

The V208 is a single width, C-size, register-based, VXIbus module that provides high-speed, high-resolution, analog-to-digital conversion.

APPLICATIONS

Automotive body engineering tests
Automotive powertrain testing
Automotive safety tests
Aircraft engine testing
Shock/vibration tests
Rocket engine testing
Wind tunnel data acquisition
Satellite testing

V208

16-bit, 100,000 Sample/sec ADC Subsystem



This ADC supports 2048 MUX-bus channels of signal conditioning

FEATURES

- 100 ksamples/s, aggregate sample rate; 200 ksample/s options available.
- 16-bit resolution and differential inputs
- Incorporates MUX-bus™ expandable to 2048 channels and optional Digi-bus™ and requires no intermodule cabling
- Fully programmable sampling and triggering with separate limit check on each channel
- Precision on-board reference for end-to-end calibration
- Optional 4 or 16 Mbyte memory

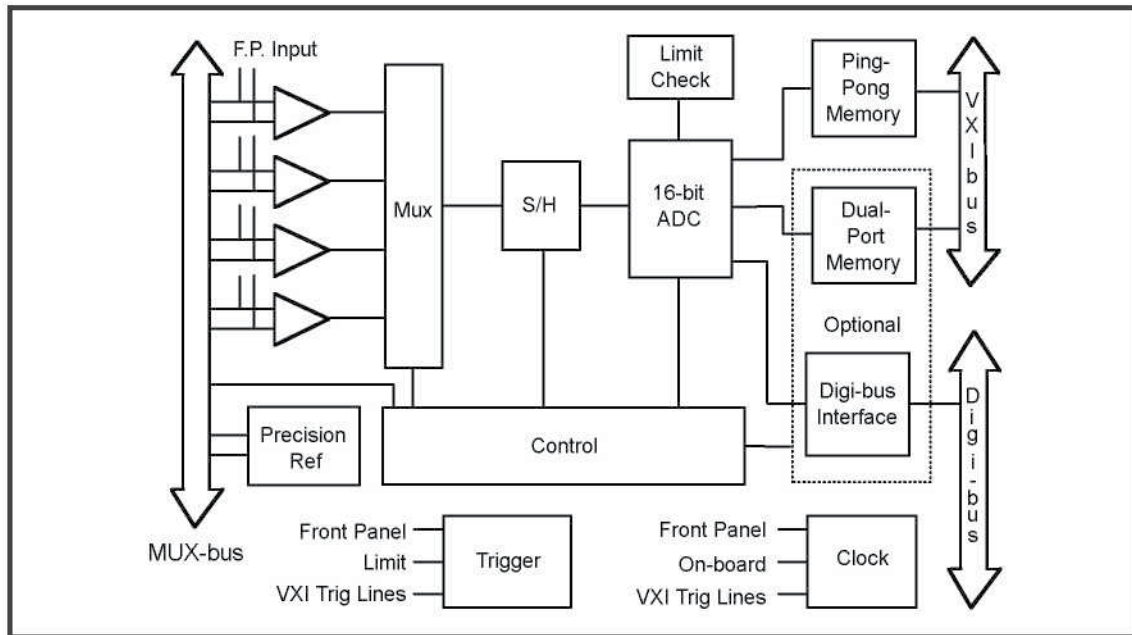
GENERAL DESCRIPTION

The V208 is a single width, C-size, register-based, VXIbus module that provides high-speed, high-resolution, analog-to-digital conversion. This module is intended for use with the KineticSystems line of VXIbus signal conditioning modules that incorporate the analog MUX-bus™ (e.g., Models V243, V246, V252, etc.) allowing extremely flexible system configurations without the need for intermodule cabling.

The V208 provides four instrumentation amplifier inputs, allowing high data throughput even with a large number of input channels. When used with 11 V243 signal conditioning modules, up to 1056 channels can be converted with each channel having its own limit-checking value. Up to 4 preconditioned signals can be monitored by the V208 without any signal conditioning modules.

This product provides a high degree of flexibility in configuring an analog sampling system. With the optional multibuffer memory, data can be taken at high sample rates with conventional controllers. If the Digi-bus™ option is used, the converted data can be forwarded to the V165 Digital Signal Processor or other modules supporting this protocol.

