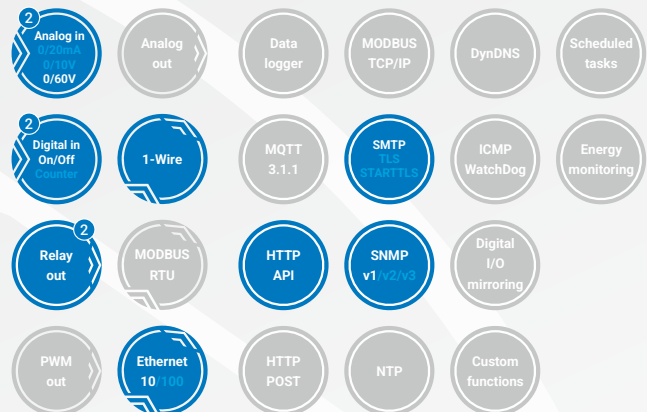




TCW122B-CM Remote I/O module



Overview

TCW122B-CM is a compact Ethernet controller from Teracom's Entry-level product line, tailored for remote monitoring and protection of server rooms, telecom sites, and other small-scale installations. It provides an affordable and reliable solution for tracking key environmental and electrical conditions.

The device includes digital and analog inputs for alarm monitoring, and a 1-Wire interface for connecting up to two Teracom sensors, dedicated to temperature and humidity measurement. Communication and configuration are done via a standard web browser, with support for SNMP and HTTP API protocols for seamless system integration.

TCW122B-CM is ideal for detecting overtemperature, power failures, or unauthorized access in IT environments. Alarm states can trigger relay activation or email notifications, helping maintain operational continuity with minimal user intervention.

Features

- Provides web-based configuration with password protection.
- Offers Ethernet connectivity at 10 Mbps.
- Supports up to two 1-Wire temperature and humidity sensors.
- Supports SNMP v1 protocol.
- Sends SNMP traps for remote alerts.
- Sends email notifications on alarm conditions (no TLS support).
- Provides HTTP API for remote integration and control.
- Allows firmware updates via a standard web browser.
- Allows pulse activation of relays.
- Supports port change for the WEB interface.
- Compatible with TC Monitor and TCW Control software.
- Features a rugged DIN-rail or wall-mountable enclosure.

Key Specifications

- Power Supply: 10-14 VDC, 0.2 A @ 12 VDC.
- Operating Temperature range: -20 to +55 °C.
- Operating Humidity range: 10 to 80 %RH (non-condensing).
- Dimensions: 109 x 82 x 32 mm.
- Enclosure: DIN rail mountable (with optional mounting kit) or wall-mountable.
- Warranty: 3 years.
- Digital Inputs: 2 dry contact, non-isolated, max 5.5 VDC.
- Analog Inputs: 2 single-ended, non-isolated, 0-60 V, 10-bit resolution.
- Relay Outputs: 2 SPDT (NO/NC), rated 3 A @ 24 VDC/30 VAC.
- 1-Wire Power Supply Output Voltage: 5.3 ± 0.2 VDC.
- 1-Wire Power Supply Output Current: 0.2 A.
- Data Logging: Not supported.

Applications

- Temperature and humidity tracking in server and network rooms.
- Detection of AC power supply loss through AC voltage detector.
- Door status supervision via dry contact sensors.
- Relay-based restart of communication equipment after lockup.

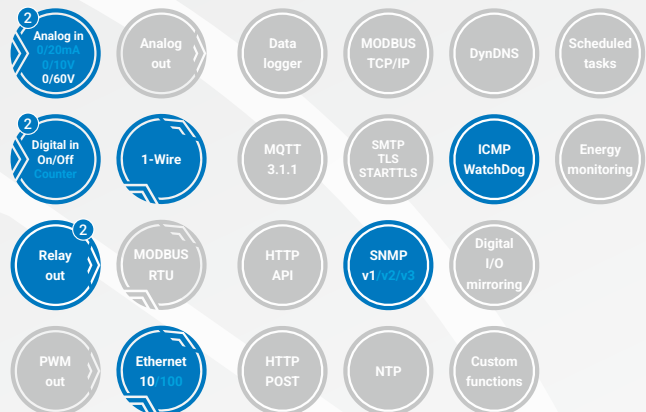
Compatible Sensors

- Temperature sensor [TST100](#).
- Humidity and temperature sensor [TSH202](#).
- Smoke detector [TSS8030R](#).
- Temperature sensor [TST100S](#).
- Humidity and temperature sensor [TSH202B](#).
- AC voltage detector [TSV101](#).

