Rev. 1 - 20/06/1991

C468

16 Channel ECL-NIM Translator

CAEN
Tools for Discovery

User Manual
UM4940

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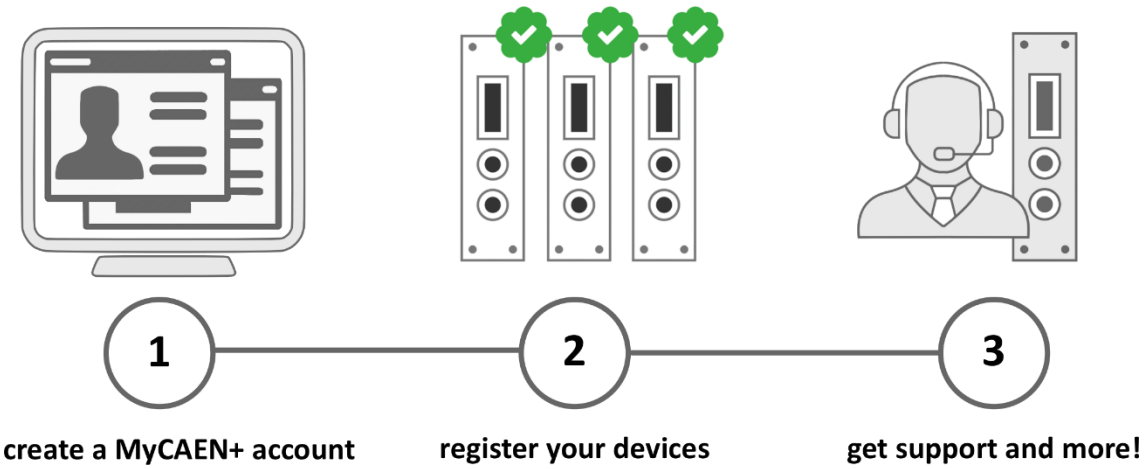

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CAEN will repair or replace any product within the guarantee period if the Guarantor declares that the product is defective due to workmanship or materials and has not been caused by mishandling, negligence on behalf of the User, accident or any abnormal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

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Disposal of the Product

The product must never be dumped in the Municipal Waste. Please check your local regulations for disposal of electronics products.

Technical Information Manual

MOD. C 468

16-CHANNEL ECL-NIM TRANSLATOR

20th June 1991

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CAEN
ECL-NIM
TRANSLATOR
Mod.C458

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1. DESCRIPTION

1.1 FUNCTIONAL DESCRIPTION

The CAEN Model C 468 16-CHANNEL ECL-NIM TRANSLATOR is a 1-unit wide CAMAC module provided with two identical 8-channel translation sections.

Through the relevant 2x8 pin flat-cable connector, each section can accept up to eight ECL inputs to be translated and the corresponding NIM outputs are available at the corresponding LEMO 00 type connectors.

The 1 to 4 and 5 to 8 input groups of each section are equipped with a 100 Ω resistor termination pack (one per input group). These resistor packs can be removed (all together) to allow the daisy-chain of the same ECL input signals on several C468 modules: in this case the inputs of the last connected C 468 must be terminated.
When unused, the resistor packs can be placed into dedicated sockets of the printed circuit board.
A front panel LED signals, when alight, that the inputs are terminated.

All the module's channels are DC coupled.

(This module is an ISN-GRENOBLE design)

N.B.: the outputs are not defined if the inputs are not driven correctly.

2. SPECIFICATIONS

2.1 PACKAGING

1-unit wide CAMAC module.

2.2 EXTERNAL COMPONENTS

CONNECTORS (per section):

- No. 8 LEMO 00 type "1..8". output connectors 1 to 8.

- No. 1 2x8 pin flat-cable connector. Input connector (1 to 8 inputs).

2.3 INTERNAL COMPONENTS

- No. 4 resistor termination packs "RS1", "RS2", "RS3", "RS4". Input terminations, 100 Ω each.

2.4 CHARACTERISTICS OF THE SIGNALS

INPUTS:

- DC-coupled.
- ECL level.
- Impedance: 100 Ω ±5%.
- Minimum pulse width: 3 ns (FWHM).

OUTPUTS:

- DC-coupled.
- NIM level (when terminated in 50 Ω).
- Risetimes and Falltimes: <2 ns, 10% to 90%.

GENERAL:

- I/O delay: <7 ns.
- Maximum frequency: >200 MHz, with an output signal attenuation of 10%.

2.5 POWER REQUIREMENTS

- 6 V at 500 mA.

3. OPERATING MODE

3.1 GENERAL INFORMATION

The Model C 468 16-CHANNEL ECL-NIM TRANSLATOR has two ECL-NIM translation sections, each one with eight inputs and eight outputs.
Both the inputs and outputs are DC coupled, and four internal resistor termination packs (470 Ω each) allows the module's outputs to be terminated (resistor packs all inserted) or not (resistor packs all removed).

When several C 468 modules are cascaded, the inputs of the last connected C 468 must be terminated.

3.2 OPERATIONS TO BE PERFORMED

CAUTION: *turn OFF the CAMAC crate before inserting or removing the module.*

1. Insert the C 468 module into the CAMAC crate.
2. Connect the signal sources to the selected input connectors.
3. Connect the module's outputs corresponding to the selected inputs to the NIM devices to be used.
4. Turn on all the equipment devices.

4. TEST PROCEDURE

4.1 INTRODUCTION

The operations to be performed to test the C 468 module are listed in the procedure below and have to be carried out according to their numerical sequence. None of the procedural step can be omitted. Each procedural step contains the operation to be performed and the corresponding effect or the verification to be accomplished.

4.2 SUGGESTED INSTRUMENTS

0- No. 1 Oscilloscope (200 MHz minimum bandwidth).

- No. 1 Signal Generator capable of producing Std. NIM level signals (7 ns minimum pulse width).

- No. 1 CAEN model N 105 Dual Fan-Out 1x16.

- No. 1 CAEN model C 467 16-channel NIM-ECL translator.

- No. 1 CAMAC crate.

- No. 1 NIM crate.

4.3 PROCEDURE

The C 468 module comes from CAEN fully tested and calibrated. This procedure allows the user to accomplish a functional test of the module.

CAUTION: *Turn OFF the crate before inserting or removing the module.*

1. Insert the C 467 and C 468 modules into the CAMAC crate, and the N 105 into the NIM crate.

Both the C 467 outputs and the C 468 inputs must be terminated (all the resistor termination packs have to be inserted).

2. Connect the outputs of one of the N 105 sections to the C 467 inputs.

3. Connect the outputs of the C 467 to the C 468 inputs.

3. Turn ON the crates.

4. Via Signal Generator, supply the input of the selected N 105 section with a Std. NIM level signal.

5. With the Oscilloscope, verify that a NIM signal is present at each output channel of the C 468 module.

THE MODULE IS TESTED AND OPERATES CORRECTLY

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