Rev. 01 - 31/03/2004

# V972

Delay Unit

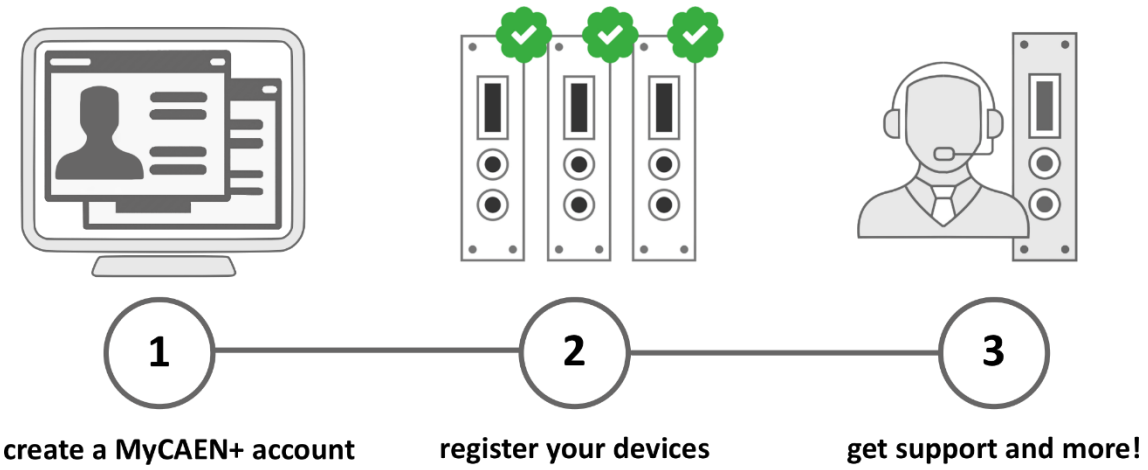

CAEN
*Tools for Discovery*

**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.1
31 March 2004

**MOD. V972**

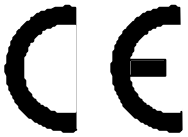
*DELAY UNIT*

**MANUAL REV.1**

**NPO**:
**00102/02:V972x.MUTx/01**

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.**



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# 1. General description

## 1.1 Overview

The Model V972 is a passive delay unit housed in a single unit VME module; the module does not require any power supply since it is made up of calibrated coaxial cable stubs for high accuracy delay.

Delay ranges from 0 to 31.5 ns (0.5 ns steps). The module has a 2.6 ns offset, so the actual delay ranges from 2.6 ns to 34.1 ns. In order to add a delay, the relevant toggle switch must be pulled towards right.

The module is provided with two LEMO 00 connectors, which are bi-directional: each connector can be used either as input or as output. Input impedance is 50 Ohm. Six toggle switches allow the delay setting.

# 2. Technical specifications

## 2.1 Packaging

The Model V972 is housed in a one unit standard VME unit. The module is made up of calibrated coaxial cable stubs for high accuracy delay, and do not require power supply.

## 2.2 Front panel

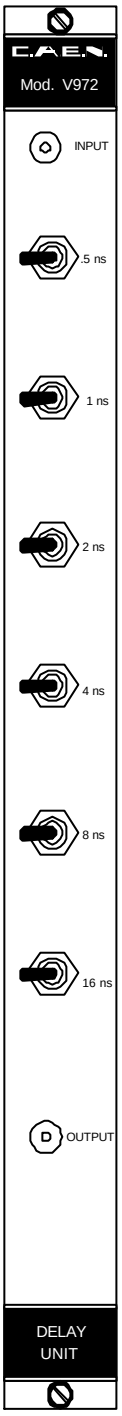


**Fig. 2.1: Mod. V972 Front Panel**

## 2.3 External components

**INPUT/OUTPUT CONNECTORS**: 2 LEMO 00 connectors

**DELAY SWITCHES**: 6 Toggle Switches

## 2.4 Technical specification table

**Table 2.1: Mod. V972 Technical Features**

| | |
|---|---|
| **Packaging** | One unit wide VME module |
| **Delay** | 0 to 31.5 ns (+ 2.6 ns offset) |
| **Resolution** | 0.5 ns |
| **Input impedance** | 50 ± 2 Ω |
| **Accuracy** | ±100 ps (for delay steps 0.5 ns through 8 ns)<br>±200 ps (for 16 ns delay steps) |
| **Max attenuation**[1] | = 2.5 dB |
| **VSWR**[2] | < 1.15 |

[1] Measured with a 100 MHz sine wave input and delay set at 31.5 ns.

[2] Measured with a square wave input (0.8 ns rise/fall time).

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