

SolNia

SolNia is an IoT platform for solar monitoring systems.

SolNia developed from Selar, which replaces MiniLink with a mini industrial PC to support backup data functions. SolNia has real-time data monitoring is possible via a dashboard on the software platform and a real-time notification system and approved by the subcommittee for consideration and screening as an economic innovation project necessary for national development no. 6/2024.



And received development support funds in the category of raw material costs/equipment costs, operating expenses, testing and analysis costs, compensation, and technology transfer costs/academic service fees from the targeted innovation project by National Innovation Agency (NIA) Thailand.

Key Features

✓ Easy to Install and Use

SolNia is a Zero Touch and Plug-and-Play product.

✓ Versatile Application

The device is compatible with various sensors, such as air quality sensors, temperature, and humidity sensors.

✓ Operation

Consumes low power and generates low heat, allowing continuous operation when working 24/7.

✓ Local Data Storage

Capable of storing data locally without need for cloud storage.

✓ Linux Operating System

Runs on Linux Ubuntu 20.04.

✓ Supports

Works with both Modbus TCP and Modbus RTU (RS485, RS232) protocols, can connect to WiFi, and has a LAN port and SIM slot for connecting to the internet.

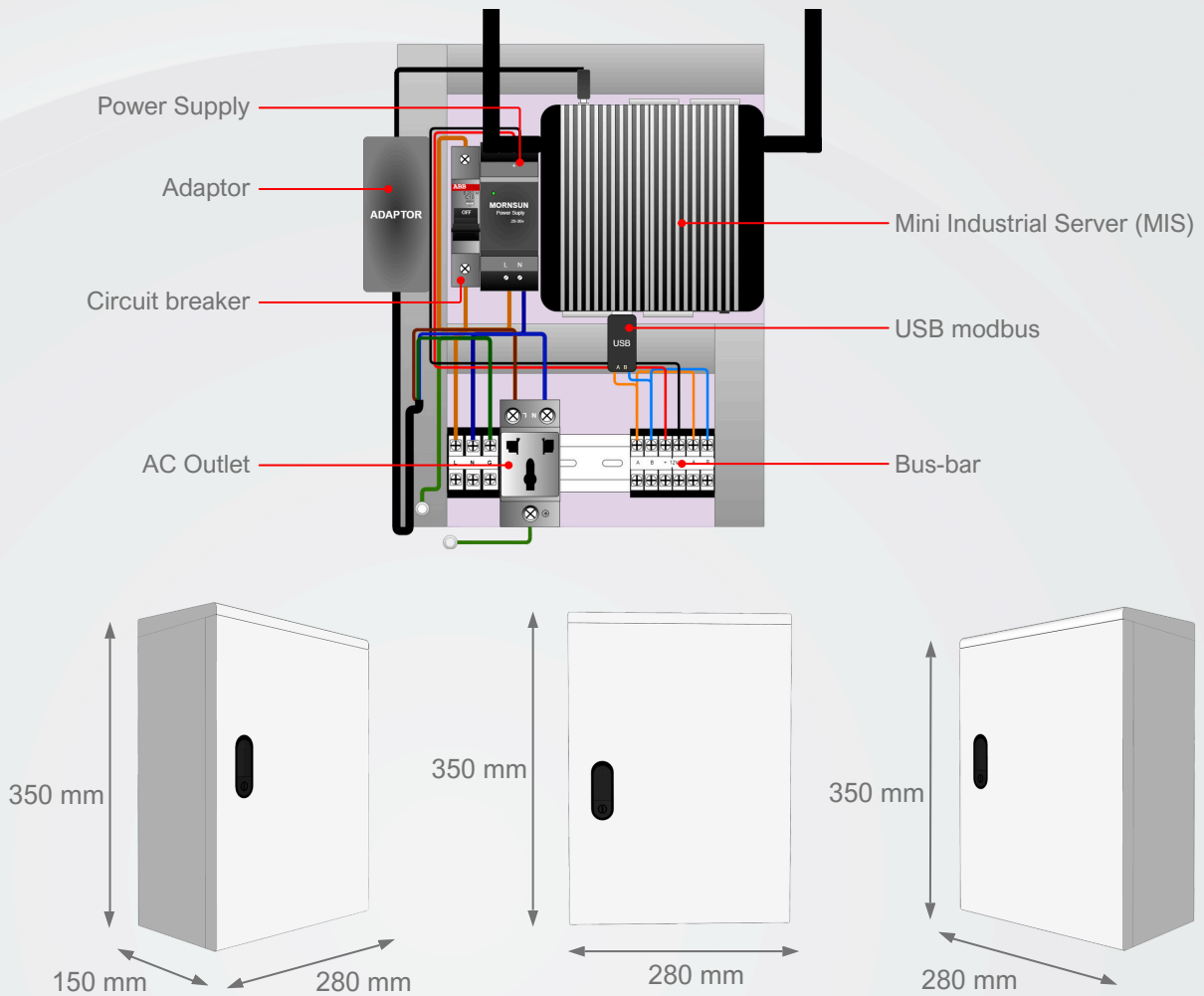
✓ Durable and Strong

Enclosure is a steel cabinet with a cover and roof, offering protection against dust and water.

