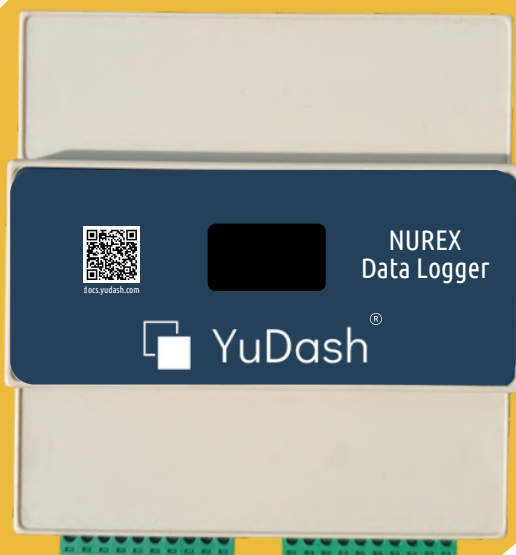


YuDash NUREX AloT Data Logger

Built for Emission Compliance
Industrial AI on the Edge



Technical Specifications

- 12/24 V DC power input
- DIN-rail mounted, compact IP30 enclosure
- Dimensions: 100 mm (W) × 120 mm (H) × 70 mm (D)
- OLED display for status & configuration
- Inbuilt RTC with NTP time synchronization
- 5 mm pluggable terminal jacks for field wiring
- Operating temperature: 0°C to 60°C

Designed for OCEMS Compliance

- CPCB 2025 API ready with AES-256 encryption
- All State PCB APIs and payload formats supported
- Data push to multiple servers and protocols
- Network failure handling and server backfill
- YuDash* cloud based remote configuration and logs

Versatile Instrument Connectivity

- Modbus RS485/RTU & Modbus TCP/IP
- 4 Channel Analog (4–20 mA) inputs
- TCP/IP parsing for WTW/Xylem
- Rain gauge pulse input
- Integrated with diverse analyzers, instruments & PLCs

High-Performance Hardware

- Quad-core Arm® Cortex®-A55 (Armv8 64bit @ 1.6 GHz)
- 1GB LPDDR4 RAM
- 16 GB storage (Industrial SD card / eMMC)
- 4G/LTE + Gigabit Ethernet Internet connectivity
- AI GPU: Arm® Mali™-G52-2EE

YuDash Firmware Stack

- MQTT, REST API & FTP with TLS/SSL security
- Flexible JSON and text payload generator
- LAN-based configuration with integrated web server
- Inbuilt datalogger with CSV storage
- Device APIs for remote configuration via MQTT

YuDash SaaS Platforms

- AKSH and YuFourIA IoT cloud platforms
- YuDash Setu wireless bridge
- Dashboards, alerts, reports, KPIs & historical analytics
- White-label options for enterprise branding
- *Annual subscription pricing model

YuDash NUREX Technical Data Sheet

Technical Specifications

Rated Input Supply	12V / 24V DC input.
Mounting	DIN Rail mounting and Wall mounting.
Dimensions	100mm (W) x 120mm (H) x 70mm (D)
Enclosure	ABS Plastic Enclosure. IP 30 rating.
Terminals	5 mm pluggable terminal jacks
Environmental Conditions	Within IP67 enclosure for outdoor or indoor use.
Temperature	Operating : 0 °C to 60°C Storage: -10 °C to 70°C
Humidity	Upto 85% (non-condensing)
Weight	250 gram (approx)

Processor (CPU)	Quad-core Arm® Cortex®-A55 (Armv8 64bit @ 1.6 GHz)
RAM	1GB DDR4 (or higher)
Storage	16 GB (Industrial SD card /eMMC)
Ethernet Port	Gigabit (1000 Mbps)
4G/LTE	LTE Cat 1, backward compatible with 2G/GPRS.
Display	OLED screen for status monitoring and configuration
RS-485 Ports	Two ports. Configurable as Modbus Master/Slave.
Analog Inputs	4 channel Analog Inputs (0-20/4-20mA) 16 bit high precision ADC
Digital Inputs	Digital input for Tipping bucket Rain Gauge
RTC	Inbuilt accurate RTC and battery
Secondary Ethernet Port*	Optional add-on of USB to LAN Ethernet port

