Installation Guide
SMART POWER MODULE SYSTEM

1. SPMS

Smart Power Module System is a modular system designed to supply Power Over Ethernet devices.
Each module works independently ensuring the highest level of reliability and security.
Through the support of a CMD control unit, it is possible to monitor all power benchmarks related to the connected devices sending control commands to modules.

Smart Power allows you to power all PoE systems with the following operating modes: A, B, A + B, A Invers Polarity, B Invers Polarity, (A + B) Invers Polarity.

Smart Power allows you to power the following product families: Cambium CORE (PMP 450i only), Cambium Epmp, Ceragon, Ubiquiti, Mimosa, SIAE, Mikrotik, Radwin.
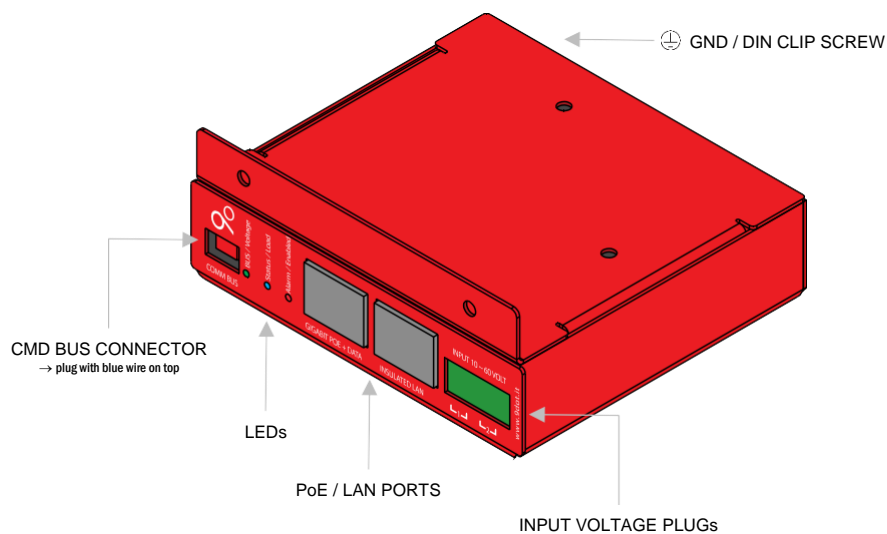
For more information on compatible products, send an email before purchase to support@9dot.it

| 150W	→	120W
assente		80W
150W	→	130W
150W		110W
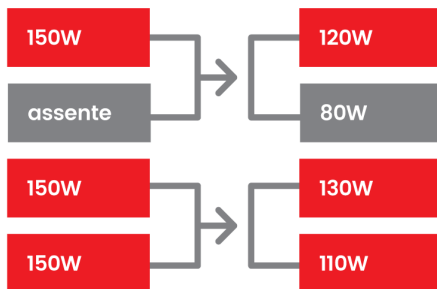
1.1. ASPI

Active Surge Protector Injector is a Power over Ethernet injector with integrated surge protection.
The built-in microprocessor constantly checks the functional parameters and protects actively the connected device against power surges, short-circuits and over voltages. It can be used as a stand-alone injector or combined with a CMD module, connected through a bus-c cable.

GND / DIN CLIP SCREW

CMD BUS CONNECTOR
→ plug with blue wire on top

LEDs

PoE / LAN PORTS

INPUT VOLTAGE PLUGs

	Description	
COMM BUS	connector for CMD module interconnection	
BUS / Voltage LED	fixed green	Successful connection with CMD
	short interruption	Query from CMD
	quick flashing	1: 12V, 2: 24V, 3: 48V
Status / Load LED	fixed blue	on and operative
	flashing blue	No load applicated
Alarm / Enabled LED	fixed red	Short circuit, disabled exit
	flashing red	Exit disabled by the user
GIGABIT PoE + DATA	gigabit port with PoE out, the output voltage is equal to the input one on INPUT connector.	
INSULATED LAN	gigabit data port, galvanic isolated	
INPUT	power Clamp 1 and 2	
	can be used simultaneously, even with different voltage	
	The higher voltage gets priority	
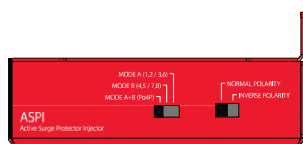
Mode Selector

