

— INDUSTRIAL IOT DATALOGGER

Vertasya IoT Datalogger — real-time data, straight to CPCB & SPCB.

An industrial ESP32 datalogger that connects emission, effluent and ambient analyzers to the regulators over the internet. Rugged, protected and ready to install, with the industrial interfaces your site already uses.



RS485 · Modbus, isolated

CAN bus, isolated

3× I²C

Ethernet 10/100

Wi-Fi + Bluetooth

9–26 V DC

4G ready



Industrial connectivity

Isolated RS485 and CAN, three I²C ports, Ethernet, Wi-Fi and Bluetooth, driven by a dual-core ESP32.



Built for harsh sites

Metal enclosure with isolation, anti-static, lightning, over-voltage and reverse-polarity protection.



Room to grow

PCIe-size slot for 4G / NB-IoT, 11 GPIOs, TF card slot and nano SIM, plus DIN-rail and wall mounting.

From your analyzers to the regulator's screen.

Vertasya reads your analyzers over RS485 or I²C, formats every value in real time, and sends it over LAN or Wi-Fi directly to the CPCB and SPCB servers. There is no middle server. Share your configuration details and our team sets up the connection to the boards for you.

1

Go live faster

A finished, field-ready unit. No custom board design, enclosure or certification work on your side.

2

Simpler integration

The industrial interfaces and protections you need, in one compact box.

3

Dependable in tough conditions

Isolation and surge protection keep it stable through electrical noise, heat and dust.

4

Flexible connectivity

Ethernet or Wi-Fi today, with 4G modules on the way for remote sites.

5

Customizable on a proven platform

Built on the widely supported ESP32 platform, so features like local data logging, extra protocols or custom reports can be added to suit your site.

Every regulated stream, one datalogger.

EMISSION

Stack monitoring

Continuous emission analyzers on chimneys and stacks: PM, SO₂, NO_x, CO and flow.

EFFLUENT

Effluent monitoring

Online effluent quality analyzers at ETPs, STPs and CETPs: pH, BOD, COD, TSS and flow.

AMBIENT

Ambient air

Ambient air quality stations around the plant boundary and in the surrounding area.

Also suited to



Industrial automation

Modbus RTU/TCP gateway or CAN node for machines, process lines and SCADA links.



Smart agriculture

Greenhouse climate, irrigation and lighting control with precise sensor data.



Machines & robotics

A rugged control core for AGVs, mobile robots and custom automated equipment.



Remote asset monitoring

Pumps, generators and field sensors for air, water and soil, with 4G for wide-area sites.



Critical infrastructure

Utility substations, data centres and base stations, including leak and water-ingress alerts.



IoT edge gateway

Collects data from RS485 and CAN devices, processes it at the edge and forwards it securely.



Specifications

Basic parameters

Power supply	9–26 V DC (terminal) or 5 V 2 A (USB-C)
Standby current	50 mA @ 12 V · 100 mA @ 5 V (USB)
Operating temp.	–20 °C to +75 °C
Dimensions	128 × 76 × 31 mm
Weight	335 g
Protection	Isolation, anti-static, lightning, over-voltage, reverse polarity

Performance

Processor	ESP32 dual-core 32-bit, 240 MHz, 600 MIPS
Flash	16 MB
RAM	520 KB SRAM · 16 KB RTC SRAM
Wireless	2.4 GHz Wi-Fi + Bluetooth
Programming	ESP32 / Arduino ecosystem

Wi-Fi

Standards	802.11 b/g/n
Data rate	Up to 150 Mbps (802.11n)
Modes	Station, SoftAP, promiscuous

Bluetooth

Version	BT 4.2 · Classic (BR/EDR) + BLE
Output power	Up to +12 dBm
BLE sensitivity	–94 dBm
Mesh	BLE Mesh, Wi-Fi mesh gateway

Interfaces

Wired network	1 × 10/100 Mbps Ethernet (internet uplink)
Industrial bus	1 × RS485, isolated, Modbus compatible · 1 × CAN bus, isolated
Sensor interfaces	3 × I ² C · 11 × ESP32 native GPIO
Expansion	1 × PCIe-size slot for 4G / NB-IoT modules (4G model coming soon) · 1 × nano SIM slot
Storage	1 × TF card slot for firmware upgrades; local data logging available on request
Controls	1 × reset button · 1 × user button



What's in the box

01	Vertasya IoT Datalogger	×1
02	2.4 GHz Wi-Fi gain antenna	×1
03	5.08 mm terminal block plug, 6-pin	×1
04	Metal universal mounting brackets	×2
05	DIN-rail clips	×2
06	M4 round-head screws	×4

Get your price today.

Tell us about your site. We'll send a quote and set up your CPCB & SPCB connection.

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