D-Link®

DOM-530-TSO
4G IIoT Gateway

D-Link's DOM-530-TSO 4G IIoT Gateway offers LTE Cat 4 speeds up to 150 Mbps for downlink and includes two Gigabit Ethernet ports, with one configurable as Ethernet WAN, facilitating smooth broadband and 4G transitions. It features dual SIM support for enhanced network reliability, alongside 2x RS232/485 ports, 1x digital input, and 1x digital output, enhancing IO capabilities. Integrated GPS function to provide device location. Additionally, the gateway supports data storage and system backup with a MicroSD card slot and USB connectivity, accommodating a broad spectrum of IT/OT applications.

Key Features

Modbus TCP/RTU/ASCII

IIoT Telemetry

Dual-SIM Failover

VPN Security

Industrial Grade Design

GPS Location

Applications

- Factory Automation
- Solar Power Station
- Environment Monitoring
- Power Plant
- Traffic Light
- Street Light
- Elevator
- Gas Station

Seamless IT/OT Integration for Enhanced Operational Efficiency

The DOM-530-TSO 4G IIoT Gateway 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-530-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.

Enhanced Telemetry and Data Management

The DOM-530-TSO 4G IIoT Gateway enhances data acquisition and analytics by supporting Modbus TCP, RTU, and ASCII protocols. It supports various interfaces such as RS-232/485 and digital I/O (DI/DO), facilitating real-time telemetry data transfer to the control center for the remote access and comprehensive insights for better decision-making results in enhanced operational efficiency.

Equipped with a Micro SD card slot and a USB port, the DOM-530-TSO facilitates data logging and storage for machines' diagnostics. This allows control center for predictive maintenance and rapid troubleshooting to reduce downtime, ensuring overall performance and lifespan of the machines.

Advanced Event Management for Efficient IIoT Operations

The DOM-530-TSO 4G IIoT Gateway significantly streamlines event management by responsive event-trigger capabilities. It is engineered to provide immediate notifications through SMS or email when IIoT sensor readings exceed pre-set thresholds, allowing the control center to monitor and control IIoT sensor status remotely via SMS. This feature enhances the efficiency of IIoT monitoring, automation, and time-sensitive applications.

Connection Diagram & Applications
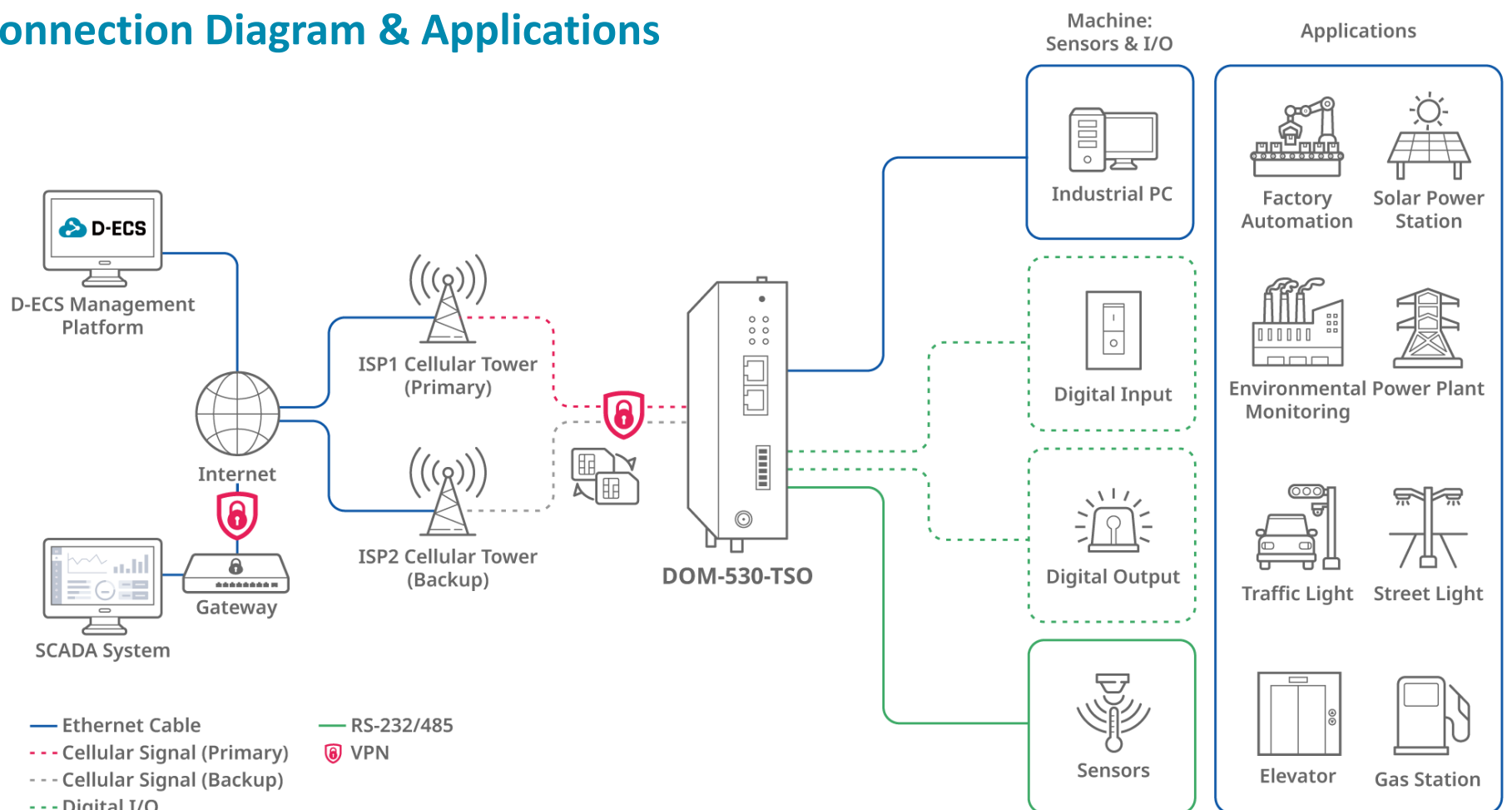
Specification

