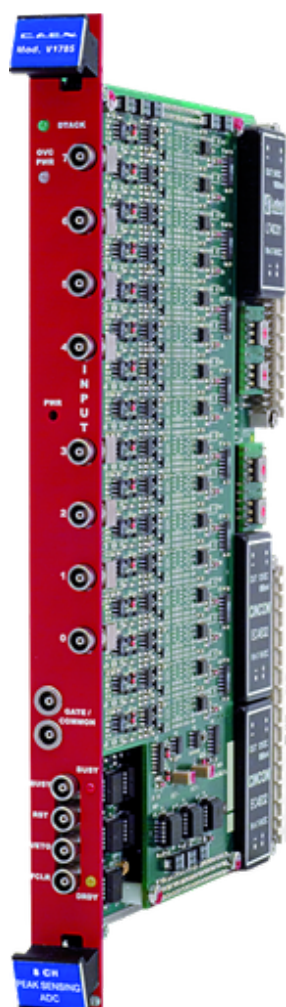
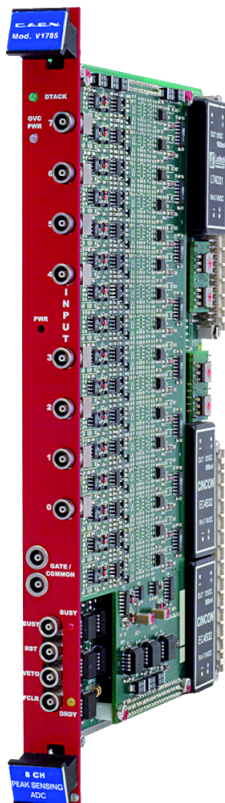


# V1785

## 8 Ch Dual Range Multievent Peak Sensing ADC



## Features



- Two simultaneous ranges: 0 ÷ 4 V / 0 ÷ 500 mV
- 12 bit resolution with 15 bit dynamics
- 125  $\mu$ V LSB on low range, 1mV LSB on high range
- 2.8  $\mu$ s / 8 ch conversion time
- 600 ns fast clear time
- Zero and overflow suppression for each channel
- $\pm 0.1$  % Integral non linearity
- $\pm 1.5$  % Differential non linearity
- 32 event buffer memory
- BLT32/MBLT64/CBLT32/CBLT64 data transfer
- Multicast commands
- Live insertion

## Description

The **Mod. V1785** is a 1-unit wide **VME 6U** module housing **8 Peak Sensing Analog-to-Digital Conversion** channels. Each channel is able to detect and convert the peak value of the positive analog signals (with >50 ns risetime) fed to the relevant connectors. Input voltage range is 0 ÷ 4 V. Each channel is processed by two gain stage (x1 and x8) in parallel followed by the ADC stage: a dual input range is then featured: 0 ÷ 4 V (1 mV LSB) and 0 ÷ 500 mV (125  $\mu$ V LSB); this allows to avoid saturation with big input signals while increasing resolution with small ones.

The ADCs use a sliding scale technique in order to reduce the differential non-linearity. Programmable zero suppression, multievent buffer memory, trigger counter and test features complete the flexibility of the unit.

The module works in A24/A32 mode. The data transfer occurs in D16, D32, BLT32 or MBLT64 mode. The unit supports also the Chained Block Transfer (CBLT32/CBLT64) and the Multicast commands.

The VME interface is VME64 and VME64X standard compliant and features the A24/A32 and MultiCast addressing modes. The data readout occurs either in D32, BLT32, MBLT64 mode, or in daisy chain with 32/64 bit Chained Block Transfers. The module features a fully programmable RORA interrupter.

The board is provided with the P1 and P2 VME connectors and fits into both V430 and standard 6U crates. It also supports the "live insertion", allowing the User to insert (or remove) the board into (or from) the crate without switching it off.

## Technical Specifications

### Packaging

1-unit wide 6U VME module

### Inputs

8 channels, 1 k $\Omega$  impedance, positive polarity, DC coupling

### Input range

Dual range: 0 ÷ 4 V / 0 ÷ 500 mV

### Resolution

12 bit (15 bit dynamics)

### Gain

High range: 1 mV/count; Low range: 125  $\mu$ V/count

### Min. input voltage

1 mV

### Reflections

< 5% with 2 ns fall time input signals

### Input offset

$\pm$ 2 mV

### RMS Noise

0.7 counts (high range), 1.5 counts (low range)

### Integral non linearity

$\pm$  0.1% of FSR (=3840 counts)  
from 5% to 95% of FSR

### Interchannel gain uniformity

$\pm$  1.5%

### Interchannel gain uniformity

> 60 dB

### Fast clear time

600 ns

### Conversion time

2.8  $\mu$ s for all channels

## Zero suppression

Threshold values programmable in:

- 16 ADC counts steps over the entire FSR
- 2 ADC counts steps over 1/8 of FSR

## Control inputs

NIM input signals:

- GATE: temporal window for current integration.
- RST: resets QAC sections, MEB status and control registers.
- VETO: inhibits the conversion of the QAC signals.
- FCLR: FAST CLEAR of QAC sections.

## Control outputs

NIM output signals:

- DRDY: indicates the presence of data
- BUSY: board full, resetting, converting or in MEMORY TEST mode

## VME interface

- A24/A32
- Geographical Addressing
- Multicast commands
- D16/D32, BLT32/MBLT64, CBLT32/CBLT64

## Ordering Options

Code	Description	
WV1785XNCAAA	V1785NC - 8 Ch. Dual Range Multievent PeakSensing ADC	RoHS

## Related Products

### VME8010



7U 21 Slot VME64 Low Cost Crate

### V3718



VME to USB 2.0 / Optical Link Bridge

### VME8004B



2U 4 Slot VME64 Mini Crate

### VME8001



1U 2 Slot VME64 Mini Crate

### NV8020A



7U CRATE VME/NIM 8 slot VME64 365W, 5 slot NIM 150W

## VME8002



5U 9 Slot VME64 Mini Crate

## VME8200



9U 21Slot VME64X Enhanced Crate series

## VME8008X



4U 8 Slot VME64X Mini Crate

## VX4718



VME to USB 3.0/Ethernet/Optical Link Bridge

## VME8004X



2U 4 Slot VME64X Mini Crate

## VME8011



7U 21 Slot VME64 Low Cost Crate

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## VX3718



VME64 to USB 2.0/Optical Link Bridge

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## V4718



VME to USB 3.0/Ethernet/Optical Link Bridge

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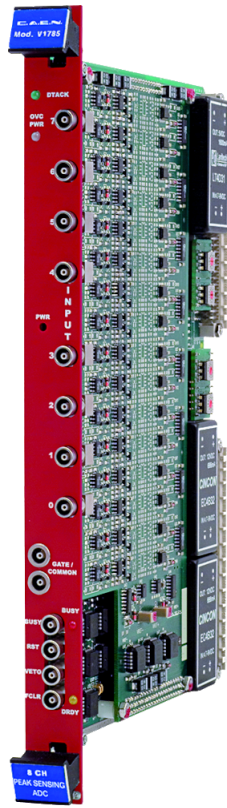
## VME8100



8U 21 Slot VME64/64X Enhanced Crate Series

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# Gallery



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