

MODEMS

Industrial Modems

In industrial environments, IoT modems play a crucial role in enabling secure, reliable, and efficient connectivity for remote monitoring, automation, and data acquisition. These modems facilitate communication over cellular networks and wired interfaces, depending on the application requirements.

This comparison evaluates two industrial-grade IoT modems, analyzing key factors. The goal is to highlight their strengths and suitability for applications such as smart metering, industrial automation, predictive maintenance,...

Ordering codes

PRODUCTS

- EasyDot EU/AUS **000199811008**
- EasyTunnel EU **000199811000**
- EasyTunnel AU/LATAM **000199811002**



| | EasyDot | EasyTunnel |
|------------------|----------|------------------|
| Connectivity | 4G/2G | 4G/3G/2G |
| RS232 | 1 | 1 |
| RS485 | 1 | 1 |
| MiniUSB | 1 | - |
| Dig I/O | - | 1 input/1 output |
| Pulses counting | - | 1 |
| Dual SIM | X | ✓ |
| Software | μTITAN | TITANv6 |
| MQTT(s), HTTP(s) | ✓ | ✓ |
| MODBUS RTU | ✓ | ✓ |
| MODBUS TCP | X | ✓ |
| MODBUS expert | X | ✓ |
| Scripting | X | ✓ |
| Wallmounting | ✓ | ✓ |
| DIN Rail | optional | ✓ |

μTITAN Software Features

Mobile Network Configuration

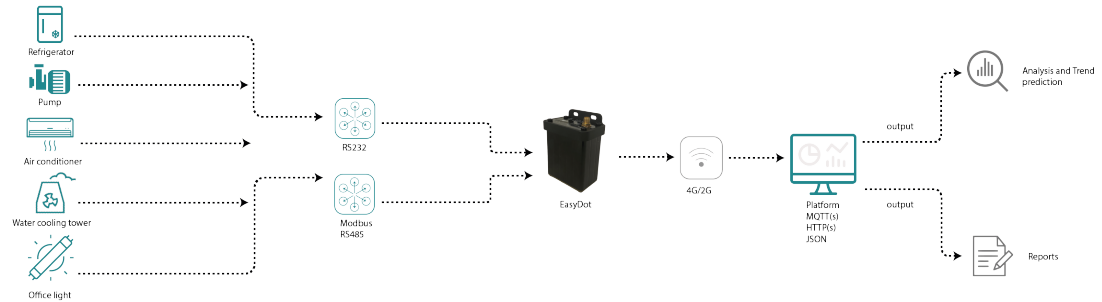
- Supports 4G/2G connectivity with WAN Mobile IP assignment.
- Displays network status (IMEI, signal strength, network type, etc.).
- Configurable APN, authentication methods (PAP/CHAP), and SIM PIN.
- Network selection options: Auto, 4G only, 2G only.
- Custom DNS configuration (manual or operator-assigned).
- Keep-alive functionality with periodic PING checks.

Security & Firewall

- Firewall with authorized IP filtering for WAN access.
- Remote configuration access restriction by IP.
- Selective access control for remote console, serial gateways, and web configuration.

Protocol Support

- MQTT Client:
 - o Configurable broker, authentication, QoS levels, and topics.
 - o Support for remote AT commands via MQTT.
 - o SSL/TLS authentication with client certificates.
- CA certificate management for secure connections.
- Syslog logging for device diagnostics and debugging.



Serial Communication Configuration

- Configurable RS232 & RS485 serial ports.
- Baud rate, parity, stop bits, flow control settings.
- Support for remote AT commands via IP gateways.
- Serial-IP gateway modes:
 - o TCP Server: Waits for connections.
 - o TCP Client: Connects to a remote IP.
 - o Direct AT Command Mode: Allows direct simple AT command execution.

External Devices & Data Logging

- Integrated data logger for storing and forwarding data.
- Supports HTTP/HTTPS and MQTT/MQTTS data transmission.
- JSON-based data structure for Modbus device readings.
- Configurable logging parameters:
 - o Periodic data retrieval from Modbus RTU devices.
 - o Automatic retries in case of network failure.

