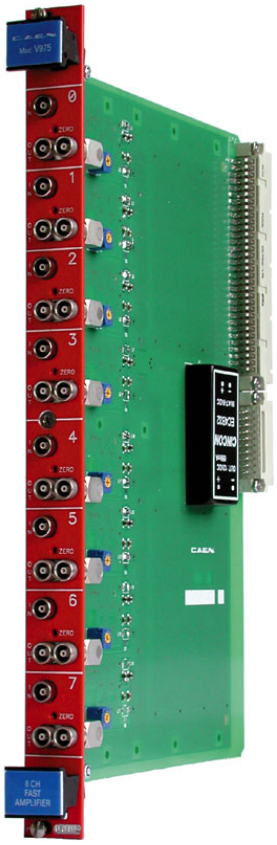
Rev. 4 - 25 February 2011

V975 series

8 Channel Fast Amplifiers



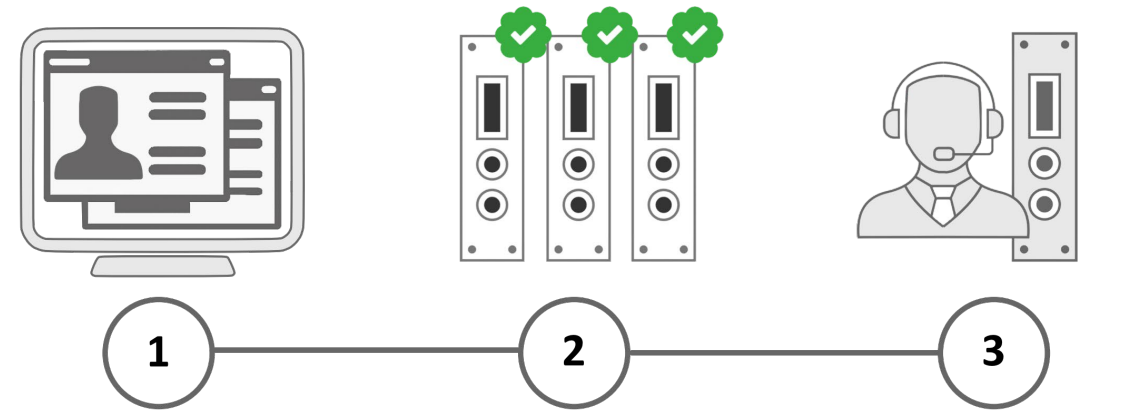
CAEN
Tools for Discovery

User Manual

Register your device

Register your device to your **MyCAEN+** account and get access to our customer services, such as notification for new firmware or software upgrade, tracking service procedures or open a ticket for assistance. **MyCAEN+** accounts have a dedicated support service for their registered products. A set of basic information can be shared with the operator, speeding up the troubleshooting process and improving the efficiency of the support interactions.

MyCAEN+ dashboard is designed to offer you a direct access to all our after sales services. Registration is totally free, to create an account go to https://www.caen.it/become-mycaenplus-user and fill the registration form with your data.



https://www.caen.it/become-mycaenplus-user/

Technical Information Manual

Revision n.4
25 February 2011

MOD. V975 series

8 CHANNEL
FAST AMPLIFIERS

NPO:
00107/01:V975x.MUTx/04

CAEN will repair or replace any product within the guarantee period if the Guarantor declares that the product is defective due to workmanship or materials and has not been caused by mishandling, negligence on behalf of the User, accident or any abnormal conditions or operations.

CAEN declines all responsibility for damages or injuries caused by an improper use of the Modules due to negligence on behalf of the User. It is strongly recommended to read thoroughly the CAEN User's Manual before any kind of operation.

CE

CAEN reserves the right to change partially or entirely the contents of this Manual at any time and without giving any notice.

MADE IN ITALY : We stress the fact that all the boards are made in Italy because in this globalized world, where getting the lowest possible price for products sometimes translates into poor pay and working conditions for the people who make them, at least you know that who made your board was reasonably paid and worked in a safe environment. (this obviously applies only to the boards marked "MADE IN ITALY", we can not attest to the manufacturing process of "third party" boards).

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. General description

1.1 Overview

The **Model V975** is a 8 channel fast rise time amplifier housed in a 1-unit VME module; each channel features a fixed voltage gain of 10.

Channels are bipolar, non-inverting.

Channels can be cascaded in order to obtain larger gain values. Each channel is provided with three LEMO 00 connectors, one for the input and two for the output (fan out of 2).

If only one of the outputs connectors is employed, the other is recommended to be terminated on 50 Ohm.

The board features a ±2 V output dynamics. 8 screw-trimmers (one per channel) allow the offset nulling.

The features include an input overvoltage protection.

Table 1.1:Versions available for the Model V975

Version[1]	Number of channels	PAUX connector[2]	–5 V DC-DC converter
V975 B	8	no	yes

Fig. 1.1: Model type label (example: V975 B)

[1] A label on the printed board soldering side indicates the module's version (see Fig 1.1); all the versions share the same features except where indicated.
[2] The versions with the PAUX connector require the V430 backplane.

2. Technical specifications

2.1 Packaging

The Model V975 is housed in a 6U-high, 1U-wide VME unit. The board hosts the VME P1 connector.

