CAEN
Tools for Discovery

Electronic Instrumentation



# SY4527 SY4527LC System Quickstart Guide

GD2463 Rev. 9 - 26 May 2025

# Purpose of this Manual

This document is the SY4527 SY4527LC System Quickstart Guide. It contains basic information about the installation, the configuration and the use of the SY4527 SY4527LC  Power Supply Systems.

# Change Document Record

| Date | Revision | Changes |
|---|---|---|
| 5 May 2012 | 0 | Preliminary release |
| 5 November 2012 | 1 | Updated installation |
| 25 September 2013 | 2 | Updated installation and log in |
| 7 May 2014 | 3 | Updated LCD installation |
| 7 October 2014 | 4 | Software description |
| 1 April 2015 | 5 | New Trouble shooting |
| 15 June 2017 | 6 | Major update with instructions also for SY4527LC |
| 23 April 2018 | 7 | Updated Safety and operation requirements |
| 12 June 2018 | 8 | Updated Hardware installation |
| 26 May 2025 | 9 | System Configuration, System Access |

# Symbols, abbreviated terms and notation

T.B.D.

# Reference Document

CAEN S.p.A.
Via Vetraia, 11 55049 Viareggio (LU) - ITALY
Tel. +39.0584.388.398  Fax +39.0584.388.959
info@caen.it
www.caen.it



**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).

CE 

# *Index*

# Introduction



The SY4527 system is the fully equipped experiment version of a new line of power supply systems which represent CAEN's latest proposal in the matter of High Voltage and Low Voltage Power Supplying. This system outlines a completely new approach to power generation and distribution by allowing the housing, in the same mainframe, of a wide range of boards with different functions, such as High/Low Voltage boards, generic I/O boards (temperature, pressure monitors, etc.) and branch controllers, where the latter are used to control other remote generators and distributors. Modularity, flexibility and reliability are the key-points of its design, enabling this module to meet the requirements needed in a wide range of experimental conditions. The mainframe is housed in a 19"-wide, 8U-high euro-mechanics rack and hosts four main sections:

- the Board Section, with 16 slots to house power supply boards, distributors and branch controllers;
- the Fan Tray Section, housing 6 fans arranged on two rows, with programmable rotation speed regulation;
- the Power Supply Section, which consists of the Primary power supply and up to 3 “Booster” units;
- the CPU and Front Panel Section which includes all interface facilities.
- The CPU controller is available in 3 different versions: BASIC, ADVANCED and FULL.
  - The BASIC version provides all communication interfaces, RESET control, INTERLOCK control and status LEDs.
  - The ADVANCED version also provides the beam handshake management signals (CH-ON, GEN, VSEL, ISEL).
  - The FULL version provides the complete set of connectors, ENABLE control section, and fan speed control.

The User Software Interface features the usual friendliness of the previous CAEN systems which now also can optionally include a color touchscreen LCD (two version are available: 10.4” and 5.7”). Modularity has been one of the leading criteria in the design and development of the system: both the Power Supply Section and the Board Section are completely modular. The Power Supply Section allows different configurations with up to 4 power supply units per mainframe (up to 4.2kW), while the Board Section can house up to 16 boards able to perform different functions. The complete line of power supply boards and distributors that has been specially developed for SY1527 are fully compatible with the new mainframes. The minimum working system configuration consists of the Primary power supply, one CPU controller and one board. The system allows also to deal with power supply solutions composed by "branch controllers" (housed in the system mainframe) and on-detector "remote boards" (manufactured to be magnetic field and radiation tolerant). A sophisticated trip handling via software allows to control and correlate trip conditions on the channels of the crate. Live insertion and extraction of the boards, which reduces the down time of the global system and eases access to the computing core and peripherals of the system, complete the system flexibility.

Easy interfacing is another key-point of the SY4527 system. The Gigabit Ethernet interface (and the optional Wi- Fi interface) allows both an easy web access and the connection via OPC Server to a SCADA control system. Enhanced software programming features an unified command set independent from the interface used to communicate with the system. The Power Supply Section and Board Section can be externally synchronised via front panel connectors. Handy maintenance and upgrading, which constitute a major issue in the reliability of a system, are further guaranteed by the possibility of accessing and servicing the system via network facilities. A USB service port allows debugging, configuration and firmware upgrade.

