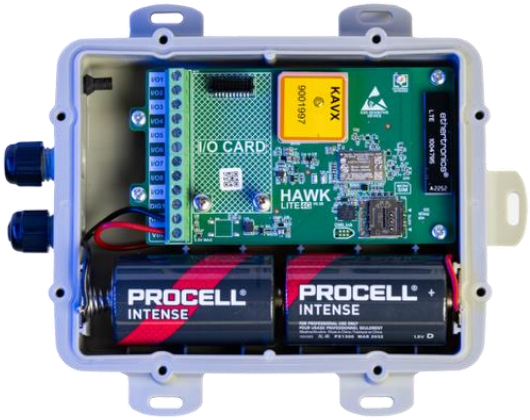
HAWK LITE

Cellular LTE-M (Cat-M1) / NB-IoT

- Robust IoT data logger and sensor hub – lower power, lower cost vs. Hawk Pro
- Flexible I/O card architecture shared with Hawk Pro
- Integrates with Bluetooth®, SDI-12, 1-Wire, 4-20mA, RS-485, RS-232, Analog Inputs, Digital Inputs, Pulse Counting, Switched Power and more
- Powered by 2 user-replaceable D Cell Alkaline batteries with two housing variations
- OTA device management and configuration



Remote Monitoring

Sensor Hub

Configurable Sampling

Ultra-Low Power

Future Proof Connectivity

White-Label & Integration Ready

I/O Card Architecture

Caters to plug-in cards that define the 9 inputs/outputs, offering near-limitless options for interfacing to sensors.

Unmatched Flexibility

Select only the hardware components you need to build your specific solution.

Power Options

Support for low cost, user-replaceable D Cell Alkaline batteries.

Housing Options

Select from our ultra-rugged and waterproof housing options or use your own.

Task Management

Onboard data processing eliminates network delays and triggers tasks or events when needed.

Onboard Smarts

Onboard GPS Location, Accelerometer, and Data Storage.

OTA Device Management

Remotely configure sensor sampling rates, position updates, upload intervals, and more.

Integration-Ready

Securely send data to any end platform via TCP Direct or HTTPS Webhook.

ENVIRONMENTAL MONITORING | AGTECH | TEMP/HUMIDITY | SOIL MOISTURE | WATER MANAGEMENT | TANK LEVEL & QUALITY | STORM & FLOODWATER MONITORING | UTILITIES | WEATHER STATIONS | EQUIPMENT MANAGEMENT | & MORE

This device is designed, developed, and manufactured by Digital Matter.

Hawk Pro PCB

Onboard Connectivity

Cellular Module	Nordic nRF9160 operates on all major global LTE-M and NB-IoT bands. Supported LTE bands: LTE-M (Cat-M1): B1, B2, B3, B4, B5, B8, B12, B13, B14, B18, B19, B20, B25, B26, B28, B66 NB-IoT (Cat-NB1/NB2): B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66
SIM Size and Access	Internal Micro 3FF SIM

Onboard Mechanics / Design

Temperature Range	Operating: -30°C to +60°C Recommended Storage: 10°C to 30°C, Humidity 30%. Store in a cool, dry place.
Cellular Antenna	Internal. Option to add high-gain external antenna.
GPS Antenna	Internal
3-Axis Accelerometer	3-Axis Accelerometer to detect tampering (planned in future firmware release).
Diagnostic LED	2 Diagnostic LEDs and Push Button for testing and operational status.
Flash Memory	Store records if device is out of cellular coverage. View storage capacity here.
Onboard Temperature	The device reports internal temperature which provides an indication of ambient temperature but may not always be precise. Use an external sensor for precise temperature monitoring.

Onboard Location

Module	Nordic nRF9160 internal GPS
Constellation	GPS
Location Accuracy*	~3m CEP
GNSS Assistance	GPS predicted ephemeris data for greater sensitivity and position accuracy.
Low Noise Amplifier	GPS signals are boosted by a low-noise amplifier (LNA) allowing operation in low signal.

* Positioning accuracy specifications are provided by the module supplier and reflect ideal conditions. Device configuration, installation, environmental conditions, augmentation services, and many other factors may lead to variations in positioning accuracy.

Onboard Interfaces

Digital Input	1 x Digital input with configurable pull up/pull down 0-40V DC input range On/Off thresholds: ON > 2V, Off < 1V Can be used for pulse counting (max 40MHz)
Plugin Board	The versatile and flexible Hawk architecture caters for plug-in cards that define the 9 inputs/outputs, offering limitless options for interfacing to sensors. Flexible onboard output power to power your sensors. See the current card list below or contact us to discuss your requirements.