2.2 Power requirements

Power consumptions measured with Input open and Output terminated on 50 Ohm:

Table 2.1: Power requirements

Power supply	V975 B
+5 V	1.1 A

2.3 Front panel

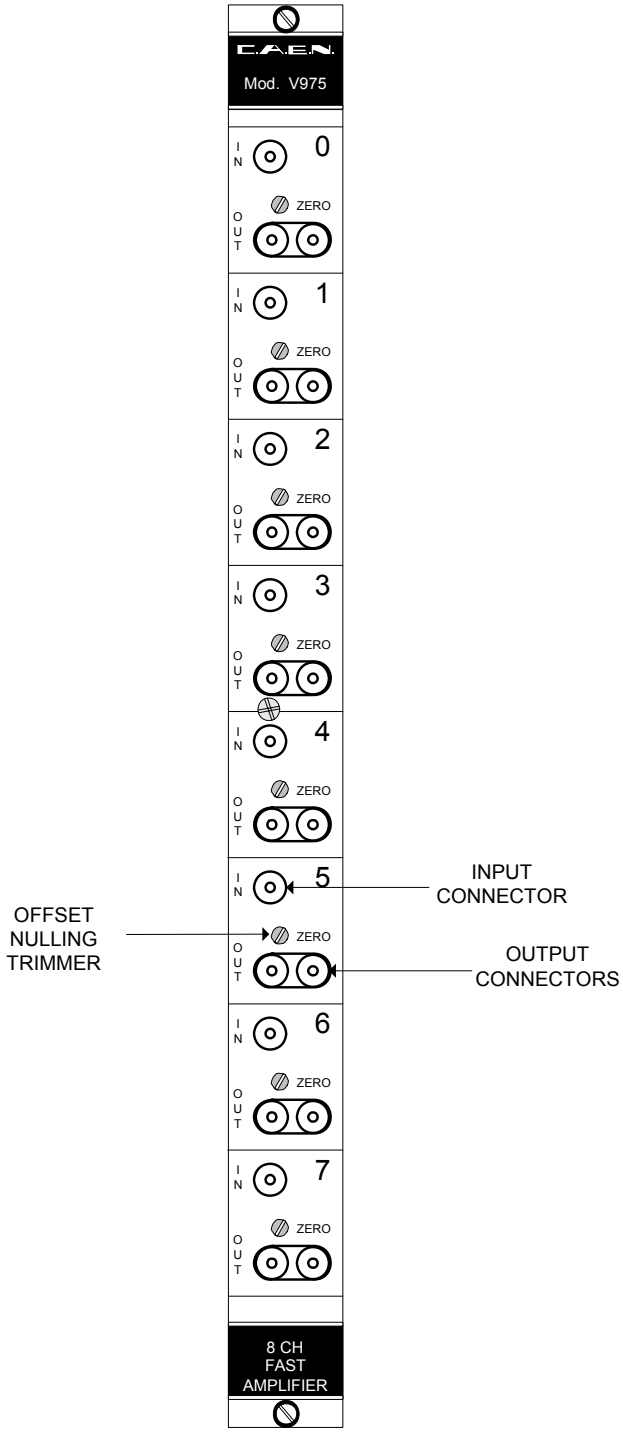


Fig. 2.2: Mod. V975 Front Panel

2.4 External components

INPUT CONNECTORS: 8 LEMO 00 connectors

OUTPUT CONNECTORS: 16 LEMO 00 connectors (8 coupled pairs)

ZERO CALIBRATION: 8 Screw-trimmers

2.5 Technical specification table

Table 2.2: Mod. V975 Technical Features

Packaging	1U-wide VME unit
Voltage gain	10 ± 6%
Rise time	≤ 1.5 ns (with unipolar input, ±25 mV amplitude)
Band width	±25 mV input signal: 0÷250 MHz ±200 mV input signal: 0÷110 MHz
Output dynamics	±2 V
Offset uniformity	±4 mV (typical) ±12 mV (maximum)
Max input amplitude	200 mV
Offset nulling range	±25 mV (measured with 0 Ohm termination on input)
Inputs channels	8, DC coupled, 50 Ω ± 2% impedance
Output channels	8 with Fan-Out of two, drive 50 Ω load
Noise	≤ 50 µV RMS (referred to the input)
Interchannel insulation	50 dB
Input reflections	≤ 10%
I/O Delay	≤ 3 ns

CAEN GmbH
Brunnenweg 9
64331 Weiterstadt
Germany
Tel. +49 (0)212 254 4077
Mobile +49 (0)151 16 548 484
info@caen-de.com
www.caen-de.com

CAEN Technologies, Inc.
1 Edgewater Street - Suite 101
Staten Island, NY 10305
USA
Phone: +1 (718) 981-0401
Fax: +1 (718) 556-9185
info@caentechnologies.com
www.caentechnologies.com

CAEN S.p.A.
Via Vetraia 11
55049 - Viareggio
Italy
Phone +39 0584 388 398
Fax +39 0584 388 959
info@caen.it
www.caen.it

CAENspa INDIA Private Limited
B205, BLDG42, B Wing,
Azad Nagar Sangam CHS,
Mhada Layout, Azad Nagar, Andheri (W)
Mumbai, Mumbai City,
Maharashtra, India, 400053
info@caen-india.in
www.caen-india.in