Device Interface
- Cellular Module: 4G LTE-Cat.4
- SIM Slot: 2*SIM(Micro SIM)
- Ethernet: 1*WAN/LAN GE, 1*LAN GE
- Serial Port: 2* (RS-232 or RS-485)(TB)
- Digital I/O:
  1* DI(Isolated, "Logic 0": 0~2V, "Logic 1": 5V~30V),
  1*DO(Relay Mode, Max. 30V) (TB)
- Micro SD Slot: 1*Micro SD for log.
- USB Port: 1* USB 2.0 Type A port for log.
- GNSS: GPS/GLONASS
- Power Input: DC 9-36V (TB)
- Antenna Connector: 2*SMA(F)-Cellular, 1*SMA(F)-GPS

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

WAN
- Mult-WAN: Cellular, Ether-WAN, WAN Failover
- Cellular: NAT, Bridge
- Ether-WAN: Dynamic IP, Static IP, PPPoE, PPTP, L2TP
- Network Monitor: ICMP Check/DNS Query

Network
- LAN & VLAN: DHCP Server/Relay, Port/Tag based VLAN
- Port Forward: NAT Loopback, DMZ, Virtual Server & Computer, VPN Pass-through
- Routing: Static, Dynamic RIPv1/v2, OSPF, BGP
- DDNS: DynDNS, No-IP, Dynamic DO
- IGMP, IPv4/v6

External Server
- Ext. Server: Email, Syslog, FTP Server

Service
- Cellular Toolkit: Data usage, SMS, SIM PIN, Network Scan
- Event Handling: Event Management, Notifying Events
- Device Location: GPS or GPS+ GLONASS

VPN
- VPN Tunnel: IPSec, OpenVPN, PPTP,L2TP,GRE
- IPsec Scenario: Site/Host to Site/host; Dynamic VPN

Security
- Firewall: SPI Firewall with Stealth Mode, IPS, Block WAN Ping
- Access Control: Packet Filter, MAC Control

Administration
- Configuration: Web UI, CLI, Command Script
- Management: SNMPv1/2/3, D-Link D-ECS[2]
- System: FW Upgrade, Backup & Restore Config, Reboot & Reset, System Log, NTP Service
- FTP: FTP, SFTP
- Diagnostic: Diagnostic Tools, Packet Analyzer

Field Communication
- Virtual COM: TCP Client, TCP Server, UDP
- Modbus: Modbus TCP/RTU/ASCII Master/Slave Access;
- Data Logging: Modbus Proxy Rule, Scheme Configuration for Sniffer/Off-Line Proxy/Full-Time Proxy/Sniffer&Off-Line Proxy/Sniffer&Full-Time Proxy.

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: 31 x 99 x 131mm

Standard Package
- 2* Cellular SMA Antennas
- 1* RJ-45 Cable
- 1* Power Adapter
- 1* Terminal Block (2-pin)
- 1* Terminal Block (4-pin)
- 1* Terminal Block (6-pin)
- 1* DIN-Rail kit

Available Versions

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

Certifications & Approvals

Certification
- CE
- UKCA
- RCM

[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.

4G LTE Antenna
GPS
RxTx GND GND RxTx (RS-232)
D- D+ GND GND D- D+ (RS-485)

GPS Antenna | RS-232/485 Connectors | LAN/WAN Port | LAN Port | Status LEDs | Reset Button

DO- DO+ DI- DI+   GNR PWR
3G/4G   USB   3G/4G

DIN Rail | DI/DO Connectors | Power Connectors | USB Port

SIM A | SIM B | Micro SD Slot

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