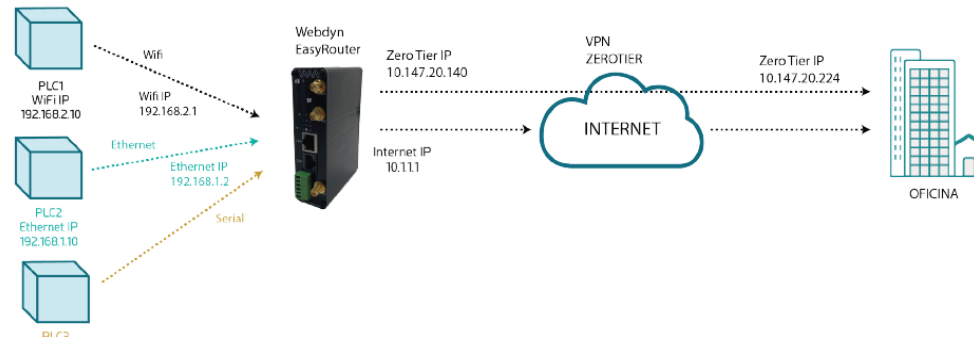
IoT & Remote Services

- DynDNS & Private DynDNS support for remote access.
- Remote control via SMS commands (restart, get IP, signal check, etc.).
- Scheduled periodic device auto-reset.
- Real-time clock synchronization via NTP servers.
- Remote console access via Telnet.

System Management

- Backup & restore functionality for device settings.
- Factory reset option via software or hardware button.
- Firmware update support via OTA (Over-the-Air).
- Remote reboot option.

TITAN V6.25 – Key Software Features



General Overview

- TITAN firmware enables 2G/3G/4G devices with advanced gateway capabilities.
- Supports router functionalities along with additional features like serial gateways, remote management, and industrial IoT connectivity.
- Can act as a data logger, collecting and forwarding information from Modbus, temperature sensors, GPS, and other external devices.

Security & Firewall

- NAT & Port Forwarding: Allows external access to internal devices.
- MAC & IP Filtering: Restricts access to authorized IP addresses.
- SSL/TLS Encryption: Secure communication for HTTP, MQTT, and serial gateways.
- User Permissions: Role-based access control (Admin, User, Guest).

Connectivity & Communication

- Mobile Network Support: 2G/3G/4G connectivity with APN, SIM failover, and network selection settings.
- Ethernet & WiFi: Can act as a WiFi Access Point or WiFi Client for internet access.
- Serial Communication (RS232/RS485): Supports serial-to-IP gateways, Modbus TCP/RTU conversion, and CSD calls.
- VPN Support: OpenVPN, IPSec, and ZeroTier integration for secure remote access.

Remote Management & Automation

- AT Commands over SMS, Telnet, SSH, MQTT, HTTP/S, and Modbus for remote control.
- DynDNS & Private DNS Support: Enables easy remote access.
- Scheduled Auto-reset: Can reboot based on time, connectivity issues, or other triggers.
- TITAN Scripts: Allows custom JavaScript programming for automation and control.

Data Logging & Cloud Integration

- Supports Modbus RTU/TCP and IEC-102 meters.
- Stores and forwards data to HTTP/HTTPS, MQTT, FTP/FTPS servers.
- Custom JSON formatting for integration with IoT platforms.
- Real-time monitoring of collected data.

Backup, Updates & Customization

- Backup & Restore Configurations: Enables fast device deployment.
- Firmware Updates via Web Interface.
- Customizable Web UI: Change logos, interface appearance, and access settings.
- LED Customization: Configure LED indicators for different statuses.

Accessories

EasyDot

| Accessories | Part Number |
|--|--------------|
| ■ MTX-Cable DB9 M a RJ45 M-1.5m (Cnt-RS232/RS485)-Tipo2 | 000230001103 |
| ■ MTX-Antenna STUB GSM5+LTE 3dBi SMA M | 000118006133 |
| ■ MTX-Antenna Magnetic STUB L12 GSM5+LTE700/2700 2dBi SMA M-RG174-3m | 000118006104 |
| ■ MTX-Antenna STUBSW GSM5+LTE700/2700 5dBi SMA M | 000118009240 |
| ■ Power supply: MTX-12-1 EU PLUG -TINNED WIRES | 000901006300 |
| ■ Din Rail | 000199804000 |
| ■ MTX-T ACC Data Cable USB A M - Mini USB B M - 5 pines - 1.8m | 000118001009 |

EasyTunnel

| Accessories | Part Number |
|---|-------------|
| ■ MTX-Cable DB9 M a RJ45 M-1.5m (Cnt-RS232/RS485)-Tipo2 | 230001103 |
| ■ AntennaStubLTE70S | 118009286 |
| ■ Power supply MTX-12-1 EU PLUG -TINNED WIRES | 901006300 |

EasyRouter

| Accessories | Part Number |
|---|--------------|
| ■ AntennaStubLTE700 | 118009286 |
| ■ MTX-12-1 EU PLUG-TINNED WIRES | 901006300 |
| ■ MTX-Cable DB9 M a RJ45 M-1.5m (Cnt-RS232/RS485)-Tipo2 | 230001103 |
| ■ MTX-Antenna Magnetic A2 GPS SMA M - RG174 - 3m | 000118006125 |
| ■ MTX-Antenna Magnetic A2 GPS SMA M - RG174 - 5m | 000118006126 |
| ■ MTX-Antenna STUBSW 2.4/5GHz SMA M RP | 000118016192 |