www.teracomsystems.com/ethernet/remote-io-module-tcw122b-cm



TCW122B-WD IP watchdog monitoring module



Overview

TCW122B-WD is a compact Ethernet monitoring device designed to improve uptime and reliability in server rooms, telecom sites, and remote installations. Its primary function is to monitor the availability of up to two IP addresses and automatically restart unresponsive devices through relay outputs, acting as an intelligent IP watchdog.

Alongside the watchdog functionality, the device supports two analog inputs, two digital inputs, and a 1-Wire interface for temperature and humidity sensors. Monitoring and configuration are performed via a standard web browser, with alarm notifications delivered through email or SNMP traps.

With simple logic control, flexible relay triggering, and secure access, TCW122B-WD helps prevent prolonged downtime, overheating, or unauthorized access. Integration with IoT monitoring systems is straightforward thanks to built-in support for HTTP API and SNMP.

Features

- Performs two independent IP watchdog functions.
- Supports both incoming and outgoing ICMP ping.
- Provides web-based configuration with password protection.
- Offers Ethernet connectivity at 10 Mbps.
- Supports up to two 1-Wire temperature and humidity sensors.
- Supports SNMP v1 protocol.
- Supports MAC filtering.
- Supports VLAN tagging for network segmentation.
- Sends SNMP traps for remote alerts.
- Allows firmware updates via a standard web browser.
- Supports port change for the WEB interface.
- Features a rugged DIN-rail or wall-mountable enclosure.

Key Specifications

- Power Supply: 10-14 VDC, 0.2 A @ 12 VDC.
- Operating Temperature range: -20 to +55 °C.
- Operating Humidity range: 10 to 80 %RH (non-condensing).
- Dimensions: 109 x 82 x 32 mm.
- Enclosure: DIN rail mountable (with optional mounting kit) or wall-mountable.
- Warranty: 3 years.
- Digital Inputs: 2 dry contact, non-isolated, max 5.5 VDC.
- Analog Inputs: 2 single-ended, non-isolated, 0-60V, 10-bit resolution.
- Relay Outputs: 2 SPDT (NO/NC), rated 3 A @ 24 VDC/30 VAC.
- 1-Wire Power Supply Output Voltage: 5.3 ± 0.2 VDC.
- 1-Wire Power Supply Output Current: 0.2 A.
- Outgoing Ping Interval: 1-253 seconds.

Applications

- Automatic reboot of routers and modems when network connectivity is lost.
- Temperature and humidity monitoring in server rooms using 1-Wire sensors.
- Detection of power supply loss or drop.
- Door or panel status supervision through dry contact inputs.

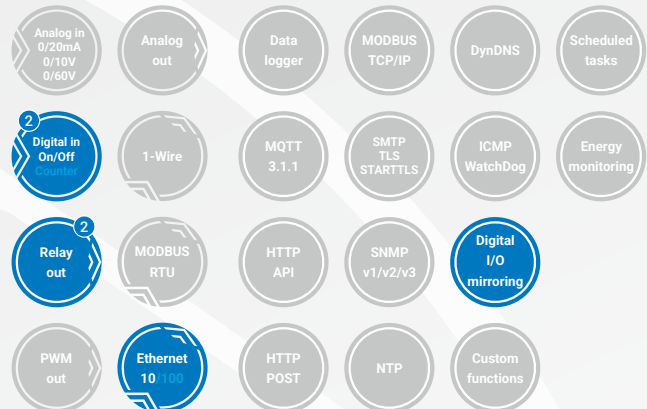
Compatible Sensors

- Humidity and temperature sensor [TSH202](#).
- Smoke detector [TSS8030R](#).
- Humidity and temperature sensor [TSH206](#).
- Temperature sensor [TST100](#).
- Temperature sensor [TST103](#).
- AC voltage detector [TSV101](#).

www.teracomsystems.com/ethernet/ip-watchdog-monitoring-module-tcw122b-wd



TCW122B-RR Digital I/O mirroring module



Overview

TCW122B-RR is a compact Ethernet module from Teracom's Entry-level product line, designed for real-time digital I/O mirroring over IP networks. It operates in pairs, replicating the state of digital inputs from one device to the relay outputs of another, enabling fast and reliable remote signaling without the need for a central controller.

