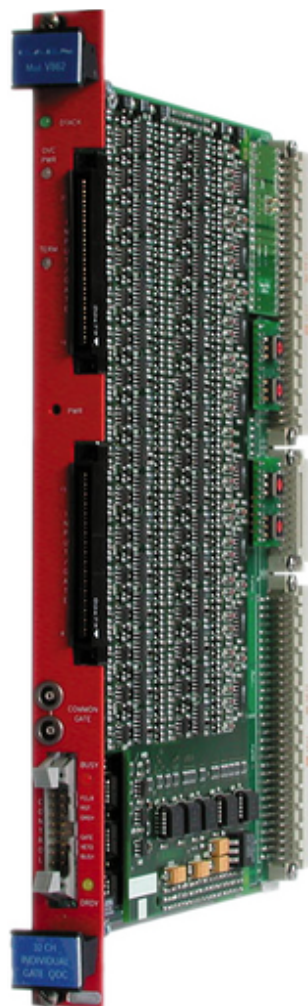
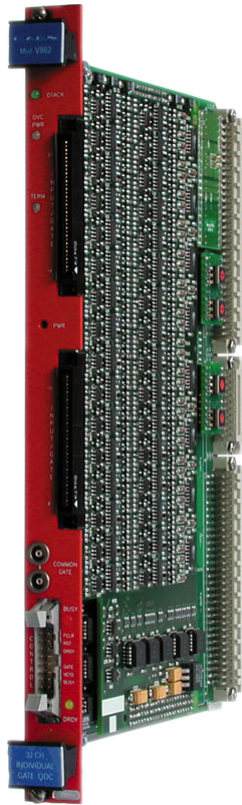


V862

32 Channel Multievent Individual Gate QDC



Features



- Individual Gate input per channel
- 0 ÷ 400 pC input range
- Full 12-bit resolution
- 100 fC LSB
- 5.7 μ s / 32 ch conversion time
- 32 event buffer memory
- 600 ns fast clear time
- Zero and overflow suppression for each channel
- $\pm 0.1\%$ integral non linearity
- $\pm 1.5\%$ differential non linearity
- BLT32/MBLT64/CBLT32/CBLT64 data transfer
- Multicast commands
- Live insertion
- Libraries, Demos (C and **LabView**) and Software tools for Windows and Linux

Description

The **Model V862** is a **1-unit wide VME 6U module housing 32 Charge-to-Digital Conversion channels** with current integrating negative inputs. Each channel has an independent gate input (GATE i) logically ANDed with a COMMON GATE input; the input charge on the i-th channel is converted to a voltage level by a QAC (Charge to Amplitude Conversion) section when both the GATE i and COMMON GATE signal are active. Input range is 0 ÷ 400 pC.

The integral non linearity is $\pm 0.1\%$ of full scale range (FSR), measured from 2% to 97% of FSR; the differential non linearity is $\pm 1.5\%$ of FSR, measured from 3% to 100% of FSR.

The ADCs use a sliding scale technique to reduce the differential non-linearity.

The outputs of the QAC sections are multiplexed and subsequently converted by two fast 12-bit ADCs (5.7 μ s for 32 channels).

The Mod. V862 offers a 32 event buffer memory; programmable zero suppression and trigger counter complete the features of the unit. The module works in A24/A32 mode. The data transfer occurs in D16, D32, BLT32, MBLT64 or CBLT32/CBLT64 mode. The unit also supports the Multicast commands.

The board has a special circuitry that allows it to be removed from and inserted in a powered crate without switching the crate off.

Technical Specifications

Packaging

6U-high, 1U-wide VME unit (version AA requires the V430 backplane)

Input signals

32 channels, 50 Ω impedance, negative polarity, DC coupling

Individual gates

32 differential ECL signals

Full scale

400 pC
(if Sliding Scale is used FSR is reduced to 3840 counts)

Resolution

12 bit

Gain

100 fC/count

Max. Tolerated positive voltage input

15 mV

Reflections

< 5% (with 2 ns fall time input pulses)

RMS Noise

0.5 counts typical

Input offset

± 2 mV

Integral non linearity

$\pm 0.1\%$ of FSR (=3840 counts)

Interchannel gain uniformity

$\pm 4\%$

Interchannel Isolation

> 60 dB

Power rejection

0.002 count/mV (+5V); 0.01 count/mV (-5V)
0.0046 count/mV (+12V); 0.0012 count/mV (-12V)

Fast clear time

600 ns

Common Gate timing

The Common Gate signal must precede the analog input by > 15 ns

Individual Gate timing

the Individual Gate signal must precede the analog input by > 8 ns

Conversion time

5.7 μ 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

COMMON GATE input

input signal, common to all channels, acting as the temporal window within which the individually gated inputs are integrated.

NIM signals, high impedance

Control inputs

Active-high, differential ECL input signals:

- GATE: same function as COMMON GATE NIM input
- 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

Differential ECL output signals:

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

VME interface

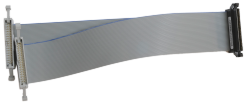
- A24/A32
- Geographical addressing
- Multicast commands
- D16/D32, BLT32/MBLT64, CBLT32/CBLT64

Ordering Options

Code	Description	
WV862XACAAA	V862AC - 32 Channel Multievent Charge ADC With Individual Gate (No JAUX, live ins)	RoHS

Accessories

A967



Cable assembly 68 pin P50 to two 2.54mm 34 pin male - 25 cm

A966



Cable assembly 68 pin P50 to four 2.54mm 16 pin male - 25 cm

Related Products

VME8200



9U 21Slot VME64X Enhanced Crate series

VME8002



5U 9 Slot VME64 Mini Crate

VME8008XB

VME8001



1U 2 Slot VME64 Mini Crate

V3718



VME to USB 2.0 / Optical Link Bridge

VX3718



VME64 to USB 2.0/Optical Link Bridge

V4718



VME to USB 3.0/Ethernet/Optical Link Bridge

VME8008B



4U 8 Slot VME64 Mini Crate

VME8011



7U 21 Slot VME64 Low Cost Crate

VME8004X



2U 4 Slot VME64X Mini Crate

VME8100



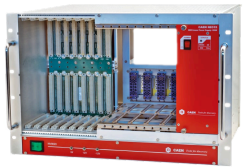
8U 21 Slot VME64/64X Enhanced Crate Series

VME8004B



2U 4 Slot VME64 Mini Crate

NV8020A



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

VME8010



7U 21 Slot VME64 Low Cost Crate

VME8008X



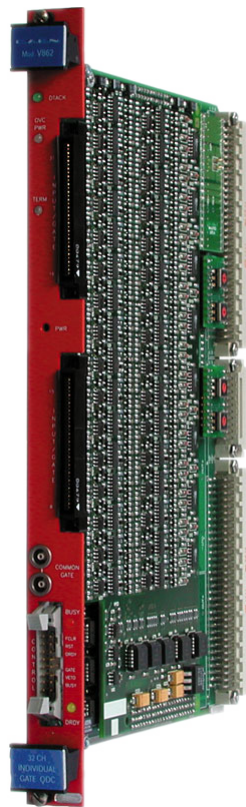
4U 8 Slot VME64X Mini Crate

VX4718



VME to USB 3.0/Ethernet/Optical Link Bridge

Gallery



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