MODE A+B (Po4P)
MODE B (4,5 / 7,8)
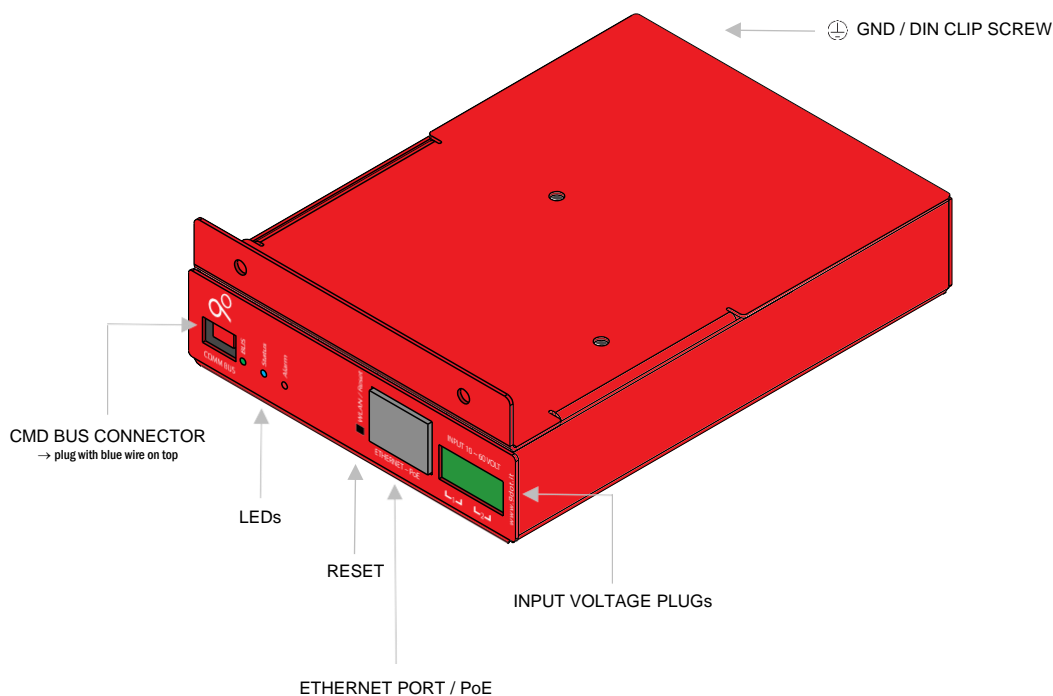MODE A (1,2 / 3,6)

Polarity Selector

NORMAL POLARITY: + 4,5 e/o 1,2 | – 7,8 e/o 3,6
INVERSE POLARITY: – 4,5 e/o 1,2 | + 7,8 e/o 3,6

ASPI detects in real time the load parameter applied.
In the event of exceeding the max load limit allowed, the overload protection will activate to interrupt the output voltage distribution for 10 seconds. After this pause, the voltage distribution will start again. During the interruption due to the overload, the led corresponding to the slot or the group flashes red.

1.2. CMD
The command module allows to monitor the status of the connected modules and to remotely send control commands with SNMP and through WEB interface (maximum 12 modules).

⏚ GND / DIN CLIP SCREW

CMD BUS CONNECTOR
→ plug with blue wire on top

LEDs

RESET

INPUT VOLTAGE PLUGs

ETHERNET PORT / PoE

|	Description	
COMM BUS	Connector of interconnection with CMD module	
BUS LED	Fixed green	Ready to the module connections
	Short interruption	Modules query
Status LED	Fixed blue	Switched on and operative
Alarm LED	Fixed red	Not completed boot or alert
	Flashing red	Reset button extended pression
WLAN / Reset	extended pression: beyond 5s, intern Wlan switching on/off beyond 30s, hardware reset completed[1]	
ETHERNET PoE	Gigabit data port, default IP: 192.168.9.1 Subnet mask: 255.255.255.0 CMD can be powered by PoE IEEE 802.3af.	
INPUT	Power Terminal Blocks 1 and 2 can be used simultaneously, even with different voltage The higher voltage gets priority.	

[1] CMD is reset to factory settings. Both Connectivity settings and information on connected modules are cancelled.

1.2.1. WEB Interface

The WEB interface of CMD is specifically designed to encourage its usage through mobile devices. You can monitor **in real time** both the applied voltage and loading parameters and send on/off/power cycle commands.

Data interpretation is made even easier by the possibility to rename and comment the connected devices. A simple caption colored in red, green or grey allows the prompt identification of the disabled devices and alarms.