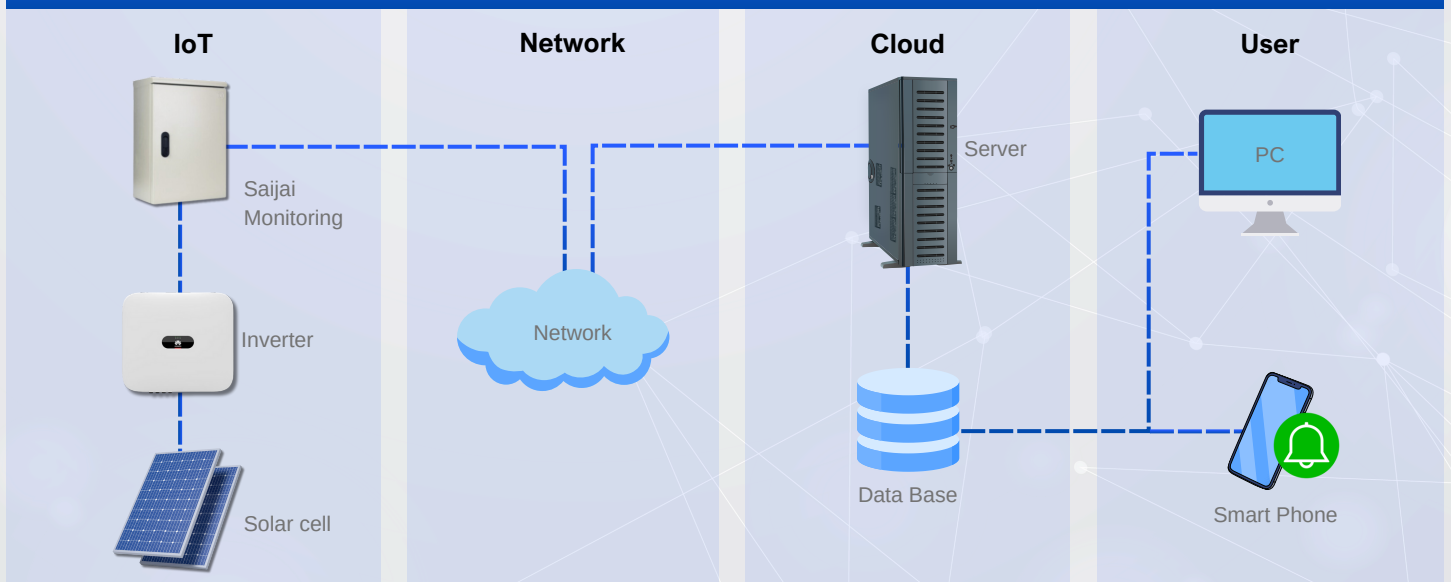
✓ User-Friendly Interface

Features an easy-to-understand dashboard, notification system, reporting, and historical data tracking, available in the Thai language.

Overview



IoT Network Diagram for Software Monitoring



Product Description

CPU	Intel Celeron J4125 (4 core 4 threads, 4M Cache, 2.00GHz, up to 2.70GHz, TDP: 10W)
Graphics Card	Intel UHD Graphics 600
Memory(RAM)	8GB DDR4
Storage	128GB M2 NGFF SSD
Dual Display	Support 4K @60Hz 2* HDMI on external interface + 1 * LVDS on internal connectors
Support System	Linux Ubuntu
External Interface	1 x DC-IN 2 x HDMI 5 x USB3.2 GEN1(5Gbps)+ 3 x USB2.0 2 x LAN 1 x MIC-IN + 1 xHP-OUT 1 x REC (Ghost button (one-key system restore) 1 x RST (Reset button & CLR_CMOS button) 2 x LED 1 x HDD LED(Red), 1 x WIFI & 4G module states(Green) 1 x PWR BT
Internal Connectors	1 x Debug 1 x LVDS 1 x SATA PWR + 1 X SATA 1 x COM_CONN (4*COM232, support RS232 / RS485 set on COM1) 1 x JFP (auto power on set up jumper) 1 x GPIO 1 x AUDIO + 1 x Speaker 1 x F USB2.0
Audio	Realtek ALC662/ALC887 ; Integrated power amplifier NS4251 3W@4Q max
Ethernet port	2 x Realtek Gigabit Ethernet (RTL8111H/8111G)
WIFI	Half-Height Mini PCIe, Support WiFi
Other	Wake UP on LAN, S5 RTC Wake Settings, PXE Boot, Restore AC power loss (Auto Power On)
Power Consumption	DC 12V-3A/ 36W or DC 12V-5A/ 60W (AC TO DC, 100~ 240V)

Product Description

Mounted	Wall-mounted/Desktop
Chassis Material	Aluminum alloy
Operating Temperature	- 20°C - 60°C
Storage Temperature	-30°C - 70°C (15°C - 35°C recommended)
Relative Humidity	10%~90% @30°C,Relative humidity, No condensation
Dimension	136 x 126 x 46 mm
Bluetooth	Bluetooth 4.0
Case	Steel
IoT size box	H: 350 x W: 280 x D: 150 mm
Weight	5 kg

Mini Industrial Server (MIS) Features



2X GbE LAN



RS232/RS485



GPIO 10P



8x USB



DDR4 RAM



M.2 SSD



2x HDMI
1x LVDS



4G
mini PCI-E
expansion



12V-19V
wide voltage



JavaScript



ubuntu



Grafana



influxdb



Node-RED