The module features two digital inputs and two relay outputs, with all communication handled over Ethernet using a simple peer-to-peer protocol. Configuration is performed through a standard web interface. TCW122B-RR is ideal for applications that require remote interlock, failover activation, or redundant digital signal extension across sites.

Its simplicity, reliability, and low latency make it well-suited for use in building automation, utility facilities, industrial control, and access systems.

Features

- Mirrors digital input states between two devices over Ethernet.
- Supports both One-to-One and One-to-Many mirroring modes.
- Operates in peer-to-peer mode without external control logic.
- Provides encrypted communication protocol for secure data transfer.
- Provides indication for active communication session.
- Allows firmware updates via a standard web browser.
- Allows configuration of relay output state on communication loss.
- Provides web-based configuration with password protection.
- Offers Ethernet connectivity at 10 Mbps.
- Supports port change for the WEB interface.
- Features a rugged DIN-rail or wall-mountable enclosure.

Key Specifications

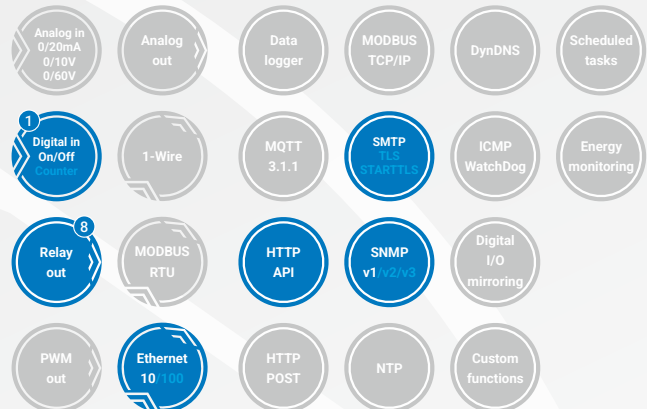
- Power Supply: 10-14 VDC, 0.2 A @ 12 VDC.
- Operating Temperature range: -20 to +55 °C.
- Operating Humidity range: 10 to 80 %RH (non-condensing).
- Dimensions: 109 x 82 x 32 mm.
- Weight: 110 g.
- Digital Inputs: 2 dry contact, non-isolated, max 5.5 VDC.
- Relay Outputs: 2 SPDT (NO/NC), rated 3 A @ 24 VDC/30 VAC.
- Enclosure: DIN rail mountable (with optional mounting kit) or wall-mountable.
- Warranty: 3 years.

Applications

- Digital signal extension between control panels in separate buildings.
- Remote status indication of contact inputs (e.g. door, switch, pressure sensor).
- Redundant activation of equipment across different network locations.
- Failover signaling or backup system triggering in automation setups.



TCW181B-CM Ethernet digital I/O module



Overview

TCW181B-CM is a compact digital I/O module from Teracom's Entry-level product line, designed for Ethernet-based remote control and status monitoring. With eight relay outputs and a single digital input, it enables simple yet effective remote switching and supervision in various industrial and building automation scenarios.

The device provides secure web-based access for configuration and manual control, as well as support for SNMP v1, SNMP traps, and HTTP API for system integration. Alarm conditions can trigger automated relay actions and notifications via email or SNMP.

TCW181B-CM is ideal for remote switching of equipment, centralized control panels, or as an extension node in networked monitoring systems.

Features

- Provides web-based configuration with password protection
- Offers Ethernet connectivity at 10 Mbps.
- Supports SNMP v1 protocol.
- Sends SNMP traps for remote alerts.
- Sends email notifications on alarm conditions (no TLS support).
- Offers HTTP API for remote integration and automation.
- Compatible with TC Monitor and TCW Control software.
- Allows firmware updates via a standard web browser.
- Features a rugged DIN-rail or wall-mountable enclosure.

