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Find the *DynamicSignals / Kinetic Systems V285-ZD21* at our website: *Click HERE*

KineticSystems

V285

8 or 16-channel, 16-bit, 500 kHz DAC/Waveform Generator

The V285 is a single-width, C-size, register-based, VXIbus module that is a 16-bit, precision, arbitrary waveform generator.

It includes a DAC per channel and is capable of update rates to 500 kHz per channel.



A high-resolution multichannel arbitrary waveform generator

APPLICATIONS

Satellite testing
Missile target simulation
Hardware-in-the-loop simulation
Signal synthesis

FEATURES

- 16-bit DAC per channel
- Built-in calibration and self-test
- 10 kHz or 100 kHz programmable, 4-pole, Bessel filter per channel
- 1 or 4 Mbyte waveform memory option with single shot or continuous modes
- Optional Digi-bus™ interface
- Simultaneous update of all channels
- Programmable clock from 100 Hz to 500kHz in 1, 2, 5,.. progression
- Arbitrary waveform generation capability using LabVIEW

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GENERAL DESCRIPTION

The V285 is a single-width, C-size, register-based, VXIbus module that is a 16-bit, precision, arbitrary waveform generator. It includes a DAC per channel and is capable of update rates to 500 kHz per channel. Each analog channel includes a 4-pole, Bessel filter with programmable cutoff frequencies of 10 kHz and 100 kHz. A 16-bit ADC/multiplexer allows all channels to be automatically tested and calibrated.

The V285 Waveform Generator optionally includes either a 1 Mbyte or 4 Mbyte RAM memory. This memory may be configured either for multibuffer operation, in which data is continuously updated via the VXIbus, or it may be preloaded with waveforms. These waveforms may be continuously output (in recirculate mode) or output once per trigger (in one-shot mode).

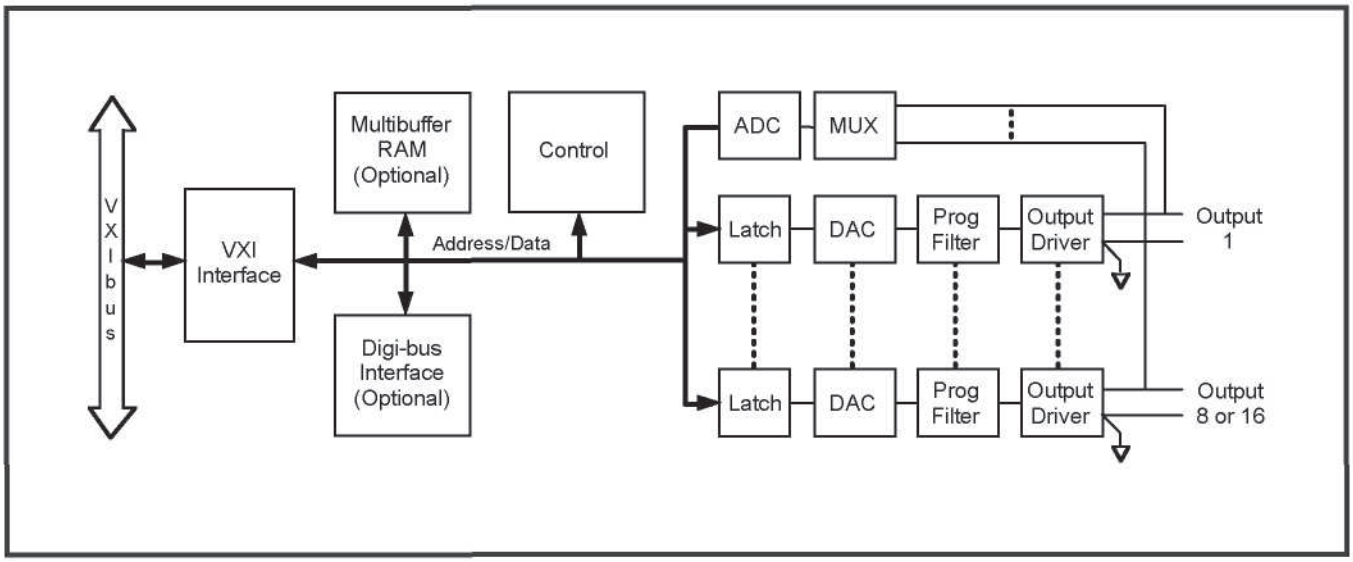
The waveform generator can also be loaded one sample at a time via a set of addressable VXIbus registers (one per DAC channel). The register contents are clocked into the DAC synchronously with the sample clock.