- Two new powerful improvements have been carried out on the new backplane:
- A new 48V Power Bus distribution
- FLEXRAY Fast Serial Link

The SY4527LC system is a simplified version of the SY4527 power supply system; it shares most of its feature with its bigger brother, with the following exceptions:

- the Board Section has 10 slots to house power supply boards, distributors and branch controllers;
- the Power Supply Section hosts the 600 W non expandable power supply unit
- the CPU provides all communication interfaces, RESET control, INTERLOCK control and status
- LED colour touchscreen LCD for local control is not available

# Safety and operation requirements

This section contains the fundamental safety rules for the installation and operation of the SY4527 system. Read thoroughly this section before starting any procedure of installation or operation of the product.

## General information

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it. To avoid potential hazards, use the product only as specified. Only qualified personnel should perform service procedures.

## Injury Precautions

- Use Proper Power Cord and HV Cables
- To avoid fire hazard, use only the power cord and HV cables specified for this product.
- Avoid Electric Overload.
- To avoid electric shock or fire hazard, do not apply a voltage to a load that is outside the range specified for that load.
- Avoid Electric Shock.
- To avoid injury or loss of life, do not connect or disconnect cables while they are connected to a voltage source.
- Ground the Product.

**WARNING:** this product is grounded through the grounding conductor of the power cord. To avoid electric shock, the grounding conductor must be connected to earth ground. Before making connections to any input or output terminals of the product, ensure that the product is properly grounded. The HV channels contain hazardous voltages. Be certain that the high voltage is completely discharged before removing or connecting the high voltage cables. High voltage cables can store charge if they are disconnected from the supply while high voltage is turned on, and can cause personal injury or death if not handled properly. Use only connecting cables with a rated voltage within the foreseen range. Do not connect the high voltage output to exposed circuitry. The load connected to the high voltage output should be enclosed in a metal shield that is connected to safety earth ground using a properly designed cord.

- 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 install the crates on top of each other
- Install in equipment racks with flame breaker top and bottom panels
- A minimum distance of 15cm is required between the crate and other object over or under it.
- If required the equipments may be cleaned with isopropyl alcohol or deionised water and air dried. Clean the exterior of the product only. Do not apply cleaner directly to the items or allow liquids to enter or spill on the product.

## Product Damage Precautions

- Use Proper Power Source.
- Do not operate this product from a power source that applies more than the voltage specified.
- To prevent product overheating, do not obstruct cooling fans vents
- Do Not Operate With Suspected Failures.
- If you suspect there is damage to this product, have it inspected by qualified service personnel.

## Product cleaning

If required, the equipment may be cleaned with isopropyl alcohol or deionised water and air dried. Clean the exterior of the product only. Do not apply cleaner directly to the items or allow liquids to enter or spill on the product.

## EC Certifications and Compliance

Use in conformity of the definition with fully equipped mainframe with fully closed slots by boards or dummy panels. Sufficient cooling and mains connection must be secured according to regulations. Signal lines length during all tests was less than 3 m. Admitted for powering by industrial mains only.

## Terms in this Manual

- **WARNING:** Warning statements identify conditions or practices that could result in injury or loss of life.
- **CAUTION:** Caution statements identify conditions or practices that could damage this product or other property.

## Safety Terms and Symbols on the Product

These terms may appear on the product:

- **DANGER** indicates an injury hazard immediately accessible as you read the marking.
- **WARNING** indicates an injury hazard not immediately accessible as you read the marking.
- **CAUTION** indicates a hazard to property including the product.

The following label is printed on the back panel of the product:

**CAUTION:**
**Before any operation read technical manual.**
**Refer servicing to qualified personnel only.**

These symbols mean:

**DANGER**
**High Voltage**

**ATTENTION**
**Refer to Manual**

**Functional earth terminal**

## General Operation Requirements

Before operation, check the following requirements:

| | |
|---|---|
| Operating temperature: | 5÷40°C (dry atmosphere) |
| Max. length of cables: | according to cable specifications |

## Power cords

The system is provided with power cord, suitable to configuration requirements, as reported on the following label:

**SY4527**

| | |
|---|---|
| VOLTAGE RANGE: | 100 - 240 V~ |
| FREQUENCY: | 50 - 60 Hz |
| INPUT CURRENT: | 25A MAX |

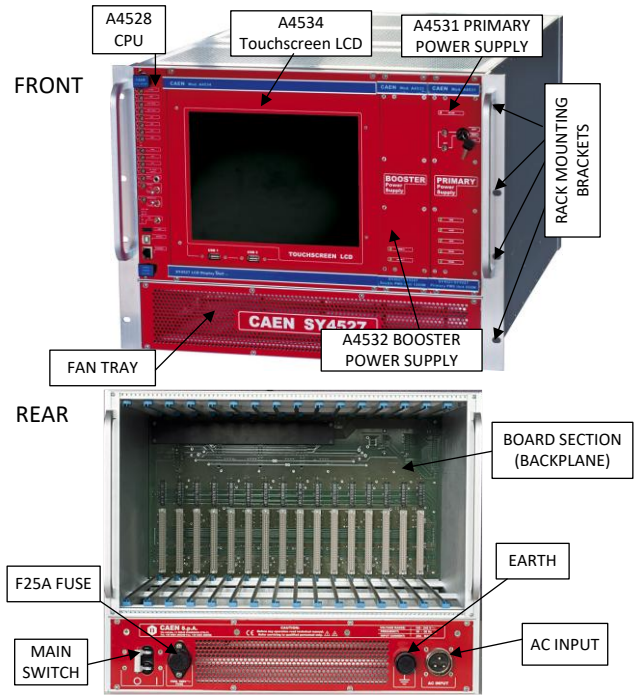
**SY4527LC**

| | |
|---|---|
| VOLTAGE RANGE: | 100 - 240 V~ |
| FREQUENCY: | 50 - 60 Hz |
| INPUT CURRENT: | 10A MAX |

# Hardware installation

## Initial inspection

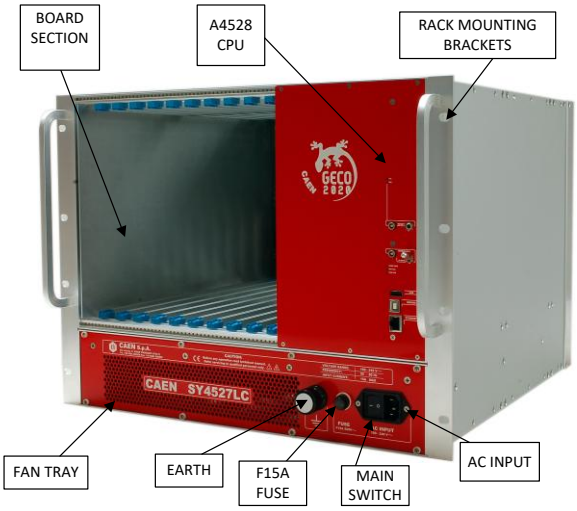
**SY4527**




The mainframe is housed in a 19"-wide, 8U-high euro-mechanics rack and hosts four main sections:

- the Board Section, on the back of the rack, with 16 slots to house power supply boards, distributors etc.;
- the Fan Tray Section, housing 6 fans arranged on two rows, with programmable rotation speed regulation;
- the Power Supply Section, which consists of the Primary power supply and up to 3 “Booster” units;
- the CPU and Front Panel Section which includes all interface facilities.

**SY4527LC**




The mainframe is housed in a 19"-wide, 8U-high euro-mechanics rack and hosts four main sections:

- the Board Section, with 10 slots to house power supply boards, distributors etc.;
- the Fan Tray Section, housing 6 fans arranged on two rows, with programmable rotation speed regulation;
- the Power Supply Section; which hosts the 600 W power supply unit
- the CPU Section which includes all interface facilities.

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 system, 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:

- SY4527 mainframe;
- Primary Power Supply (A4531); already installed
- CPU Board (Mod. A4528); already installed
- A4534 - A4537 LCD Display; OPTIONAL, to be installed
- A4532 Booster Power Supplies; OPTIONAL, to be installed
- A4535 Wi-Fi Dongle for Wireless connectivity; OPTIONAL
- Power Supply cord
- 10BASE-T Ethernet cable

Moreover, to operate the SY4527, are also required, an external Personal Computer (if you have not the optional A4534 - A4537 LCD Display) and (at least) one Power Supply Board (for example the A1535 24 Channel 3.5 kV/3 mA Common Floating Return Board).

- SY4527LC mainframe;
- CPU Board (A4528); already installed
- A4535 Wi-Fi Dongle for Wireless connectivity; OPTIONAL
- Power Supply cord
- 10BASE-T Ethernet cable

Moreover, to operate the SY4527LC, are also required, an external Personal Computer and (at least) one Power Supply Board (for example the A1535 24 Channel 3.5 kV/3 mA Common Floating Return Board).

## Rack mounting

The SY4527 and SY4527LC are designed for BUILDING-IN: they must be installed in a 19" equipment rack; the rack must be of the following type: Standard 19-inch (48.3 cm) four-post EIA rack, a minimum of 39.4 inches (100 cm) deep, with mounting rails that conform to English universal hole spacing per section 1 of ANSI/EIA-310-D-1992.