Key Specifications

- Power Supply: 10-14 VDC, 0.37 A @ 12 VDC.
- Operating Temperature range: -20 to +55 °C.
- Operating Humidity range: 10 to 80 %RH (non-condensing).
- Dimensions: 115 x 90 x 40 mm.
- Weight: 205 g.
- Digital Inputs: 1 dry contact, non-isolated, max 5.5 VDC.
- Relay Outputs: 8 SPDT (NO/NC), rated 3 A @ 24 VDC/30 VAC.
- Enclosure: DIN rail mountable or wall-mountable.
- Warranty: 3 years.

Applications

- Remote switching of HVAC, lighting, or access control systems.
- Centralized control of power relays in electrical panels.
- Automated restart of equipment or network devices via relay control.
- Alarm-based relay activation triggered by digital input state.



Main features

	TCW122B-CM	TCW122B-WD	TCW122B-RR	TCW181B-CM
Operating voltage range	10-14VDC	10-14VDC	10-14VDC	10-14VDC
Operating temperature range	-20 to 55° C	-20 to 55° C	-20 to 55° C	-20 to 55° C
Dimensions	109 x 82 x 32 mm	109 x 82 x 32 mm	109 x 82 x 32 mm	115 x 90 x 40 mm
Chipset	8 bit	8 bit	8 bit	8 bit
Ethernet connectivity	10 Mbit/s	10 Mbit/s	10 Mbit/s	10 Mbit/s
DIN rail mountable	✓ *	✓ *	✓ *	✓
3-year extended warranty period	✓	✓	✓	✓

* with optional mounting kit

Peripherals

	TCW122B-CM	TCW122B-WD	TCW122B-RR	TCW181B-CM
10 Mbit Ethernet connectivity	✓	✓	✓	✓
Analog inputs	2	2	0	0
Digital inputs	2	2	2	1
Relay outputs (NO/NC)	2	2	2	8
1-wire interface	✓	✓	✗	✗
5VDC power supply over 1-wire interface	✓	✓	✗	✗
Galvanically isolation	✗	✗	✗	✗

Services

	TCW122B-CM	TCW122B-WD	TCW122B-RR	TCW181B-CM
HTTP API	✓	✓	✗	✓
SNMP v1	✓	✓	✗	✓
SNMP trap alerts	✓	✓	✗	✓
SMTP (no TLS support)	✓	✗	✗	✓
Digital I/O mirroring	✗	✗	✓	✗
IP Watchdog	✗	✓	✗	✗



Our cellular remote monitoring controllers are designed to operate over mobile networks, utilizing GPRS, 3G, and 4G LTE as their primary means of wireless communication. These devices provide a flexible and reliable solution for remote monitoring in locations where Ethernet (LAN) connectivity is unavailable or impractical.

Easy setup & Web-based configuration

All controllers feature a built-in web server, allowing users to configure and manage the device via a standard web browser (Chrome, Firefox, Edge, Opera, etc.)—eliminating the need for specialized software.

Reliable & long-lasting performance

All our devices are built for long-term durability and come with a 3-year warranty.



KEY POINTS

Seamless M2M integration

Our cellular controllers support Machine-to-Machine (M2M) communication, enabling smooth integration with other systems through HTTP Post with XML/JSON status files, HTTP API commands and MQTT.

Even without a public static IP address, these controllers can transmit data and execute remote control functions efficiently.

Enhanced security & real-time alerts

To ensure secure communication, all devices support TLS-encrypted email alerts, keeping users informed of important status changes or alarms. Notifications can be sent via email with TLS encryption and SMS messages for immediate alerts.

Remote control via SMS commands

For added flexibility, our devices allow users to send commands via SMS, providing a simple yet powerful way to control and configure settings remotely.