Alternatively, the waveform generator can accept the waveform data over Digi-bus™. Digi-bus data is selected from a "data frame" and stored in a set of holding registers, one for each DAC channel. At the next sample clock or start of Digi-bus frame, the data is strobed from the registers into the respective DACs. This allows the V285 data to be accepted directly from a DSP module such as the V165.

The waveform generator employs a sample clock to simultaneously update all channels. This clock can be selected to be an internal, crystal-controlled clock; a VXI trigger line; a Digi-bus start-of-frame; or an external, front-panel, user-supplied clock.

The V285 supports both static and dynamic configuration. It may be accessed using A32/A16, D32/D16 data transfers.

V285 Block Diagram



Item	Specification
Number of Channels	8 or 16
Output Signal Range	±10.24 V @ 25 mA (with calibration)
Resolution	16 bits
Linearity Error	±0.003% FSR
Distortion	-96 dB max. THD
Output Impedance	0.1 Ω
Output Protection	Current limiting for short circuit to ground
Output Connector Type	BNC for 8-channel option 50S High Density for 16-channel option
Maximum Transfer Rates Digi-bus option Multi-buffer option	 10 Mbyte/s 6.4 Mbyte/s
Power Requirements +5V -5.2 V +24 V -24 V	ZA11 ZB11 ZC11 ZD11 ZA21 ZB21 ZC21 ZD21 5.0 A 6.0 A 6.0 A 6.0 A 6.0A 7.0 A 7.0 A 7.0 A 215 mA 215 mA 215 mA 215 mA 420 mA 420 mA 420 mA 420 mA 280 mA 280 mA 280 mA 280 mA 550 mA 550 mA 550 mA 550 mA 240 mA 240 mA 240 mA 240 mA 475 mA 475 mA 475 mA 475 mA
Environmental and Mechanical Temperature range Operational Storage Relative humidity Cooling requirements Dimensions Front-panel potential	 0°C to 50°C -25°C to +75°C 0 to 85%, non-condensing to 40°C 10 CFM 340 mm x 233.35 mm x 30.48 mm (C-size VXIbus) Chassis ground

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KineticSystems

RELATED PRODUCTS

Model 5819-Axyz	Cable—50P High Density to Unterminated
Model 5819-Cxyz	Cable—50P High Density to 50S Amphenol Ribbon
Model 5819-Exyz	Cable—50P High Density to 50P High Density (V285 to V765)
Model 5819-Fxyz	Cable—50S High Density to 50P High Density
Model V754-ZA11	Termination Assembly for V285
Model V765-ZA11	Rack-mount Termination Panel

ORDERING INFORMATION

MODEL	DESCRIPTION
V285-ZA11	8-channel, 16-bit, 500 kHz DAC/Waveform Generator
V285-ZC11	8-channel, 16-bit, 500 kHz DAC/Waveform Generator with Digi-bus
V285-ZD11	8-channel, 16-bit, 500 kHz DAC/Waveform Generator with 4 Mbyte RAM
V285-ZA21	16-channel, 16-bit, 500 kHz DAC/Waveform Generator
V285-ZC21	16-channel, 16-bit, 500 kHz DAC/Waveform Generator with Digi-bus
V285-ZD21	16-channel, 16-bit, 500 kHz DAC/Waveform Generator with 4 Mbyte RAM
V285-0001	Digi-bus Factory Upgrade
V285-0002	1 Mbyte Buffer Factory Upgrade
V285-0003	4 Mbyte Buffer Factory Upgrade

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