- The rack must be provided with flame-breaker top and bottom panels.
- Use the front panel rack-mount brackets to install the units in the rack.
- Leave at least 15cm free space above and below the chassis, to allow heat dissipation
- Only trained and qualified personnel must be allowed to install, replace, or service this equipment.
- Never lift the chassis alone—Always use two people to lift the chassis. If available, use a scissor jack or other lifting device designed for installing the chassis into the equipment rack.
- Ensure that your footing is solid and the weight of the system is evenly distributed between your feet.
- Lift the system slowly, keeping your back straight. Lift with your legs, not with your back. Bend at the knees, not at the waist.
- If you are going to control the SYx527 remotely, connect it to either the Local Network or to the Host PC, via the ethernet cable; the SYx527 Ethernet port is on the A4528 CPU.


## A4532 Booster Power Supply installation (SY4527 only)

If you have not ordered optional A4532s, skip this step.

The Power Supply Section may host up to 3 A4532 Booster power supply units; in order to install them:

- Unpack the unit
- Remove the SY4527 dummy panels on the left of the A4531 via the M2.5x11 screws (four per panel)
- Slide the first A4532 into the first slot next to the A4531 Primary PS (on the left of the A4531)
- Fix it via four M2.5x11 screws

Other A4532s must be inserted one next another, from right to left.

## A4534 and A4537 LCD Display installation (SY4527 only)

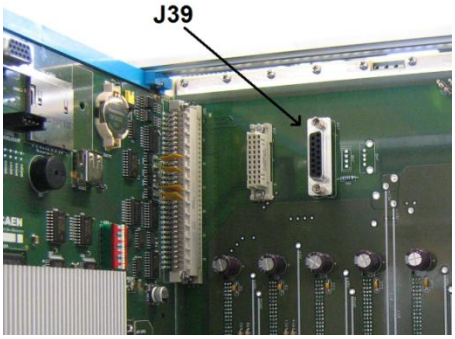


If you have not ordered optional A4534 or A4537, skip this step.

To install A4534 or A4537 LCD Display:

- Unpack the unit
- Remove the SY4527 dummy panels on the right of the A4528 CPU via the M2.5x11 screws (four per panel)

– Plug the DB15 connector of the A4534 or A4537 into the J39 connector on the SY4527 backplane




– Slide the A4534 or A4537 into the housing next to the A4528 CPU (on the right of the A4528)

– Fix it via four M2.5x11 screws

– A4534 and A4537 are touchscreen devices, but can be operated via an external keyboard, through either USB1 or USB2 port

The A4534 and A4537 can be RESET in the following way:

- Press the ALT GR + PRINT SC + K key combination
- Wait a few seconds than press the CTRL+ALT+DEL key combination

## A4535 Wi-Fi Dongle installation

The A4535 Wi-Fi Dongle allows the wireless control of the SY4527; in order to use it follow these steps:

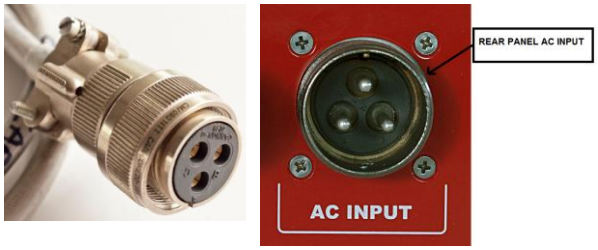
- Connect the A4535 into the USB port of the A4528 CPU
- Activate the A4535 via the “License manager” option of the HIVOCS Web configurator
  - Go to Setting Menu
  - Select License Manager > Wi-Fi Add-On
  - Type the Activation Code provided with the A4535
- At this point, the SY4527 will be listed in the wireless network of your PC
  - If this does not happen, then reboot both the System and PC

Click on the SY4527 icon then perform the System Access

## Power connection

**SY4527**

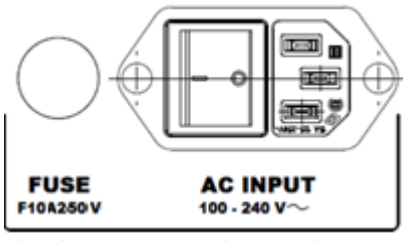
In order to connect the SY4527 the Mains:
Plug the Power Supply Cord into the CA-COM-E-20-19 3-Pin Cannon Industrial AC Input rear panel connector




Plug the AC Power Socket into the Mains

**SY4527LC**

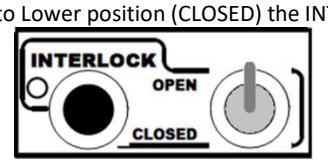
In order to connect the SY4527LC the Mains:
Plug the Power Supply Cord into the C14 Type Inlet (Fused) connector