Figure 1 – LOGIN PAGE
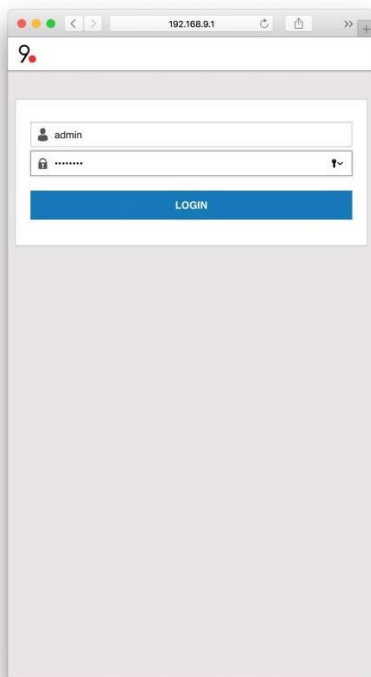
IP: 192.168.9.1
Login: admin
Password: password

Figure 2 – MAIN PAGE

After login, the screen is divided in two blocks.
The grey part is referred to the CMD module, while the part below lists the connected modules.
Every line can be expanded to get more info and to send on/off/power cycle commands.
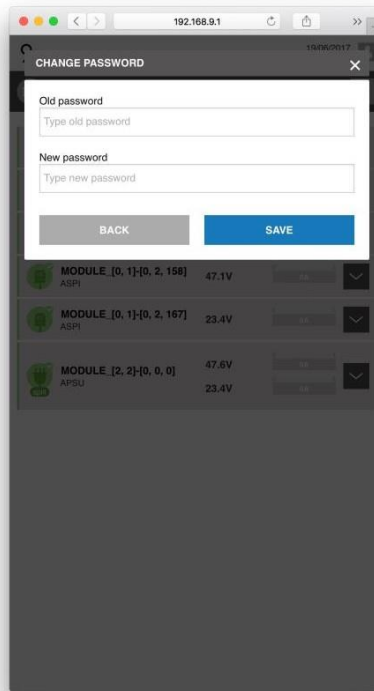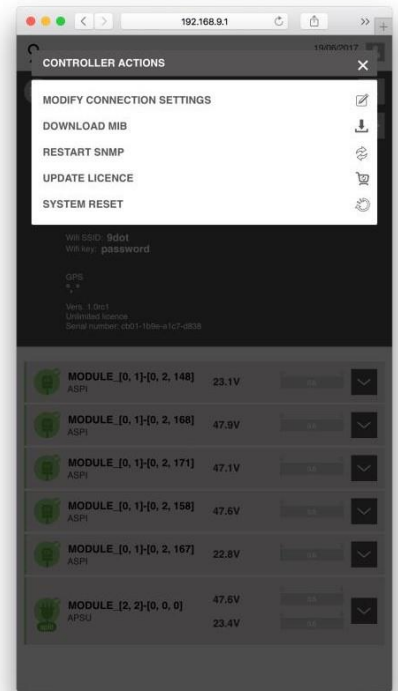
Figure 3 – MAIN MENU

Opening the menu on the grey bar, you can see network and integrated Wlan parameters, beyond Gps info (if connected), Software version and license.
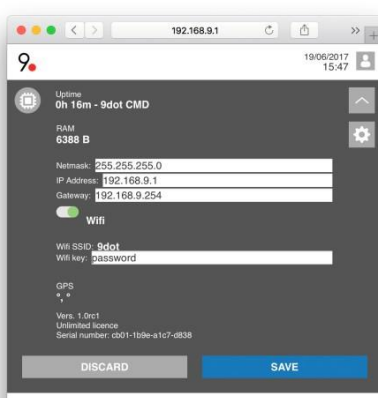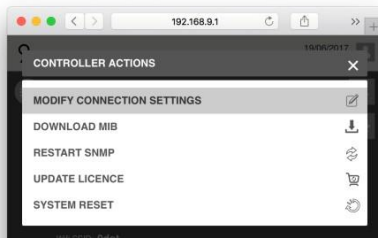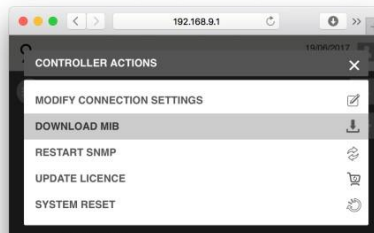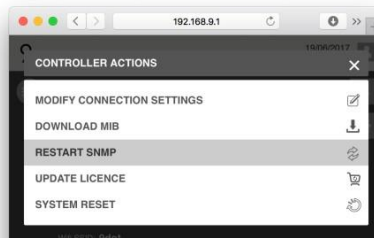
Figurae 4 – PROFILE SETTINGS
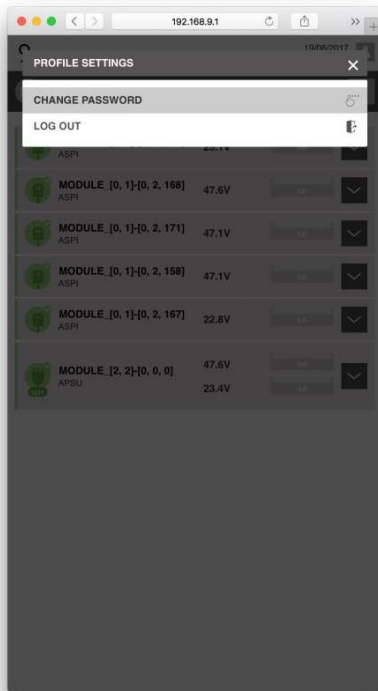
The menu allows to change the password of admin user and to log out.

