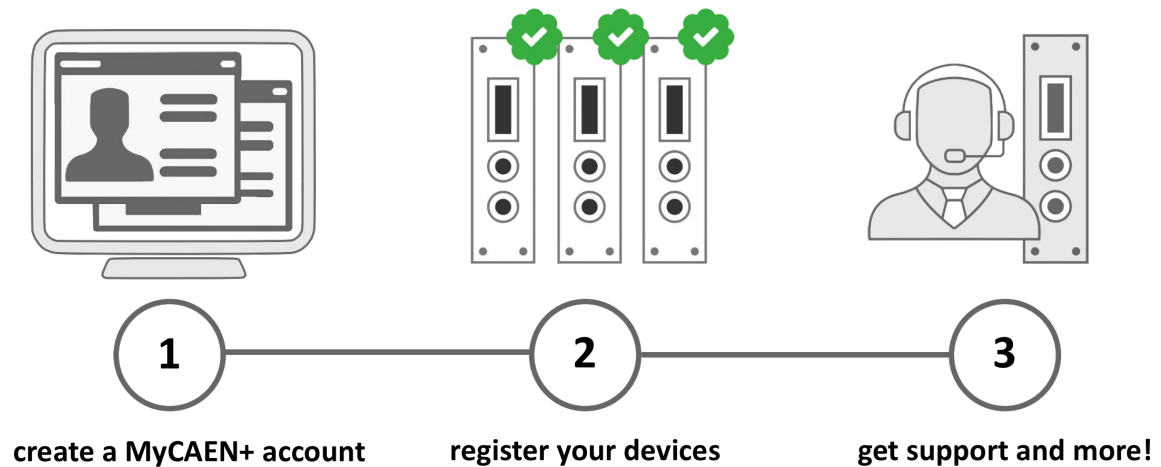# Register your device

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.

1

create a MyCAEN+ account

2

register your devices

3

get support and more!

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

Purpose of this Manual

This document is the DT75xx User's Manual; it contains information about the installation, the configuration and the use of the unit.

Change Document Record

Date	Revision	Changes
19 September 2017	0	Preliminary
30 January 2018	1	Updated for A750x channels

Reference Documents

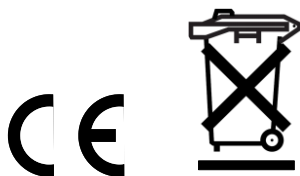A750x High Efficiency Power Supply user manual

Disclaimer

No part of this manual may be reproduced in any form or by any means, electronic, mechanical, recording, or otherwise, without the prior written permission of CAEN SpA.

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

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

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 cannot attest to the manufacturing process of "third party" boards).

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1. Module description

Overview

Fig.1: DT75xx Desktop Evaluation Board

The **DT75xx** is a Desktop module, housing an Evaluation Board for A750x channels.

It allows to use the A750x PCB mount channels as desktop power supplies, for test and evaluation purposes.

2. Technical specifications

Packaging

The DT75xx unit is a Desktop module housed in a 154x50x164 mm3 (WxHxD) alloy box. The kit includes:

- DT75xx Desktop module
- External AC/DC power supply with separate power cord

Power requirements

The module is powered by the external AC/DC stabilized power supply included in the delivered kit (Switchbox Model FRA045-S12-4; see specifications)

Note.: Using a different power supply source, like battery or linear type, it is recommended the source to provide +12V and, at least, 2.5A; the power jack is a 2.1mm type, a suitable cable is the RS 656-3816 type (or similar).

CAEN ⬡ Electronic Instrumentation

Front and back panel

Fig.2: DT75xx front and rear panel

External components

VSET

Rotary handle; allows to set output voltage (right: increase; left: decrease)

ISET

Rotary handle; allows to set maximum current (right: increase; left: decrease)

5V – 12V

Two position switch; allows to select between +5V and +12V power supply input (refer to A750x User's manual)

HV ON

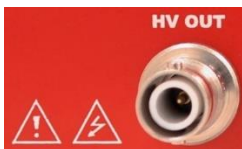Two position switch; allows to turn HV On

VMON

2 x 4mm socket
VMON readout; red = signal; black = GND

IMON

2 x 4mm socket
IMON readout; red = signal; black = GND

HV OUT

HV OUT   HV Channel Output; Mod. SHV RADIALL R317580; Impedance: 50 Ohm; Frequency range: 0 – 2 GHz; VSWR: <1.20 + 0.3 F (GHz) – (plug and jack); Test voltage: 10kV DC – 1mn (unmated connectors); Ratings: 12kV DC – 1mn (mated pairs); Current rating: 10 A

WARNING! These connectors produce extremely hazardous high voltages at a potentially lethal current level; never connect or disconnect the HV OUT connector with the power ON/OFF switch ON; always switch power OFF and wait at least 30s before connecting or disconnecting HV cables.

