

# AMS 111 Compact

## IoT Logger

AMS 111 Compact is optimized for applications with a reduced set of sensors and applications where portability is important. It runs on a globally trusted multitasking operating system and provides a rich set of features. Despite its small size, it provides flexibility and performance comparable to the AMS 111 loggers. The most compact variant fits into a box with dimensions of 15 x 10 x 7 cm.



**Interchangeable  
communication module**  
(LoRA, 4G GSM,  
LTE NB1/M1)



**4 universal I/O ports,  
USB port, SDI-12,  
RS-485**



**Optional integrated  
battery with charger**



**SD memory card data  
logging**

AMS 111 Compact provides a large set of functions in the basic configuration and can be further expanded with optional modules. The basic configuration contains three serial ports (RS-232, RS-485, and SDI-12), a USB port, built-in internal non-volatile memory, micro SD memory card, 4G GSM modem,

4 universal inputs/outputs ports, and 4 switchable power outputs. AMS 111 Compact has a built-in solar charger with the MTTP algorithm. The logger can be customized and programmed using a user-friendly graphical interface or directly with JSON-based scripts.

### Interfaces and storage

<b>Serial port</b>	RS-232 (with HW flow control), RS-485 (optionally isolated), SDI 12 (v1.3)
<b>USB</b>	virtual serial port, mass storage
<b>Bluetooth</b>	version 5.2
<b>Modem</b>	built-in 4G module
<b>Storage</b>	micro SD card, internal non-volatile memory

## 4G modem

### Data rates

- LTE-FDD Max 100 Mbps (DL) Max 50 Mbps (UL)
- LTE-TDD Max 61 Mbps (DL) Max 18 Mbps (UL)
- DC-HSPA+ Max 42 Mbps (DL) Max 5.76 Mbps (UL)
- UMTS Max 384 Kbps (DL) Max 384 Kbps (UL)
- TD-SCDMA Max 4.2 Mbps (DL) Max 2.2 Mbps (UL)
- CDMA Max 5.4 Mbps (DL) Max 14.7 Mbps (UL)
- EDGE Max 236.8 Kbps (DL) Max 236.8 Kbps (UL)
- GPRS Max 85.6 Kbps (DL) Max 85.6 Kbps (UL)

## Universal configurable IO ports

Quantity	4
Functionalities	digital input, digital output, analog input (16-bit), Low power impulse counter (1 port), measuring 4 - 20 mA loop (1 port)

## Power outputs

Quantity	4
Parameters	configurable, maximal current 200 mA for each output and in Li-ion version the total output sourcing is up to 500 mA at 12 V

## User interface

Status LEDs	Bluetooth serial interface with command set
USB virtual serial port with command set	Optionally built-in OLED with keypad

## Power options

Built-in charger with MTTP algorithm	
Battery	Li-ion accumulator with monitoring and USB charging or 12/24 V lead-acid accumulator with monitoring
Backup battery for low drift RTC	

## Optional features

Built-in GNSS module	Door padlock
Safety door switch sensor	Display

## Optional extension modules

Precise AD module	
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## Electrical parameters

External power in Li-ion power version	5 V to 30 V (AC/DC, PV panel)
External power in 12 V Pb accumulator power version	15 V to 30 V (AC/DC, PV panel)
Consumption in sleep mode	0.37 mW
Consumption in active mode	depending on the configuration

## Environmental parameters

Temperature	-40 – 70 °C
Humidity	0 – 100 % non-condensing
Protection	IP 67

