D-Link®

DOM-311-TSO
4G IIoT RTU

D-Link's DOM-311-TSO 4G IIoT RTU provides LTE Cat 4 speeds up to 150 Mbps for downlink. It is equipped with one Fast Ethernet port and expanded IO capabilities including 1x RS232/485 port, 3x digital inputs, and 2x digital outputs, making it suitable for a wide range of IT/OT applications.

Key Features

Modbus TCP/RTU/ASCII

IIoT Telemetry

VPN Security

IT/OT Integration

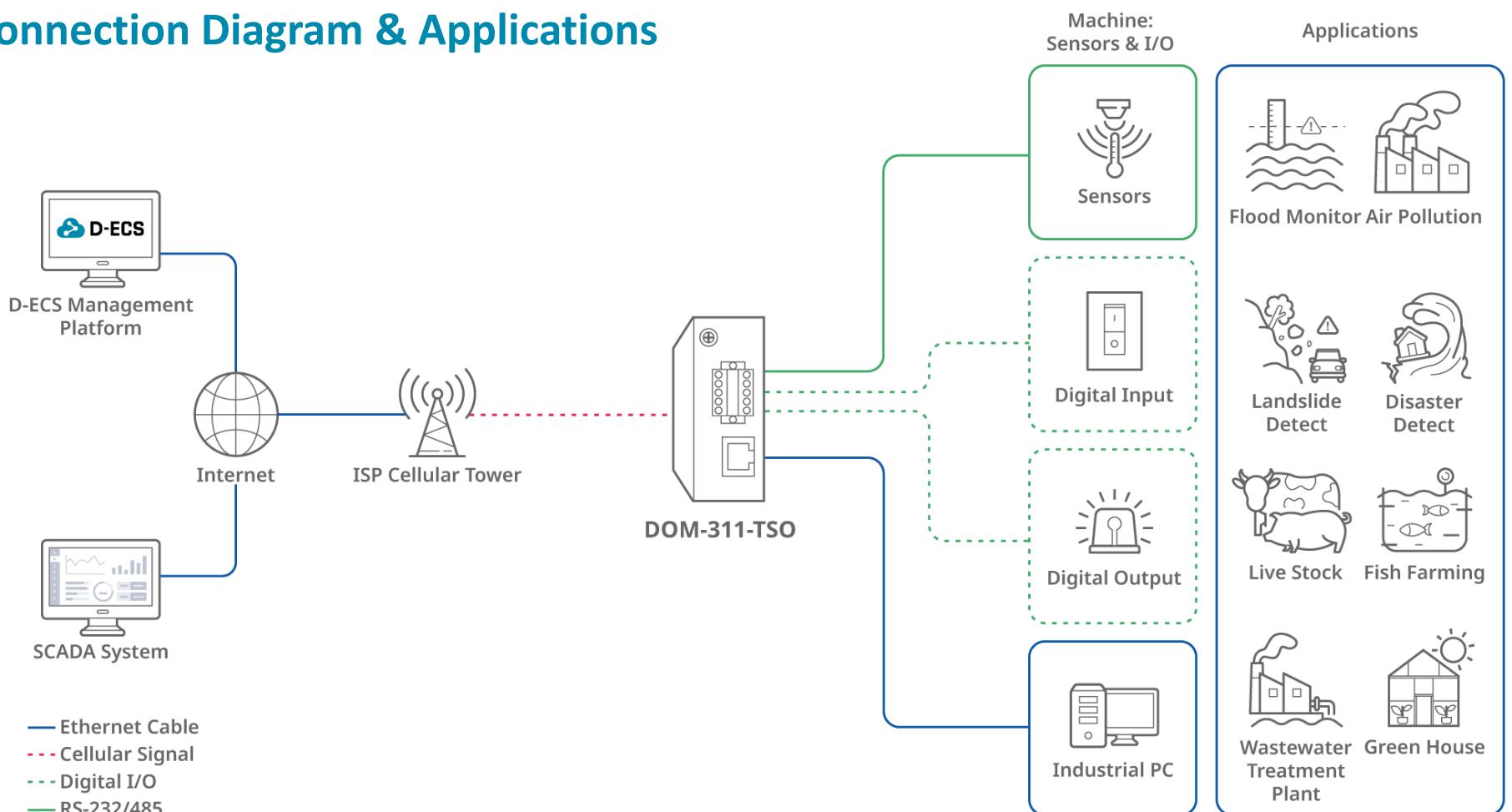**Industrial Grade Design**

D-ECS
Management Platform

Applications

- Environmental Monitoring (Flood, Air Pollution, Landslide detect, Disaster Detect)
- Live Stock
- Fish Farming
- Wastewater Treatment Plant
- Green House

Seamless IT/OT Integration for Enhanced Operational Efficiency

The DOM-311-TSO 4G IIoT RTU (Remote Terminal Unit) is key to converging business operations with production processes, offering advantages such as enhanced decision-making, streamlined process automation, preventive maintenance, and maximized production output. Leveraging reliable 4G connectivity, it facilitates quick integration of remote sensors, devices, and machinery, ensuring centralized manageability and boosting competitive edge.