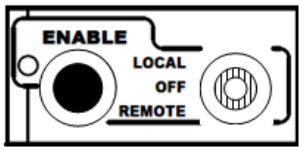

Plug the AC Power Socket into the Mains

# System Power-On

- Slide and Plug one or more power supply boards, such as A1535[1], into the board section slots (see p. 7)
- Fix them properly
- Switch On the Host PC
- Configure the Host PC as DHCP Client
- Set to Lower position (CLOSED) the INTERLOCK switch on the A4528 CPU

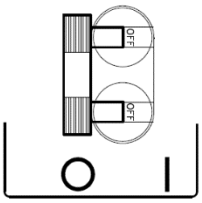



- Set the ENABLE switch of the A4528 CPU (if present) to Upper position (LOCAL ENABLE[2])

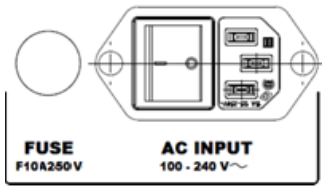



- Set to ON (position 1) the MAIN switch

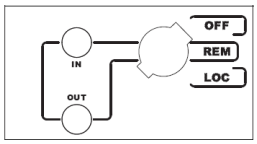
**SY4527**



**SY4527LC**




- SY4527 ONLY: Turn the Power-On key, located on the panel of the A4531 Primary Power Supply, in the right position (ON LOCAL[3]): the AC OK LED (yellow), located on the front panel of the A4531, lights up and the fan tray unit starts to work.




- Following these operations, the following LEDs will be lit up on the front panels of the Primary Power Supply: AC-OK, VDD, +VCC, -VCC, VFAN, VPWR . On the CPU: INTERLOCK led will be OFF and ENABLE led will be ON; this means that boards channels are ready to deliver output voltage
- After the initial check of the system, it is possible to access the system through the HIVOCS Web configurator.
- The system has a default address is 192.168.0.1 and the DHCP server configured to assign IP addresses on the network 192.168.0.0/255.255.255
- Perform System access (see  below)

[1] Read carefully the power supply board User's manual in order to have it correctly configured
[2] This allows LOCAL Channel Enable, without the need of an external enable signal (REMOTE position)
[3] This allows LOCAL Power ON, without the need of an external enable signal (REMOTE position)

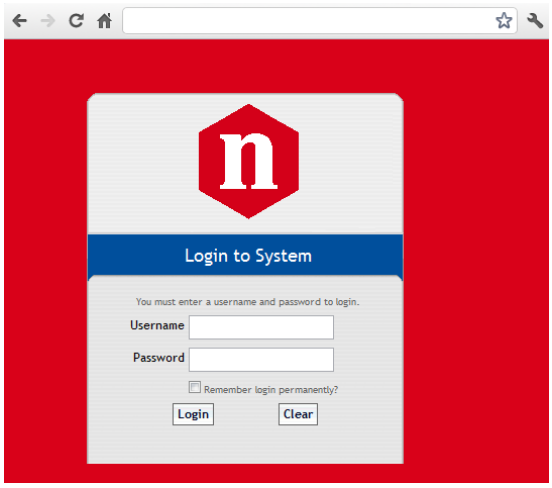
# System Configuration

To configure the system, if the LCD Touchscreen color Display is not installed, connect it to your local network (LAN) or use a Ethernet cable and connect it directly to your PC Ethernet port.
Wait until the PC has received an IP address after which you can connect to the HIVOCS and configure the network you want, by following the instructions in DHCP Server of the HiVoCS.
Open a web browser and type: http://192.168.0.1 and enter user id and password.
With HV Control Firmware rel. 2.3.1 and later, after a hardware reset, the password is changed to *ChangeThePassword*.; default user is **admin**
In case of forgotten IP address of the system or the admin username and password, to restore the default setting, connect an USB keyboard to the USB connector of the CPU panel and use key combination CTRL+ALT+DEL; the system will produce a "buzz" sound, after the last buzz, wait for about 15 sec, then reboot the system, default settings will be restored.