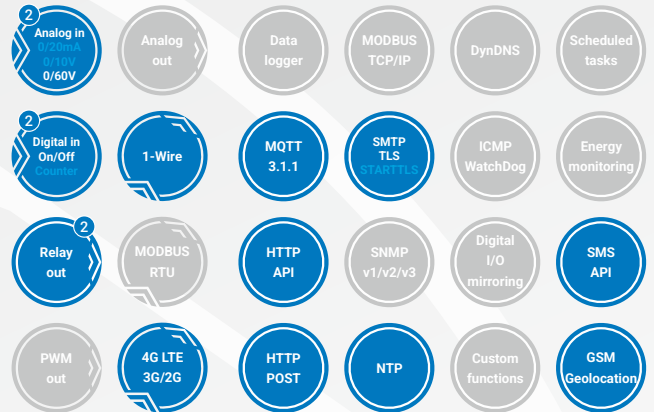
Versatile input options for various applications

Equipped with standard analog and digital inputs, our controllers can monitor – DC voltages (via analog inputs) and Dry contacts (via digital inputs).

This makes them ideal for a wide range of applications, including remote monitoring of mobile network equipment, environmental monitoring in vehicles, temperature and humidity tracking in pharmaceutical & food storage facilities, etc.



TCG120-4 4G LTE wireless I/O module



Overview

TCG120-4 is a wireless I/O module designed for remote monitoring and control in areas without Ethernet access. It supports 4G LTE, 3G, and 2G networks, ensuring reliable data transmission across diverse mobile infrastructures. With built-in digital and analog inputs, relay outputs, and a 1-Wire interface, it enables flexible integration with sensors and field equipment.

The module supports autonomous operation, where relays are controlled by user-defined alarm conditions, eliminating the need for constant remote supervision. For remote communication, TCG120-4 provides both HTTP API and MQTT protocols, allowing seamless integration with SCADA systems, IoT platforms, or custom cloud solutions.

Configuration is easy through a web browser via USB during initial setup, or remotely via SMS or HTTP API commands. Periodic status updates in XML or JSON format ensure full visibility, while MQTT offers efficient messaging even over low-bandwidth networks.

Features

- Supports 4G LTE, 3G, and 2G (GPRS/EDGE) networks.
- Remote configuration via SMS, HTTP API, or USB.
- SMS API.
- Periodic HTTP/HTTPS POST with XML/JSON data.
- MQTT protocol support (v3.1.1) for publish/subscribe communication.
- AWS IoT ready – supports integration with Amazon Web Services for cloud-based monitoring and control.
- Sends SMS alert to up to 5 recipients.
- TLS-secured email (SMTP) support.
- Sends email alerts to up to 5 recipients.
- GSM-based geolocation support (approximate position).
- Firmware updates via USB.
- Firmware update Over-the-air.
- Autonomous operation based on input and sensor alarm conditions.

Key Specifications

- Power Supply: 10-28 VDC, 0.24 A @ 12 VDC.
- Operating Temperature range: -20 to +55 °C.
- Operating Humidity range: 5 to 85 %RH (non-condensing).
- Dimensions: 109 x 65 x 32 mm.
- Weight: 152 g.
- Enclosure: DIN rail mountable (with optional mounting kit).
- Warranty: 3 years.
- Digital Inputs: 2 dry contact, non-isolated, max 5.5 VDC.
- Analog Inputs: 2 single-ended, non-isolated, 0-60 V, 10-bit resolution, ±1% accuracy.
- Relay Outputs: 2 SPDT (NO/NC), rated 3 A @ 24 VDC/30 VAC.
- 1-Wire Power Supply Output Voltage: 5.0 ± 0.3 VDC.
- 1-Wire Power Supply Output Current: 0.2 A.
- Data Logging: Not supported.

Applications

- Remote monitoring and automation of infrastructure in locations without Ethernet.
- SMS and email-based alerting for utility and telecom equipment.
- Environmental parameter tracking at off-grid agriculture and water pump stations.
- GSM geolocation and remote monitoring of refrigerated display cases, freezers, and cold storage units.