NUREX Part Numbers

Part No	Detailed Part Number	Ethernet	4G/LTE	RAM	Storage	USB
NUREX44	NUREX44LA1016	Gigabit	India (Asia)	1 GB	16 GB	

Technical Features

Network Connectivity	1) Ethernet, 4G Cellular (LTE). 2) India, EU, ANZ and Global variants for 4G/LTE
MODBUS Communication	1) Two RS-485 independent channels 2) Upto 500 tags and 24 Modbus slaves per channel. 3) Modbus Write feature for PLC/Instrument settings. 4) MQTT/Analog to Modbus Client/Server
API and Cloud Protocols	1) CPCB 2025 API data push with AES-256 encryption 2) MQTT, REST, HTTP, FTP. Secure layer (SSL/TLS) 3) Inbuilt JSON payload formats. 4) Generic payload generator for text/csv formats. 5) Data push to multiple servers across protocols. 6) Data scaling and clipping for parameter mapping.
Ethernet Features	1) Connect to Internet / local LAN server 2) Modbus TCP/IP, HTML parsing, SNMP 3) Configurable for Static or Dynamic IP. 4) Supports proxy server settings
Flexible Configuration	1) Easy configuration UI through LAN port. 2) JSON based configuration for backup/restore.
Data Logger Features	1) 16 GB Industrial SD card included in data logger. 2) Flexible CSV data logging (daily/monthly/yearly files). 3) Ethernet LAN based SD card browser.

OCEMS Features

CPCB API	CPCB 2025 API data push with AES-256 encryption.
Optional Features*	
State PCB API	Haryana, M.P., Maharashtra, Tamil Nadu, Telangana. . Other state PCBs available on request
Analyzer Calibration	Analyzer calibration flow through modbus write and applicable integration with CPCB.
DI/DO Calibration Module.	YuDash/External make add-on Calibration module (Modbus to 4 channel DI/DO): 4 DI: potential free input. 4 DO: Potential free relay (max 1A, 24VDC)

Custom Part Numbers

Custom Part Number	Base Part number	Additional Feature and Accessories
NUREX46	NUREX44	Secondary Ethernet Port through USB-C to LAN converter
NUREX48	NUREX44	Secondary Ethernet Port through USB-C to LAN converter. DI/DO Calibration Module.



YuDash NUREX for OCEMS



**Central Pollution Control Board
OCEMS API**

State PCB OCEMS



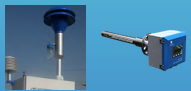
Customer/OEM Cloud Server



Emission Analyzers



Emission Analyzers

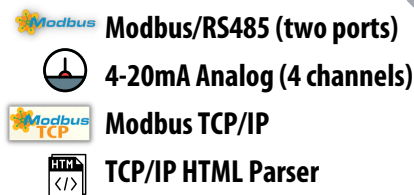
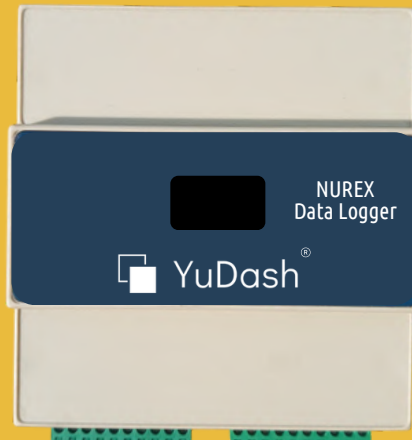


Stack Monitors



Water Analyzers

*bod cod tss
ph chlorine pm
flow so2 sox
nox no tss co*



YuDash YuDash Cloud Platform

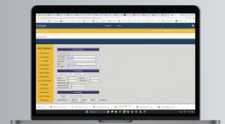
YuDash CEMS1
API logs Remote Configuration YuTunnel

Local LAN Network



On Device Features

User Interface



API logs Live Dashboard



- Normalization feature
- Remote Calibration*