Onboard Smarts

Battery Life Monitoring	‘Battery Low’ and ‘Battery Critical’ alert levels.
Task Management	Powerful onboard task management allows you to schedule tasks or run tasks based on sensor thresholds and events, even when out of cellular coverage.

Hawk Lite Power

D Cell Battery Pack

User-Replaceable Batteries	2 x D Cell Alkaline (1.5V per cell). Batteries not included.
Supported Battery Types	Alkaline. Battery selection is very important. Follow this link to learn more.

Hawk Lite Housing

Hawk D Cell Housing (Hawk2D) - Available with or without GORE® Vent

Designed to accommodate the PCB, I/O Card, and 2 x D Cell Alkaline batteries.

Dimensions	185 x 150 x 30 mm (7.3 x 5.9 x 1.2 in)
Housing	Non-branded nylon glass housing is suitable for white labeling.
IP/IK Rating	Ultra-rugged and waterproof IP68 and IK07-rated housing to ensure the device can withstand impact, fine dust, and brief submersion.
Optional GORE® Vent	Allows for pressure equalization while protecting against water and dust ingress.
Installation	Multiple installation options for securing the device with screws, bolts, cable ties, rivets, and more. Includes 2 cable glands to allow for waterproof cable entry to the housing.

Device Management

Flexible Configuration	Remotely configure sensor sampling rates, position updates, upload intervals, and more.
Device Management Platform	Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system.

Configuration App	Configurable with DM-Link provisioning tool.

Integration

Third-Party Integration	TCP Direct or HTTPS Webhook
API	Command and configure the device via rich API functionality.

Security

Data Security	Military-grade AES-256 Encryption from device to Device Manager to protect the integrity and confidentiality of your data. Data forwarded to third-party systems is sent via HTTPS for end-to-end security.

Warranty

Manufacturer’s Warranty	Two-year manufacturer’s warranty. Exclusions apply.

Certifications

Please view our knowledge base for regulatory and network certifications.

I/O Cards

Agtech1

Digital Input	1 x Digital Input with configurable pull up/pull down 0-40V DC input range On/Off thresholds: On >2V, Off <1V Can be used for pulse counting (max 40Hz)
Digital Output	1 x Switched Ground (1A current limit)

I²C SDA/SCL	Yes
SDI-12	Yes
Switched Power Out	3.3V Switched Power for Sensors
Switched Sensor Power	5V or 12V Selectable Power for Sensors
1-Wire®	Yes
4-20mA	Yes

Agtech2

Analog Inputs	4 x Analog Inputs (0-30V range)
Digital Output	1 x Switched Ground (1A current limit)
SDI-12	Yes
Switched Power Out	3.3V Switched Power for Sensors
Switched Sensor Power	5V or 12V Selectable Power for Sensors
1-Wire®	Yes

Bluetooth+ Card

Bluetooth Module	BGM240PA22VNA3
Analog Input	1 x Analog Input (0-30V range)
Digital Input	1 x Digital Input with configurable pull up/pull down 0-40V DC input range On/Off thresholds: On >2V, Off <1V Can be used for pulse counting (max 40Hz)
Digital Output	1 x Switched Ground (1A current limit)

Power Out	3.3V Power Out for Sensors
Switched Power Out	5V or 12V Selectable Power Out for Sensors
SDI-12	Yes
I^2C SDA/SCL	Yes
4-20mA	Yes

Digital Card

Analog Inputs	2 x Analog Inputs (0-30V range)
Digital Inputs	5 x Digital Inputs with configurable pull up/pull down 0-40V DC input range On/Off thresholds: On >2V, Off <1V Can be used for pulse counting (max 40Hz)
Digital Output	1 x Switched Ground
Switched Power Out	5V or 12V Selectable Power Out for Sensors

RS-1 Card

Analog Input	1 x Analog Input (0-30V range)
Digital Input	1 x Digital Input with configurable pull up/pull down 0-40V DC input range On/Off thresholds: On >2V, Off <1V Can be used for pulse counting (max 40Hz)
Digital Output	1 x Switched Ground
RS485 TX/RX	Yes
Power Out	3.3V Power Out for Sensors
Switched Power Out	5V or 12V Selectable Power Out for Sensors

1-Wire®	Yes
4-20mA	1 x 4-20mA input

Serial Card

Analog Input	1 x Analog Input (0-30V range)
Digital Inputs	2 x Digital Input with configurable pull up/pull down 0-40V DC input range On/Off thresholds: On >2V, Off <1V Can be used for pulse counting (max 40Hz)
Digital Output	1 x Switched Ground (1A current limit)
Switched Power Out	5V or 12V Selectable Power Out for Sensors
RS232 TX/RX	Yes
TTL TX/RX	Yes