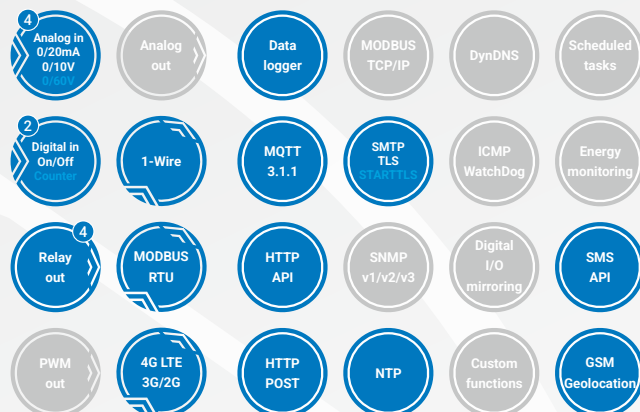
Compatible Sensors

- Temperature sensor [TST103](#).
- Smoke detector [TSS8030R](#).
- Humidity and temperature sensor [TSH206](#).
- CO₂ and pressure sensor [TSM400-1-CP](#).
- Door sensor [TSD800](#).
- AC voltage detector [TSV101](#).

www.teracomsystems.com/cellular/4g-lte-wireless-io-module-tcg120-4



TCG140-4 4G LTE universal IO module



Overview

TCG140-4 is a 4G LTE universal I/O module designed for remote monitoring and control in industrial and environmental applications. It supports multi-band cellular connectivity across 4G, 3G, and 2G networks, making it ideal for locations lacking Ethernet access. The device combines digital and analog inputs, relay outputs, and interfaces for 1-Wire and MODBUS RTU sensors.

With support for MQTT and HTTP(S) API, TCG140-4 integrates seamlessly into SCADA and IoT platforms. It can operate autonomously, logging data internally and executing relay actions based on preconfigured thresholds. Remote access is available via browser, SMS, or API, with firmware updates over USB or mobile network.

The device features a rugged metal enclosure, ensuring secure installation in industrial control panels. Its versatile connectivity and dependable local automation make it a practical choice for modern field deployments

Features

- Ensures wide-area coverage with 4G LTE and fallback to 3G/2G.
- Supports MQTT and HTTP(S) API for seamless IoT integration.
- Operates independently with local relay control based on alarms.
- Logs data periodically or on events using the internal memory.
- Sends status updates in XML, JSON, or CSV format.
- Works with 1-Wire and MODBUS RTU sensors.
- Delivers SMS and email alerts on alarm conditions.
- Secures email communication using TLS encryption.
- Provides GSM-based geolocation for mobile asset tracking.
- Enables remote configuration via SMS, HTTP API, or USB.
- Performs firmware updates over-the-air or via USB.
- Protects internal electronics with a robust metal enclosure.
- Installs easily on DIN rails using an optional mounting kit.
- Publishes and subscribes to MQTT topics for cloud interaction.
- Converts analog input values with configurable scaling and units.
- Operates reliably on IPv4 networks with IMS-based SMS support.

Key Specifications

- Power Supply: 10-28 VDC, 0.37 A @ 12 VDC.
- Operating Temperature range: -20 to +55°C.
- Operating Humidity range: 5 to 85%RH (non-condensing).
- Dimensions: 158 x 119 x 34 mm.
- Weight: 470 g.
- Enclosure: DIN rail mountable (with optional mounting kit).
- Warranty: 3 years;
- Digital Inputs: 2 dry contact, non-isolated, max 5.5 VDC.
- Analog Inputs: 4 single-ended, non-isolated, 0-10 V or 0-24 mA, 10-bit resolution, $\pm 1\%$ accuracy;
- Relay Outputs: 4 SPDT (NO/NC), rated 3 A @ 24 VDC/30 VAC.
- 1-Wire and RS-485 Power Supply Output Voltage: 5.0 ± 0.3 VDC.
- 1-Wire and RS-485 Power Supply Output Current: 0.2 A.
- Data Logging: Up to 70000 records.

Applications

- GSM Geolocation, monitoring, and logging of mobile assets such as refrigerators and freezers.
- Remote relay operation and control in irrigation and lighting systems.
- Standalone data logging and remote monitoring in food and pharmaceutical storage.
- Environmental monitoring in agriculture and greenhouse automation.