# System Access

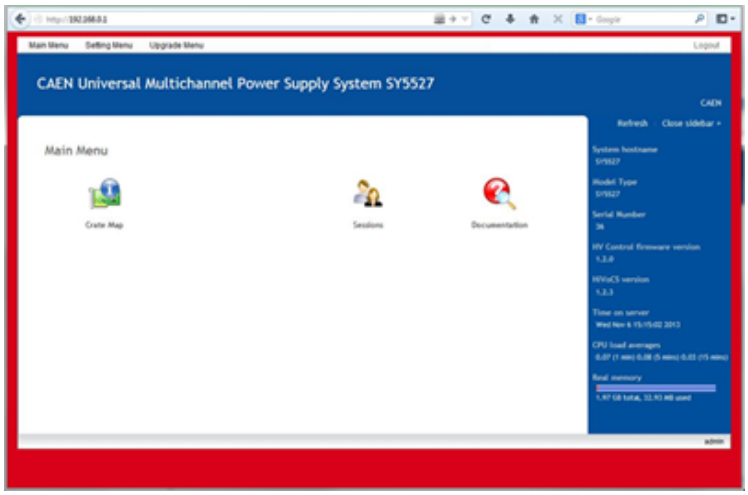
To access the system via Gigabit Ethernet, open the web browser and type the default address **192.168.0.1**

At this point your web browser will open the HIVOCS Web configurator Log-in window



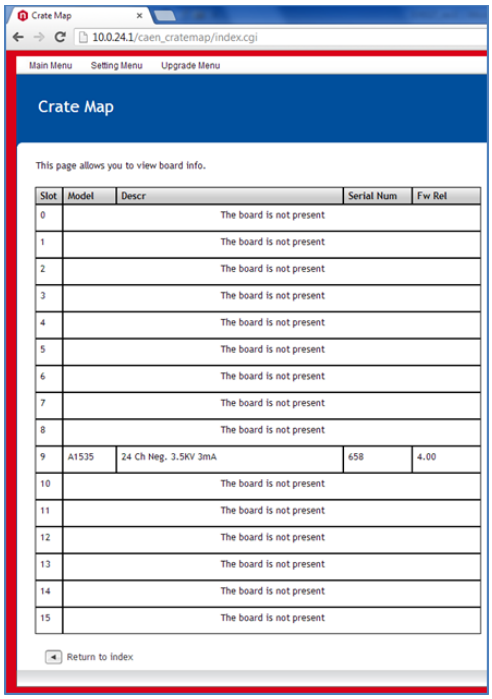

With HV Control Firmware rel. 2.3.1 and later, after a hardware reset, the password is changed to *ChangeThePassword* ; default user is **admin**

After successful log in, the main menu will be displayed:




- Click on the Documentation Icon and download the SY4527 and CAENHV Control Software User's Manuals in order to acknowledge the System full capabilities.
    - The User's Manuals are updated to the latest running firmware revision; in order to ensure having the latest available manual revision, check periodically the www.caen.it website.

- Crate Map is entered from the Main menu and opens the Crate Map Window showing what types of boards (model, description, serial no., fw release) are inserted into the crate and in which slot they are plugged into.



# Optional software tools

## GECO2020

CAEN GECO2020 is a graphical application that allows to manage the SYx527 (and all other CAEN Power Supplies) full capabilities. Once the SYx527 is correctly installed, download and install the GECO2020 software package related to your OS; follow the instructions in the GECO2020 User manual and the SYx527 will be ready to be operated. For more info please visit

www.caen.it (products>firmware/software section).

## CAEN HV Wrapper

CAEN HV Wrapper is a library, available either as a set of ANSI C functions or LabVIIEW™ VI's. Such set provides the software developer an unified software interface for the control of CAEN Power Supplies. This is a low level application in which the writing of the Control SW is assigned to the user. It contains a generic software interface independent by the Power Supply models and by the communication path used to exchange data with them. CAEN HV Wrapper is logically located between an higher level application, such as GECO2020 , and the lower layer software libraries. For more info please visit

www.caen.it (products>firmware/software section).

