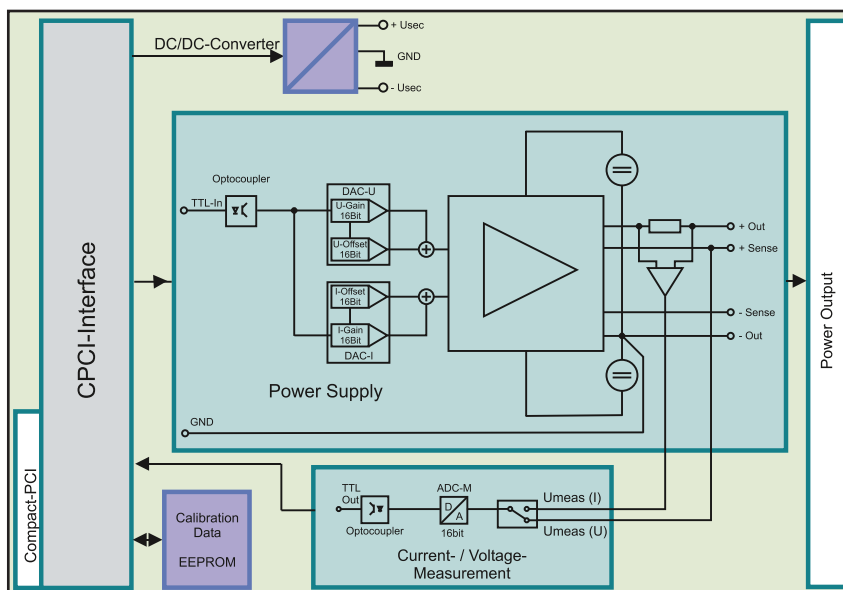
Optionally the VX6620 can be configured with an integrated readback function for output voltage and current. The dual mode option combines two output ranges in one module ($\pm 10\text{V}/\pm 1\text{A}$ and $\pm 20\text{V}/\pm 500\text{mA}$, or $\pm 20\text{V}/\pm 500\text{mA}$ and $\pm 40\text{V}/\pm 250\text{mA}$, or $\pm 30\text{V}/\pm 400\text{mA}$ and $\pm 60\text{V}/\pm 200\text{mA}$).

The VX6620 does not require an external DC source. The supplied power at the PXI backplane will be used to generate the output power. All required internal voltages are generated with special designed DC/DC converters with extremely low noise.

For safety reasons the VX6620 does support the following built-in security features required in automatic testing:

- Autosensing. If the sense line is not connected the output will be used as the sense point automatically.
- Broken sense line. The output voltage will be reduced about the voltage drop across the load line automatically.
- Shorted sense line. The output voltage will be limited to 3V above programmed value.

The instrument calibration is done digital and fully automatic. The calibration data are stored in on-board EEPROM.



General	Specification	Comment
Module size	2 cPCI slots, 3U	
Module weight	<0.7 kg	
Front connector type	25pol. D-SUB female	
Operating temperature	0 ... 50°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	

Specifications	VX 6620-10	VX 6620-20	VX 6620-40	VX 6620-60
Output ratings				
Output voltage ¹	-10 V _{DC} ... 10 V _{DC}	-20 V _{DC} ... 20 V _{DC}	-40 V _{DC} ... 40 V _{DC}	-60 V _{DC} ... 60 V _{DC}
Output current	±1 A _{DC}	±500 mA _{DC}	±250 mA _{DC}	±200 mA _{DC}
Output ranges (DC)	1.0 A, 100 mA, 10 mA	500 mA, 100 mA, 10 mA	250 mA, 100 mA, 10 mA	200 mA, 100 mA, 10 mA
Measurement Unit				
Voltage range	-10 V _{DC} ... 10 V _{DC}	-20 V _{DC} ... 20 V _{DC}	-40 V _{DC} ... 40 V _{DC}	-60 V _{DC} ... 60 V _{DC}
Current ranges (DC)	1 A, 100 mA, 10 mA	1 A, 100 mA, 10 mA	1 A, 100 mA, 10 mA	1 A, 100 mA, 10 mA

Generator Specification	Specification	Comment
Number of outputs	1	
Output Relays	Yes	On/off via software
Resolution	16 Bit	
Voltage accuracy	0.05% + 0.05%	±(of programmed value + of full range)
Current accuracy		
Accuracy in highest range	0.1% + 0.1%	±(of programmed value + of full range)
Accuracy all other ranges	0.05% + 0.05%	±(of programmed value + of full range)
Temperature drift		
Voltage	50 ppm/°C	
Current	150 ppm/°C	
Ripple and noise (20 Hz ... 20 MHz)		
Voltage (highest I-range)	<2.0 mV _{RMS} ; <60 mV _{pp}	Standard Device; RMS Normal Mode
Voltage (all other I-ranges)	<1.0 mV _{RMS} ; <20 mV _{pp}	Standard Device; RMS Normal Mode
Voltage (highest I-range)	<0.7 mV _{RMS} ; <20 mV _{pp}	Low Noise Option; RMS Normal Mode
Voltage (all other I-ranges)	<0.5 mV _{RMS} ; < 7 mV _{pp}	Low Noise Option; RMS Normal Mode
Output Settling Time²		
Rise Time	<250 μs	10% to 90% of full scale output setting
Fall Time	<250 μs	90% to 10% of full scale output setting

¹ The sum of common mode and output voltage may not exceed 60 V.

² Programmed voltage change at maximum current.

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.

Measurement Specification	Specification	Comment
Resolution	16 Bit	
Measurement modes	Single, Statistic, Array	
Voltage accuracy ¹	0.05% + 0.05%	±(of reading + of full range)
Current accuracy ^{1,2}		
Accuracy in highest range	0.1% + 0.1%	±(of reading + of full range)
Accuracy all other ranges	0.05% + 0.05%	±(of reading + of full range)

Ordering Information	Comment
VX6620-10 ³	Output power: ±10 V/±1 A
VX6620-20	Output power: ±20 V/±0.5 A
VX6620-40	Output power: ±40 V/±0.25 A
VX6620-60	Output power: ±60 V/±0.20 A
Option A ⁴	Measurement unit for voltage and current
Option B ⁴	Dual mode, provides a second power range with half voltage and higher current
Option C	Low noise option
Option PBF	All components RoHS compliant

¹ For readings >5% of range.

² Current measurement range is equal to the selected current range of the voltage source.

³ Dual Mode not available.

⁴ Always included.