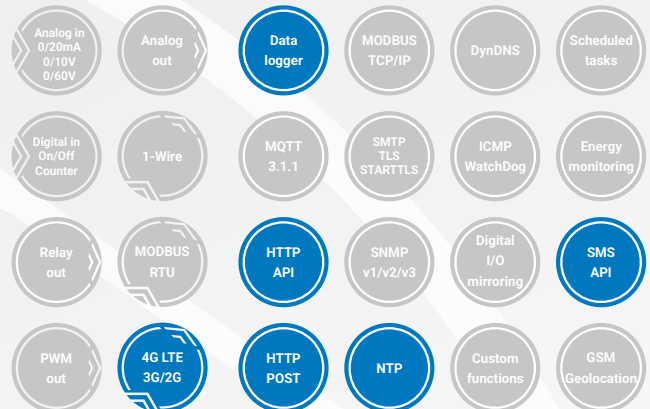
Compatible Sensors

- Precision temperature sensor [TST300](#).
- MODBUS RTU relay output module [TDI340](#).
- Humidity and temperature sensor [TSH300](#).
- CO₂ and pressure sensor [TSM400-1-CP](#).
- Door sensor [TSD800](#).
- AC voltage detector [TSV101](#).

www.teracomsystems.com/cellular/4g-lte-universal-io-module-tcg140-4



TCG210-4 4G Parcel temperature and humidity logger



Overview

TCG210-4 is a battery-powered 4G parcel temperature and humidity logger with fallback support for 2G communication. The device is compatible with HTTP/HTTPS API protocols, making it suitable for modern IoT applications. It periodically sends HTTP/HTTPS POST requests to a remote server, containing a status file in JSON format and the most recent logged data in CSV format.

The logger operates on a built-in non-rechargeable Lithium-thionyl chloride (Li-SOCl₂) battery, ensuring long-term autonomous operation. Thanks to advanced low-power techniques, the device can run for several months without maintenance. The lithium content per cell is less than 2 g, making the battery fully compliant with IATA Dangerous Goods Regulations (DGR), UN 3091, Packing Instruction 970, Section II – allowing safe air transportation.

The primary application of the TCG210-4 is the monitoring of temperature and humidity in sensitive parcel shipments containing pharmaceuticals, food, and other perishable goods. It can also be used as a standard data logger in warehouses, greenhouses, and other environments requiring reliable climate monitoring.

Features

- Global Connectivity – 4G LTE Cat.1 with 2G fallback.
- Long Battery Life – months of autonomous operation.
- Smart Power Management – optimized energy consumption.
- Easy Configuration – via Wi-Fi, SMS, or HTTP API.
- Real-Time Alerts – SMS notifications to up to 5 users.
- Built-in Sensors – accurate temperature & humidity monitoring.
- Large Memory – up to 70,000 records.
- IoT Ready – JSON data via HTTP/HTTPS.
- Data Export – automatic CSV upload.
- Remote Control – full management via HTTP API.
- OTA Updates – firmware updates over Wi-Fi or LTE.
- Compact Design – lightweight and easy to deploy.
- Air Transport Safe – compliant with IATA regulations

Key Specifications

- Dimensions: 163 x 63 x 42 mm.
- Weight: 180g (without battery).
- Operating Temperature range: -20 to +60°C.
- Operating Humidity range: 10 to 90%RH (non-condensing).
- Ingress protection: IP54.
- Data Logging: Up to 70000 records.
- Battery (not included), Type: ER26500 Non-rechargeable Lithium-thionyl chloride (Li-SOCl₂), Voltage: 3.6 V, Capacity: 6000 mAh.
- Typical current consumption: 0.140 A @ 3.6 VDC.
- Sleep mode current: 6 µA.
- Cellular interface, Standards: LTE-FDD, EDGE, GPRS.
- SIM card: Micro.
- Warranty: 3 years.

Applications

- Pharmaceutical and food parcels - Continuous monitoring of temperature and humidity during transportation of medicines, vaccines, and perishable food products.
- Cold chain logistics - Reliable temperature and humidity tracking throughout the delivery process to ensure product integrity.
- Air cargo shipments - Fully compliant with IATA regulations, making it ideal for monitoring small parcel shipments transported by air.