# Technical specifications table

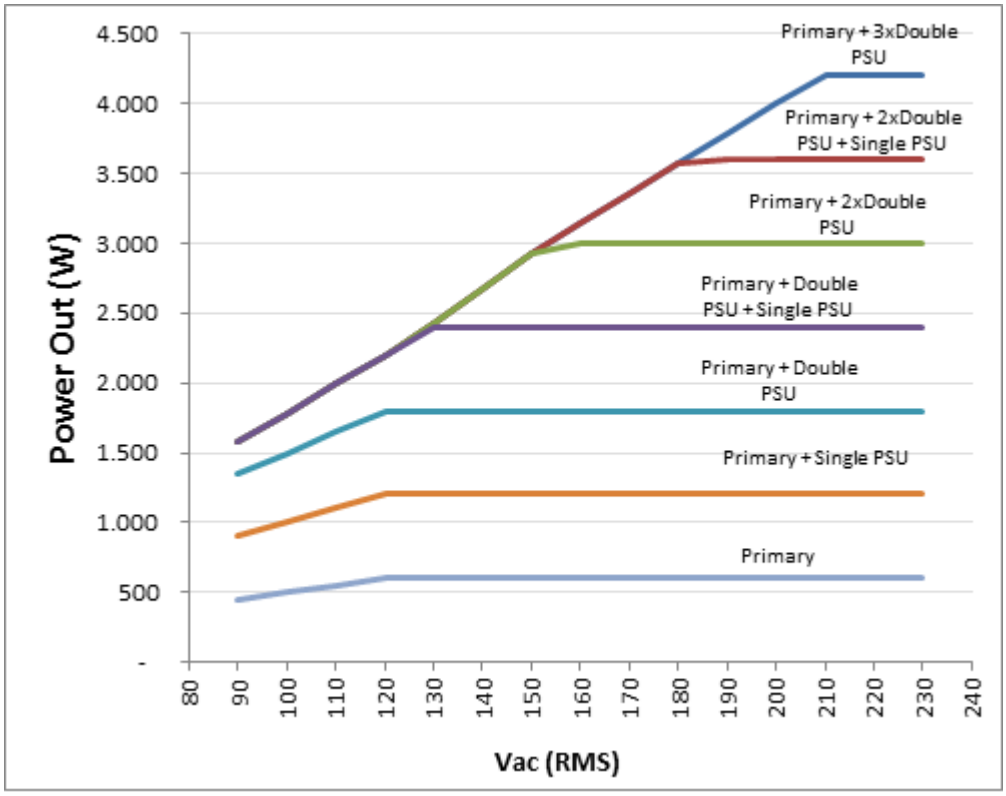
| | | | |
|---|---|---|---|
| **Version** | | SY4527 | SY4527LC |
| **Packaging** | | 19" 8U Euro-mechanics rack<br>W: 19'' (483 mm)<br>H: 8U (355 mm)<br>D: 747 mm (with handles)<br>667 mm (without handles) | 19" 8U Euro-mechanics rack<br>W: 19'' (483 mm)<br>H: 8U (355 mm)<br>D: 556 mm (with handles)<br>489 mm (without handles) |
| **Weight** | | Mainframe(*): 18 kg | Mainframe: 15 kg |
| **Power Requirements** | **Voltage range** | 100/240 Vac; 50/60 Hz | |
| | **Max current** | 25 A; Fuse 10x38 30A 600V screw cap | 10A; Fuse 5x20 10A 250V slot cap |
| | **Max power** | 5500W @ 220Vac; 2750W @ 110Vac | 1050W @ 220Vac; 1020W @ 110Vac |
| **Cooling fans** | | 9 x 120x120 24V 9GV1224P4G01 | 6 x 120x120 24V 9GV1224P4G01 |
| **Ventilation sound pressure level** | | 78.5 dBA (high); 67.5 dBA (medium); 48 dBA (low) | |
| **Max. number of boards per crate** | | 16 | 10 |
| **Max. number of Power Supply Units per crate** | | 4 (1 Primary + 3 Optional)(**) | 1 |
| **Primary Power Supply Unit Output Power** | | 600 W with 220 Vac Mains; 550 W with 110 Vac Mains | |
| **Optional Power Supply Unit Output Power** | | Single Version: 600 W (220 Vac Mains); 550 W (110 Vac Mains) Double Version: 1200 W (220 Vac Mains); 1100 W (110 Vac Mains) | n.a. |
| **Maximum. Output Power** | | 4200W @ 220 Vac ; 1990 W@ 110 Vac | 600W @220Vac; 550W @ 110Vac |
| **CPU** | | 3 versions: BASIC, ADVANCED and FULL | CPU with basic features |
| **Display** | | 10.4" or 5.7" Colour Touchscreen LCD (optional) with two USB 2.0 ports for event logging, configuration backup & restore | n.a. |
| **Communication** | | Gigabit Ethernet, Wi-Fi (optional) | |
| **Software** | | CAENGECO2020 GUI; OS Platforms: MS Windows, Linux, HiVoCS tool | |
| **Enhanced Software (optional)** | | Includes advanced features like Logging, Scripting, Alarm handling | |
| **Additional features** | | OPC Server compatibility; FLEXRAY Fast Serial Link | |
| **Operating temperature** | | From 5°C to +40°C | |
| **Operating humidity** | | From 10% to +90% non-condensing | |
| **Storage temperature** | | From -30°C to +80°C | |
| **Storage humidity** | | From 5% to +90% non-condensing | |

(*) One Primary Power Supply (Mod.A4531) and one CPU(Mod.A4528) are included; boards are not included.