With its multi-interface compatibility including RS-232/485 and digital I/O (DI/DO), the DOM-311-TSO promptly responds to IoT sensor criteria and enables digital output to end devices in the OT field, improving responsiveness and automation in industrial applications. It supports various industrial communication protocols and utilizes the Modbus transfer protocol between RTU and TCP, simplifying integration into complex automation and remote control systems, thus enhancing operational efficiency and system reliability.

Data Telemetry

The DOM-311-TSO provides centralized control for data acquisition from remote devices via Modbus TCP, RTU, and ASCII protocols to streamline monitoring and analytics. With multi-interface compatibility, including RS-232/485 and digital I/O (DI/DO), the device enables real-time data transfer to the control center, providing comprehensive insights and improved operational efficiency.

Robust Build Quality

The DOM-311-TSO is designed to maximize M2M connection reliability and availability, featuring a corrosion-resistant zinc-plated steel casing, wide voltage input range, wide operating temperature range and humidity tolerance, making it suitable for the most demanding M2M applications in virtually any environment. Convenient DIN-Rail design allows the DOM-311-TSO to be mounted virtually anywhere to optimize signal quality.

Connection Diagram & Applications

- ——— Ethernet Cable
- - - - Cellular Signal
- - - - Digital I/O
- ——— RS-232/485

Specification

Device Interface
- Cellular Module: 4G LTE-Cat.4
- SIM Slot: 1*SIM(Nano SIM)
- Ethernet: 1*LAN FE
- Serial Port: 1* (RS-232 or RS-485)(TB)
- Digital I/O:
  3* DI("Logic 0": 0~2V, "Logic 1": 5V~30V),
  2*DO(Open Collector, Max. 30V) (TB)
- Power Input: DC 9-36V (TB)
- Antenna Connector: 2*SMA(F)-Cellular

Performance[1]
- Maximum Cellular Data Throughput:
  LTE: 150 Mbps (DL) / 50 Mbps (UL)

WAN
- Cellular: NAT, Bridge
- Network Monitor: ICMP Check

Network
- DHCP: DHCP Server
- Port Forward: Virtual Server
- Routing: Static
- DDNS: DynDNS, No-IP, Dynamic DO
- IPv4/v6

VPN
- VPN Tunnel: OpenVPN
- VPN Usage: Client mode

Security
- Firewall: IPS, Block WAN Ping
- Access Control: Packet Filter, MAC Control

Administration
- Configuration: Web UI, CLI, Command Script
- Management: D-Link D-ECS[2]
- System: FW Upgrade, Reboot & Reset, System Time, NTP Service
- Scheduling: reboot rule policy, working day
- SMS Service: SMS Event Management

Field Communication
- Virtual COM: TCP Client, TCP Server, UDP
- Modbus: Modbus TCP/RTU/ASCII Master/Slave Access;
- Data Interchange: Restful API.

Status
- Network Status: Connection information, Cellular Signal Quality
- Cellular Mobile: Cellular Modem Information/Status, Cellular Network Status, Cellular Signal Quality
- Security: VPN Status

Environment
- OP/Store Temp.:
  Operating Temperature -30 to 70 ˚C (-22 ˚F to 158 ˚F)
  Storage Temperature -40 to 85 ˚C (-40 ˚F to 185 ˚F)
- Humidity:
  Operating Humidity 10% to 95% non-condensing
  Storage Humidity 0 to 95% non-condensing
- Dimensions: 78 x 70 x 29mm

Standard Package
- 2* Cellular SMA Antennas
- 1* RJ-45 Cable
- 1* Power Adapter
- 1* Terminal Block (10-pin)
- 1* DIN-Rail kit

Available Versions

SKU List[3]	
EU SKU (HW: A1): 4G LTE • LTE-FDD: B1/B3/B7/B8/B20/B28A • LTE-TDD: B38/B40/B41	**US SKU (HW: A2):** 4G LTE • LTE: B2/B4/B5/B12/B13/B14/B66

Certifications & Approvals

Certification
- CE
- UKCA

1 Data rates are theoretical. Data transfer rate depends on network capacity and signal strength.
2 D-ECS License fees will apply.
3 Supported frequency band is dependent upon hardware SKU.

GND

Reset Button   SIM Slot

LAN

Terminal Block
RS-232/485
Digital I/O
Power Input

Cell   Cell

LAN Port   DIN Rail

4G LTE Antenna

D-Link