**Figure 5 – CHANGE PASSWORD**

Change password

Figure 6 – CONTROLLER ACTIONS

The menu allows to change network setting and to access to system actions

Figura 7 – MODIFY CONNECTION SETTINGS

Figura 8 – MODIFY CONNECTION SETTINGS

After you inserted all the connected modules to CMD, restart the SNMP service and download the MIB file to get the completed map of SNMP objects.

Figura 9 – UPDATE LICENCE
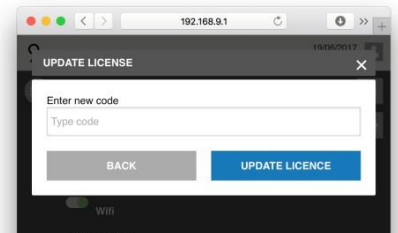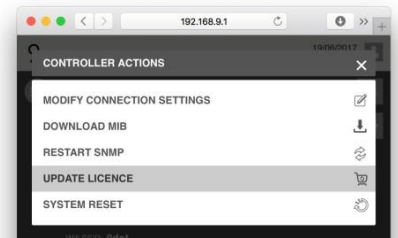
Insert demo license codes to enable extra functions than the standard software doesn't include.
CMD modules are supplied with unlimited license.

Figure 10 – SYSTEM RESET
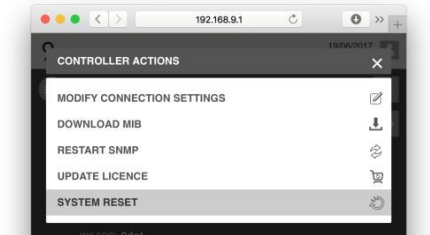
System Reset removes all connected modules references and refreshes factory passwords.
To refresh network parameters is necessary to reset through the button placed on CMD front.

Figure 11 – ASPI

For every ASPI, you can check voltage values in input and applicated load.
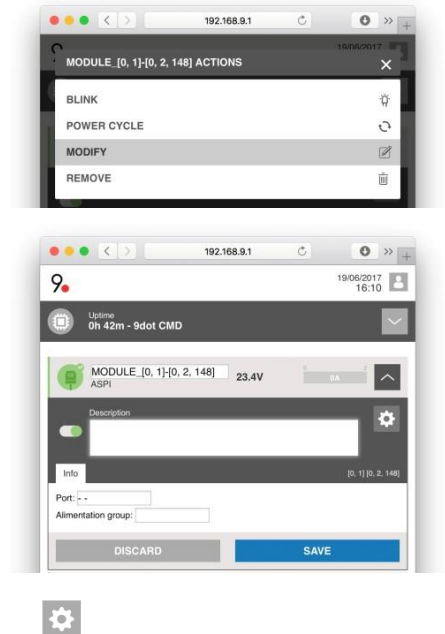The switch allows to send quickly on/off/power cycle commands.
ASPI are identified by serial number.

Figure 12 – DISABLED / ALARM

When a user switches off a module, it will be shown as grey.

If the module is red, there is an alert:

- Short circuit
- Temporary overloaded
- Module out of reach by CMD

Figure 13 – ASPI ACTIONS

BLINK, ASPI leds flash to be better identified.
POWER CYCLE, ASPI stops supply for 10 seconds l'alimentazione
MODIFY, allows to change descriptions and references in order to easily identify the module.
REMOVE, removes the module from the list. If the module is still connected to the BUS, it will appear again at the end of the list.

Figure 14 – ASPI

The load applied to every module is highlighted with a particular color in order to better identify devices with more consumption and closer to the maximum limit of consumption.

Green, < 50%
Yellow, 50% - 75%
Red, > 75%