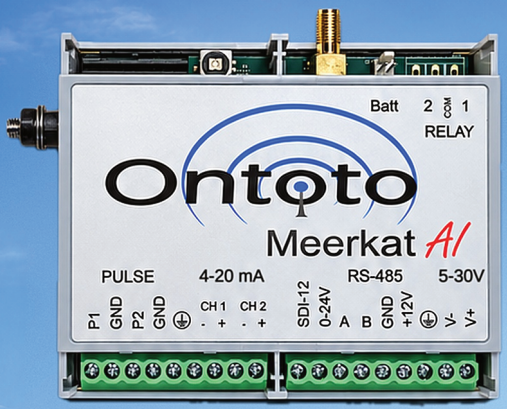
Ontoto

Meerkat AI

Direct To Cell

SIMPLE SETUP
AI DATA LOGGER



NO FIRMWARE.
NO CODE.
JUST A PHOTO.

AUTO SENSOR SETUP BY AI
Upload your sensor photo with its details and let AI take care of the configuration.

BLE
Easy configuration via the Ontoto Connect app for Android or iOS.

DUAL POWER
Lithium battery or 5–30 V DC, with automatic switch-over and no power interruption.

REMOTE MONITORING
Hourly-synced samples, alarms, remote config and relay control for pumps, gates or sirens.



AUSTRALIAN DESIGNED & MANUFACTURED

RELIABLE MONITORING SOLUTIONS FOR CRITICAL INFRASTRUCTURE

BUILT FOR DEMANDING APPLICATIONS

From a Photo to a Working Sensor Profile

Integrating a new sensor has traditionally meant reading manuals, working out commands, and often waiting for firmware changes. Meerkat AI replaces that with a guided, intelligent process: the user supplies an image and a brief description, and the AI does the engineering.

1. **Photo + description**
   Snap the sensor label, add a short description. A manual is optional.
2. **Search the Ontoto repository**
   The AI looks for an existing profile in the Ontoto Sensor Profile Repository.
3. **No match? Search the web**
   It finds the manufacturer's manuals and extracts the technical details.
4. **Profile generated**
   Interface, commands, units and sampling built automatically.
5. **Test and go live**
   Review, run a test reading and write it to the logger.

Simpler for the Installer

What the installer does

- ✓ Photographs the sensor label and adds a short description
- ✓ Answers a few plain-language questions the documents can't settle, such as vented or sealed, units, supply voltage
- ✓ Wires the sensor using the on-screen wiring guide
- ✓ Taps to auto-detect, read and test the sensor

What the installer no longer needs

- ✗ Firmware updates or factory reconfiguration for a new sensor model
- ✗ Hand-written command strings, register maps or scaling formulas
- ✗ Specialist knowledge of SDI-12, RS-485 or analogue protocols
- ✗ A laptop on site: setup runs on a phone over Bluetooth

ID

Shared bus? No address clashes.

When a new sensor is added to a bus that already has another sensor on it, Meerkat AI automatically checks the addresses in use. If the new sensor's slave ID (Modbus on RS-485) or SDI-12 address is already taken, the app prompts the installer to change it to a free one before saving, so sensors never talk over each other.

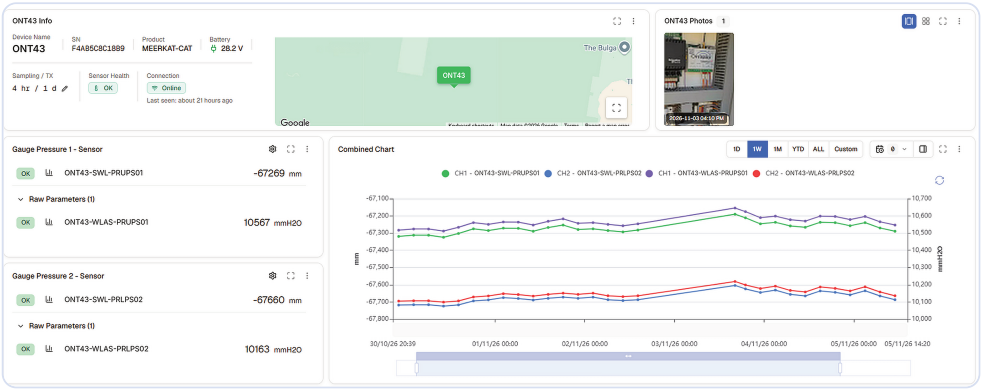
1 Snap & describe
Photo of the label and a short description

2 AI configures
Finds or builds the profile, guides the wiring

3 Live data
Tested, saved and reporting

Your Data in the Ontoto Web Portal

Once the sensor is configured by Meerkat AI, the device sends data to the Ontoto Web Portal at the set transmission interval. Access and visualise your data in the portal, with custom gauges tailored to your requirements.



Alarms & Control

Alarm configuration

The device can be programmed to send an immediate email alert via the portal when a sensor reading exceeds a predefined threshold. The alarm remains latched until the reading falls below the hysteresis threshold.

Relay switch control

Automatically control pumps, gates, sirens or other equipment using Meerkat AI's on-board relay. Link relay actions to sensor readings to switch equipment on or off when predefined thresholds are reached.

Technical Specifications

Power sources	• 5–30 V external DC input • 3 × 3.6 V D-cell lithium battery pack
Battery	• Voltage: 3–5 V • Peak power: 6 W
Sensor power supply	• Supports 3.3, 5 & 12 V sensors • Max 100 mA output current @ 12 V
Relay	• Rated load: 0.3 A @ 125 VAC, 1 A @ 30 VDC • Rated current: 2 A • Dielectric: 1500 VAC; impulse: 1500 V
Transmission	LTE Cat-1 (Terrestrial, with Starlink Direct-to-Cell capability in New Zealand)
Network protocols	• CoAP
Clock accuracy	± 2 seconds per day, automatically re-synced on a transmission
Memory	128 MB NAND flash memory
BLE	BLE 5.3
Operating temperature	–40°C to +80°C
Dimensions	105 × 85 × 30 mm
Weight	140 grams
On-board barometer	• Range: 300–1250 mbar • Resolution: 0.01 mbar • Accuracy: ±0.3 mbar

Sensor interfaces

- RS485 (Modbus)
- SDI-12
- 2 × pulse inputs
- 2 × 16-bit 4-20 mA channels
- 0-24 V 12-bit analogue voltage input

Applications

Mining — piezometers, tilt and displacement sensors, tailings dam monitoring

Agriculture — soil moisture, irrigation flow and tank level monitoring

Environmental — weather stations, rain gauges, barometric compensation using the on-board barometer

Water — groundwater and surface water level, flow meters (pulse), water quality probes (SDI-12, RS-485 (Modbus))

Infrastructure — structural movement, bridge tilt and drainage level monitoring

Mixed sites — several sensor brands on one logger model, configured on site