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Find the *DynamicSignals / Kinetic Systems V266-ZA21* at our website: *Click HERE*

# 16, 32, or 64-channel, 16-bit DAC

## Up to 64 16-bit DAC channels at an affordable price

## V266

### Features

- **16, 32, or 64 independent analog outputs**
- **±10 V, ±16 V, or 4-20 mA output**
- **16-bit resolution**
- **Low drift**
- **Single gain and offset adjustments**
- **2-pole, Bessel output filter on each channel (voltage output option)**
- **Power-on reset to zero volts (or 4 mA)**

### Typical Applications

- **Automotive test cells**
- **Industrial control**
- **Automatic Test Equipment (ATE)**
- **Voltage and current loop control**




### General Description

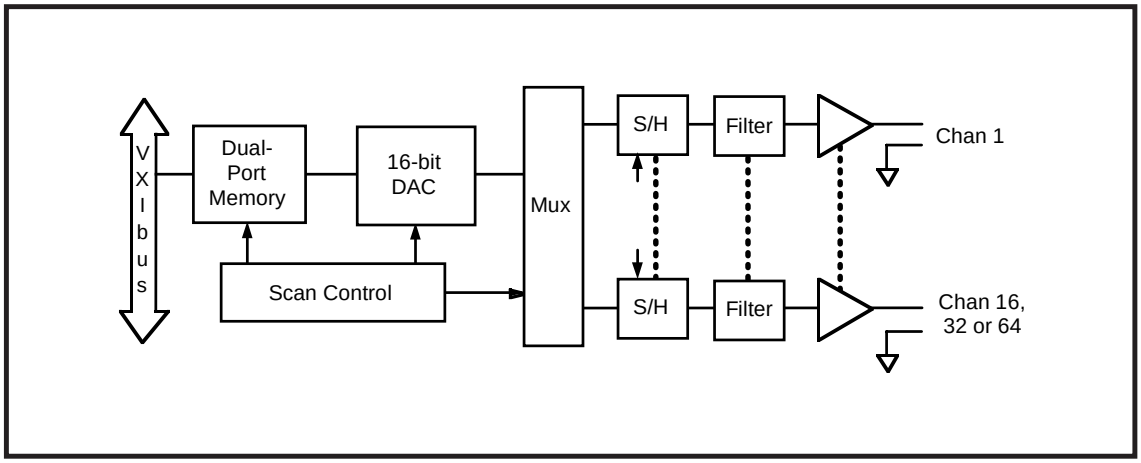
The V266 is a single-width, C-size, register-based, VXIbus module with 16, 32, or 64 16-bit analog output voltage channels. Several output options are available. The V266-ZA11 provides ±10 V full-scale outputs, the V266-ZB11 provides 4-20 mA current loop outputs and the V266-ZC11 provides ±16 V full scale. These options provide 32 output channels. Additionally, the V266-ZA21 and -ZA31 provide ±10 V full-scale outputs with a 64-channel density or 16-channel density respectively.

Data values for each channel are written to a 16-bit wide, dual-port memory. This memory is sequentially scanned, and the values are applied to a single 16-bit digital-to-analog converter. The DAC output is then multiplexed to separate high-precision sample-and-hold circuits (one for each channel), and the outputs of these circuits are fed through active, 2-pole, low-pass Bessel filters before being brought to the front panel connector. Bessel filters are provided because of their optimum step response. The nominal cutoff frequency of each filter is set at 500 Hz. Since the voltage outputs of all circuits are accurate to within 1 mV of each other, only one gain and one offset potentiometer are needed to adjust the DAC.

Data can be written to or read from the V266 in either offset binary or two's complement format as determined by the state of a bit in the control register. During power-on, the module initiates a sequence to zero the memory contents. The output signals are available at a pair of high-density connectors on the module's front panel. Paired output signals are provided to eliminate ground offset effects.

The V266 supports both static and dynamic configuration. Access to the dual-port memory is via memory locations indicated by the Offset Register within the VXIbus Configuration Register set through A24/A16 address space using D16 data transfers.

### V266 Block Diagram






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## V266 *(continued)*

| Item | Specification |
|---|---|
| Number of Channels | 16 (ZA31 option only)<br>32 (ZA11, ZB11 and ZC11 options)<br>64 (ZA21 option only) |
| Output Signal Range | |
| V266-ZA11 | ±10 V, 10 mA maximum |
| V266-ZA21 | ±10 V, 10 mA maximum |
| V266-ZA31 | ±10 V, 10 mA maximum |
| V266-ZB11 | 4-20 mA current loop (non-isolated) |
| V266-ZC11 | ±16 V, 15 mA maximum all channels driven<br>40 mA single channel<br>(all 32 channels must be collectively less than 480 mA) |
| Resolution | 16 bits |
| Linearity Error | ±0.003% FSR<br>±0.015% FSR for 4-20 mA output option<br>±0.031% FSR for ±16 V output option |
| Monotonicity | Monotonic to 14 bits |
| Absolute Accuracy | 1 mV typical (±10 V options) |
| Transfer Function Error from Nominal (4-20 mA) | ±0.3% of span |
| 4 mA Offset Error @ 0 V Input (4-20 mA option) | ±20 mA |
| Maximum Load, $R_L$ (4-20 mA option) | 1100 Ω |
| Channel Tracking | 1 mV typical (±10 V options) |
| Output Impedance (voltage options) | 0.1 Ω |
| Output Protection | Can withstand an indefinite short circuit to ground |
| Settling Time | 5 ms to 0.003% |
| Channel Latency | 2.0 ms (1.0 ms for ZA31 option) |
| Total Drift | ±15 ppm FSR/°C |
| Voltage Ripple | 500 µV RMS typical |
| On-board Memory | 16, 32, or 64 16-bit words (depending on option) |
| Output Connector Type | 68S High Density |
| Power Requirements (maximum) | ZA11, ZA21, ZB11 / ZC11 / ZA31 |
| +5 V | 1.9 A / 1.9 A / 1.9 A |
| +24 V | 0.85 A / 1.0 A / 0.55 A |
| -24 V | 0.85 A / 1.0 A / 0.55 A |
| Environmental and Mechanical | |
| Temperature range | |
| Operational | 0°C to 50°C |
| Storage | -25° to +75°C |
| Relative humidity | 0 to 85%, non-condensing, to 40°C |
| Cooling requirements | 10 CFM |
| Dimensions | 340 mm x 233.35 mm x 30.48 mm (C-size VXIbus) |
| Front-panel potential | Chassis ground |



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## Ordering Information

Model V266-ZA11 32-channel, 16-bit DAC, ±10 V output
Model V266-ZA21 64-channel, 16-bit DAC, ±10 V output
Model V266-ZA31 16-channel, 16-bit DAC, ±10 V output
Model V266-ZB11 32-channel, 16-bit DAC, 4-20 mA output
Model V266-ZC11 32-channel, 16-bit DAC, ±16 V output

## Related Products

Model 5868-Axyz Cable—68P High Density to Unterminated
Model 5868-Cxyz Cable—68P High Density to 68P High Density (V266 to V765)
Model 5868-Dxyz Cable—68S High Density to 68P High Density
Model V751-ZA11 Termination Assembly for 32-channel V266
Model V751-ZA21 Termination Assembly for 64-channel V266
Model V751-ZA31 Termination Assembly for 4-20 mA V266
Model V751-ZA51 Termination Assembly for 16-channel V266
Model V765-ZA11 Rack-mount Termination Panel



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