

Overview

The Amberlogger is a measurement and control datalogger developed with a Raspberry Pi microcontroller, allowing the connection of virtually any type of sensor (analog, digital, or smart). A wide range of communication options are available, including GPRS, 5G, Wi-Fi, and satellite. Local access can be made through our mobile application available on the Play Store, or remotely via our web-based Amberlogger platform. Data can be analyzed using our proprietary cloud system, Ambercloud.

Benefits and Features

- Connection of digital sensors through protocols such as I²C, SDI-12, MODBUS, RS-232, RS-485, or HART, as well as two pulse input modules.
- Analog converters (8 channels) with 16-bit resolution, allowing connection of sensors with voltage or current outputs.
- Amberlogger (Android application) for local programming/configuration via Bluetooth, and Amberlogger Web for remote programming/configuration.
- Flexible power supply from the main grid, DC power source, or 12 V battery.
- Large storage capacity on SD card.
- Internet connectivity via Ethernet/LAN, satellite, or mobile networks.
- RF (radio frequency) wireless communication, enabling loggers to exchange data in remote areas without reliable internet and to create mesh networks.
- NTP protocol for precise time synchronization. Date-time adjustment of the logger group can be performed via NTP or GPS/GLONASS.
- Automation system management capabilities.



Technical Specifications

- CPU: 700 MHz single-core up to 1.2 GHz (single and quad-core, depending on model).
- Internal memory: 512 MB, 1 GB, 4 GB, or 8 GB depending on the model.
- Storage capacity: 16 GB or 32 GB SD card.
- USB ports: 1 or 4.
- Operating system: Adapted Raspbian Lite.
- Data logging
 - Scan rate up to 4 Hz.
 - Sampling rate up to 1 Hz.
 - Automatic management of sampled data in case of connectivity loss.
- Analog-to-Digital Converters (ADC)
 - 16-bit resolution.
 - 8 input channels.
 - Sampling rate of 8 ksps (kilosamples per second).
- Connectivity
 - Mobile networks.
 - Satellite.
 - Ethernet LAN 10/100.
 - Radio frequency network.