INPUT CURRENT

2 x 4mm socket
Input Current readout

12V IN

12V In	RAPC722X SWITCHCRAFT PCB 2.1mm DC Power Jack	Input	+12V DC Input
ON/OFF switch	Molveno A11331122000 A1 switch		**O** → power supply OFF. **I** → power supply ON

Technical specifications table

Table 1: DT75xx Technical Features

Packaging	Desktop module; 154x50x164 mm³ (WxHxD) alloy box; weight 0.6kg
Humidity range	0 ÷ 80%
Operating temperature	0 ÷ 45°C
Storage temperature	-10 ÷ 70°C
External power supply	Switchbox FRA045-S12-4 (12 VDC, 3.75 A, 45 W); Universal Input C14 receptacle; INPUT Voltage range 100-240VAC 1.2A 50-60Hz. Inrush current 40A at 115VAC / 80A at 230VAC max. Dielectric withstand Input/output 3,000VDC. OUTPUT Output voltage +12V. Ripple and noise 2% p-p max. Load regulation ±5% max. No load stand by power <0.5W @ 230VAC. Efficiency >=85% for CEC requirement. Hold up time 10ms at nominal line. Protections OCP, OVP, over power & short circuit. GENERAL Std output connector Dc barrel jack. Std output cable/length UL1185, #18AWG / 5 ft. ENVIRONMENTAL Operating temperature 0°C to +40°C. Storage temperature –20°C to +85°C. STANDARDS Safety standards IEC/UL/EN60950-1, CE, CB. EMC EN55022 (CISPR 22) class B, FCC class B.

3.   Unit operation

Safety requirements and Initial inspection

N.B. read carefully the "Precautions for Handling, Storage and Installation" document provided with the product before starting any operation!

The following HAZARD SYMBOLS are reported on the unit:

CAUTION: indicates the need to consult the "Precautions for Handling, Storage and Installation" document provided with the product. **A potential risk exists if the operating instructions are not followed**

HIGH VOLTAGE: indicates the presence of electric shock hazards. Enclosures marked with these symbols should only be opened by CAEN authorized personnel. **To avoid risk of injury from electric shock, do not open this enclosure**

To avoid potential hazards, use the product only as specified. Only qualified personnel should perform service procedures.

Avoid Electric Overload. To avoid electric shock or fire hazard, do not power a load outside of its specified range.

Avoid Electric Shock. To avoid injury or loss of life, do not connect or disconnect cables while they are connected to a voltage source.

Do Not Operate without Covers. To avoid electric shock or fire hazard, do not operate this product with covers or panels removed.

Do Not Operate in Wet/Damp Conditions. To avoid electric shock, do not operate this product in wet or damp conditions.

Do Not Operate in an Explosive Atmosphere. To avoid injury or fire hazard, do not operate this product in an explosive atmosphere.

Do Not Operate with Suspected Failures. If you suspect this product to be damaged, have it inspected by qualified service personnel.

Prior to shipment this unit was inspected and found free of mechanical or electrical defects. Upon unpacking of the unit, inspect for any damage, which may have occurred in transport. The inspection should confirm that there is no exterior damage to the unit, such as broken knobs or connectors, and that the panels are not scratched or cracked. Keep all packing material until the inspection has been completed. If damage is detected, file a claim with carrier immediately and notify CAEN. Before installing the unit, make sure you have read thoroughly the safety rules and installation requirements, then place the package content onto your bench; you shall find the following parts:

- DT75xx desktop power unit;
- External AC/DC power supply with separate power cord

Installation

- Place the unit on a clean and dry surface;
- Make sure that the AC/DC power supply is NOT connected to the DC input rear connector
- Remove the plexiglass cover using a cross head screw driver:
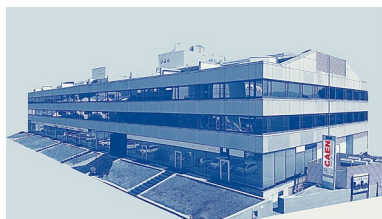

- Slide the plexiglass rear wards, then plug the A750x module into the PCB socket; be very careful not to bend the contact pins!
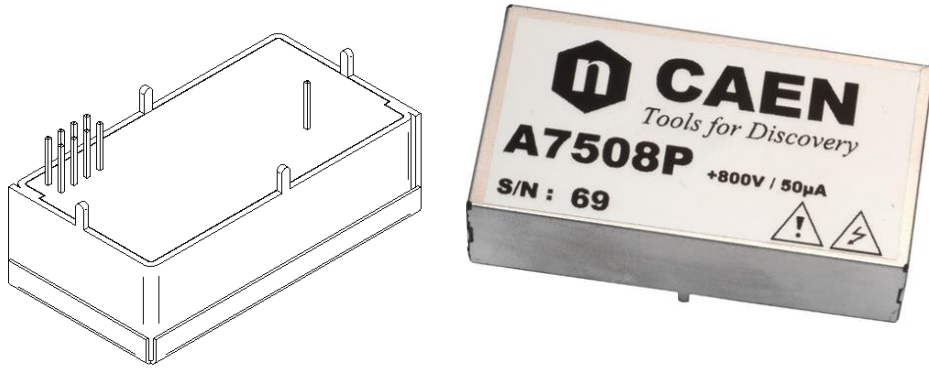
- Put back the plexiglass cover in place, including the cross-head screw

- Connect the DT75xx to the AC/DC power supply through the DC input rear connector

- Connect the HV OUT to the load

- Connect the external AC/DC power supply to Mains (AC) via the separate power cord

- Select the proper 5V or 12V power supply (check A750x User's manual)

- Power up the DT75xx through the ON/OFF rear switch

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