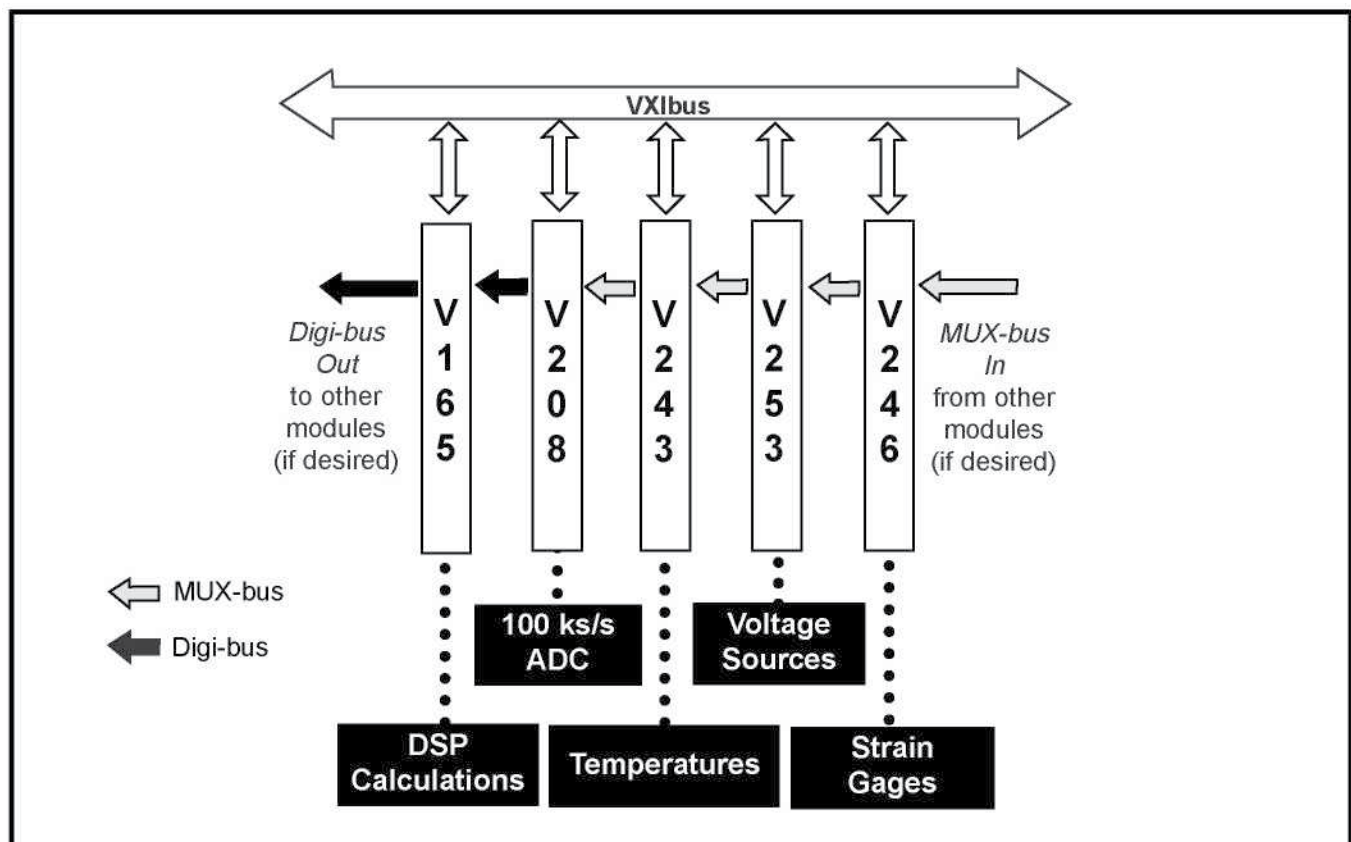
The V208 supports both static and dynamic configuration. It may be accessed using A32/A16, D32/D16 data transfers.



Item	Specification
Input Channels Number Source	4, expandable to 2048 via MUX-bus Front panel or MUX-bus on P2 connector
Analog Signal Input Type	Differential
Analog Input Range	±10.24 V
Input Impedance	Greater than 20 MΩ
Large Signal Analog Bandwidth (-3 dB)	Greater than 100 kHz
Resolution	16 bits, monotonic over operating temperature range
DC Accuracy Differential non-linearity Integral linearity No missing codes	0.006% of FSR 15 bits Guaranteed
Dynamic Performance Maximum conversion rate Crosstalk Total harmonic distortion	100 ksample/s (V208-Yxyz options), 200 ksamples/s (V208-Zxyz options) -90 dB -90dB(@100kHz)

Sample Clock Internal source Frequency choices External sources Duty cycle Backplane source	On board, crystal controlled 11 steps from 100 Hz to 200 kHz (1, 2, 5, ... sequence) Note: 100 kHz is the highest useable rate for the V208-Yxyz options) TTL signal to 200 kHz 50% 1 of 8 trigger lines on VXIbus P2 connector
External Trigger Source Minimum value	Negative-going TTL signal 50 ns
Limit Checking Resolution Maximum value	Level, \pm slope 8 bits $\pm 10.16V$
Calibration	Precision 10 V reference on board, bussed to adjacent signal conditioning modules via MUX-bus for end-to-end calibration
Connector Type	Front panel BNCs and SMBs
Power Requirements +5V -5.2 V +24 V -24 V	3.3 A (without multibuffer), 4.4 A (with multibuffer) 66 mA 130 mA 150 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 10CFM 340 mm x 233.35 mm x 30.48 mm (C-sized VXIbus) Chassis ground

A Typical Mux-bus Configuration (showing the optional Digi-bus connection)





The V208-YD22, -YD32, -ZD22 and -ZD32 options include multibuffers with pre-trigger capability. These buffers can be used in a two-port fashion, allowing one buffer segment to be filling while another segment is being read, maximizing system throughput. In addition, these buffers, under software control, can be used as circular memories for transient capture. In this mode the buffer size as well as the number of post-trigger samples can be selected.

RELATED PRODUCTS

Model 5919-Z1A Connector—SMB, Cable-type

ORDERING INFORMATION

MODEL	DESCRIPTION
V208-YA12	16-bit, 100,000 Sample/second ADC Subsystem
V208-YD22	16-bit, 100,000 Sample/second ADC Subsystem with 4 Mbyte Multibuffer with Pre-Trigger
V208-YD32	16-bit, 100,000 Sample/second ADC Subsystem with 16 Mbyte Multibuffer with Pre-Trigger
V208-ZA12	16-bit, 200,000 Sample/second ADC Subsystem
V208-ZD22	16-bit, 200,000 Sample/second ADC Subsystem with 4 Mbyte Multibuffer with Pre-Trigger
V208-ZD32	16-bit, 200,000 Sample/second ADC Subsystem with 16 Mbyte Multibuffer with Pre-Trigger
V208-PD22	16-bit, 200,000 Sample/second ADC Subsystem with 4 Mbyte Trans Buffer
V208-0001	Digi-bus factory upgrade

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