(**) See SY4527 Output Power

# Output Power Chart

The following chart shows the available output power depending on installed Power Supply Units and input power voltage line.




# SYX527 Quick Troubleshooting Guide

Goal of this troubleshooting guide is helping the CAEN Mainframe SYX527 users to quickly identify the most common reason in the system malfunctioning and, if possible, leading them to fix it by themselves.

**Problem: The system does not power up.**
**Possible Issue to check:**

1. Is the 110V/220V cable connected?
   **If not:** plug it properly.
2. Is the rear Main Switch on "I" position?
   **If not:** put it on the "I" position
3. Is the rear fuse continuity still intact?
   **If not:** replace the fuse.
4. Is the front panel key on "LOC" (if you are working locally) or "REM" (if you are working remotely) position?
   **If not:** put the key in the desired position according to you needs.
5. Are the CPU board and the Primary Power Supply and the Booster properly plugged?
   **If not:** plug them properly
6. Are all the AC-OK, VDD, +VCC, -VCC, VFAN, VPWR led on the A4531 front panel on?
   **If not:** contact the CAEN Power Supply support and follow their instruction. If asked, send the A4531 back for repairing.
7. Are all the HV SYNC, CHK PASS led on the A4528 front panel on?
   **If not:** contact the CAEN Power Supply support and follow their instruction. If asked, send the A4528 back for repairing.

**Problem: I cannot connect to the system.**
**Possible Issue to check:**

1. Is the Ethernet cable connected both to the pc and to the system?
   **If not:** plug it properly.
2. Is the host PC set as DHCP client?
   **If not:** set the pc as DHCP client
3. If the system is directly connected to the pc, is the system set as DHCP server?
   **If not:** set it as DHCP using the HiVoCS web interface

4. Are the system IP address and subnet mask properly set?
   **If not:** set them properly using the HiVoCS web interface
5. Did you forget the system IP address or the admin user and password?
   **If yes:** in order to restore the default setting, connect an USB keyboard to the USB connector of the CPU panel and use key combination CTRL+ALT+DEL; the system will produce a "buzz" sound, after the last buzz, wait for about 15 sec, then reboot the system, default settings will be restored.
6. **If none of the previous point worked:** contact CAEN Power Supply support and follow their instruction. If asked, send the A4528 CPU back for reparation.

**Problem: The SY hosted boards cannot be switched on or do not provide any voltage/current.**
**Possible Issue to check:**

1. Are the boards properly plugged?
   **If not:** plug them properly
2. Are the boards recognized by the SY system?
   **If not:** contact the CAEN Power Supply support and send the board back for repairing
3. Is the CPU Interlock led on?
   **If yes:** change the interlock switch position.
4. Is the CPU Enable switch on “LOC” (if you are working locally) or “REM” (if you are working remotely) position?
   **If not:** put the switch in the desired position according to you needs
5. Do the boards foresee a 50 Ohm termination? If yes, is the terminator plugged?
   **If not:** plug a 50 Ohm termination
6. **If none of the previous point worked:** contact CAEN Power Supply support and follow their instruction. If asked, send the board back for reparation.

CAEN SpA is acknowledged as the only company in the world providing a complete range of High/Low Voltage Power Supply systems and Front-End/Data Acquisition modules which meet IEEE Standards for Nuclear and Particle Physics. Extensive Research and Development capabilities have allowed CAEN SpA to play an important, long term role in this field. Our activities have always been at the forefront of technology, thanks to years of intensive collaborations with the most important Research Centres of the world. Our products appeal to a wide range of customers including engineers, scientists and technical professionals who all trust them to help achieve their goals faster and more effectively.

**CAEN S.p.A.**
**Via Vetraia, 11**
**55049 Viareggio**
**Italy**
**Tel. +39.0584.388.398**
**Fax +39.0584.388.959**
**info@caen.it**
**www.caen.it**

**CAEN GmbH**
**Klingenstraße 108**
**D-42651 Solingen - Germany**
**Phone +49 (0)212 254 4077**
**Fax +49 (0)212 25 44079**
**Mobile +49 (0)151 16 548 484**
**info@caen-de.com**
**www.caen-de.com**

**CAEN Technologies, Inc.**
**1140 Bay Street - Suite 2 C**
**Staten Island, NY 10305**
**USA**
**Tel. +1.718.981.0401**
**Fax +1.718.556.9185**
**info@caentechnologies.com**
**www.caentechnologies.com**

CAEN
Tools for Discovery
Electronic Instrumentation

*SY4527 SY4527LC System Quickstart Guide GD2463 rev. 9 - 26 May 2025*

*00118-10-4527G-G2463*