

M2M IoT Gateway

MODEL: TS-4G-GW400

Sensor Node & Gateway is Approved by



With Truesync IoT Solutions, you can



About truesync.io

Truesync IoT Systems is an IoT hardware and software company based in United Kingdom.

Our vision is to become a distinguished IoT solution provider in the IoT space which covers Smart City, Utilities, Energy, Industries & Manufacturing, and Farming sectors.

We conceptualize, design, develop, test, integrate, deliver, and support solutions for the client's needs and challenges.

By utilising our IoT Sensor Nodes, Gateways and Cloud solutions, we are helping in the front line of turning cities into Smart Cities, traditional grids into Smart Grids & Smart Energy entities with benchmarking references.

Reach us for your use cases and challenges via www.truesync.io.

M2M & IoT Concepts

Machine-to-Machine (M2M) refers to the direct interaction between devices, using either wired or wireless communication channels without requiring human intervention. This technology facilitates point-to-point communication between machines, sensors, and hardware, allowing them to capture information about their status and communicate it to other devices. This enables devices to control their operations based on the shared data. The primary aim of M2M is to gather data, transmit it across a network, and perform actions triggered by specific events. M2M communication is popular in industries seeking efficient, cost-effective, and rapid technological solutions.

Common examples of M2M technology include controlling electrical devices like fans and bulbs via a smartphone's Bluetooth, with the smartphone and the electrical devices being the interacting machines. Another example is a smart meter, which monitors electricity consumption in real-time. M2M technology is extensively used in applications such as tracking, automation, metering, and healthcare.

The advantages of M2M technology include being cost-effective, easy to maintain, and enhancing customer service through proactive monitoring and servicing.

How M2M works:

The primary function of M2M technology is to access sensor data and transmit it over a network. An M2M system typically uses cellular or Ethernet connections and includes three main components:

- **Data endpoint (DEP):** The system that contains the data to be monitored or transmitted. Data endpoints are microcomputer systems or transmitters connected to a receiver. The network includes numerous connected devices and data endpoints.

- **Communication networks:** These can be cellular networks or wired/wireless internet connections that transfer data between machines.
- **Data integration point (DIP):** The machine that receives the transmitted information. A network can have multiple data endpoints but usually only one data integration point. The DIP can be a control center for meter readings, a server, or a web crawler.

What is IoT?

The Internet of Things (IoT) is a concept where devices, applications, sensors, and actuators are connected via the internet, allowing them to exchange data with each other and other devices. This interconnection enables remote monitoring and control of devices. IoT builds upon the foundation of M2M technology by creating extensive cloud networks of devices that communicate via cloud platforms. The cloud infrastructure provides the necessary software and platform for all IoT devices, enabling the creation of fast, flexible, and high-performance networks.

Examples of IoT devices include smart home voice assistants like Google Home and Alexa, and the devices they connect with. Any network of devices connected to the internet and using a cloud platform for communication is considered part of the IoT.

M2M IoT Gateway

Introducing TS-4G-GW400 Gateway, a next-generation cellular Gateway based on 4G-LTE Technology that is tailored to meet the escalating demands of Smart Grid, Metering, Smart Industrial and Smart City communication and control in our interconnected world.

This 4G Cellular VPN router is purpose-built for industrial-level applications. Leveraging the rapid expansion of the 4G cellular data network and a multitude of high-speed broadband access services, it ensures swift Internet connectivity.

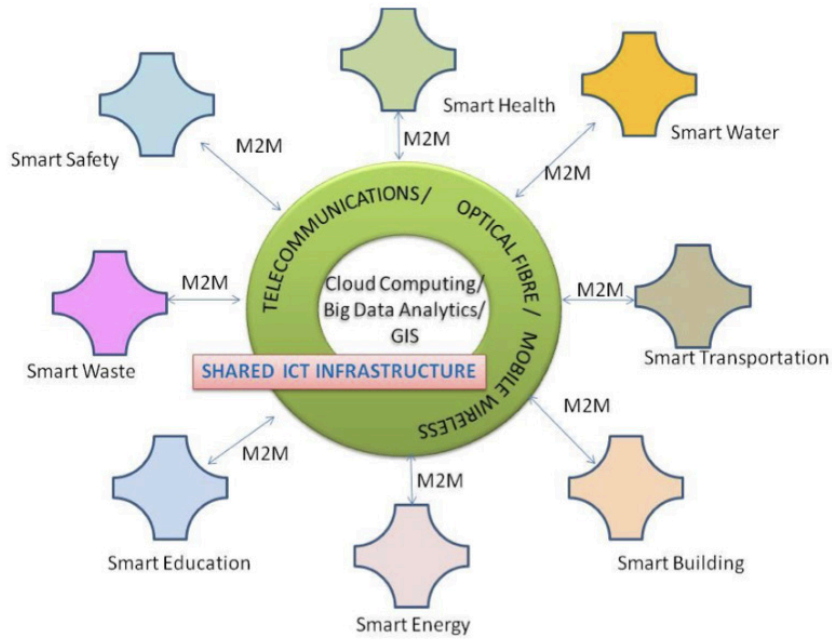
With its emphasis on security, stability, and intelligent performance, the Gateway effortlessly facilitating high-speed data transmission and communication to realize the true potential of the M2M and Internet of Things (IoT).

Equipped with Ethernet WAN/LAN ports, terminal blocks, and a drawer-type SIM/uSIM card slot, it offers versatile connectivity options.

Furthermore, the device supports pass-through transmission, allowing simultaneous connection for Serial, Ethernet interfaces.

Remote management is made simple through a user-friendly application, providing instant access to device status updates from any location if needed or from customer data center.

Its applications span a wide range of industries, including smart grid, transportation, finance, industrial automation, public safety, and more, making it an indispensable asset in today's interconnected industrial landscape as depicted below.



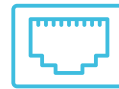
Features



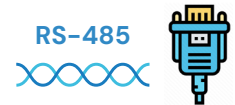
Wireless Technology



DC & AC



2x Ethernet Port



1 x RS-232 Port /
1 x RS-485 Port

Modbus + **DLMS®** + **IEC 62056-21**

Support of Modbus, DLMS/
COSEM & IEC Protocols
Interfaces and Protocols

Product Information

APPLICATIONS

Advanced Metering Infrastructure, Automatic Meter Reading, Building Automation, Energy Management Systems

GATEWAY KEY FEATURES

Dimension	97mm x 112mm x 24mm
Weight	280g
Operating Temperature	-35°C to 75°C
Enclosure	Rugged Metal Casing
LTE Band Supported	LTE-FDD: B1, B3, B5, B7, B8, B20, B28 LTE-TDD: B38, B40, B41 WCDMA: B1, B5, B8 GSM: B3, B8
Wi-Fi Protocol	IEEE 802.11 n
Wi-Fi Data Rate	150 Mbit/s
Flash Memory	128MB/256MB DDR2 RAM
Configuration & Management	WebUI Management, HTTP, Syslog
Software Specifications	WAN – Static IP, DHCP VPN – Client PPTP, L2TP, OpenVPN, IPsec APN, VPDN Support
Power Supply Parameters	12VDC, 1A, <450mA power consumption
Cellular Modem Speed	Cat 4
Physical Interfaces	1xRS232/RS485, 2 x Ethernet (LAN/WAN), 1 x Wi-Fi
Transparent Protocols Supported	Modbus, DLMS/COSEM, IEC 62056-21, OPC-UA
APN	Private and Public APN
Typical Application	Smart Metering, SCADA/RTU, Media, Point of Sale (POS), Supply Chain Management, M2M Applications

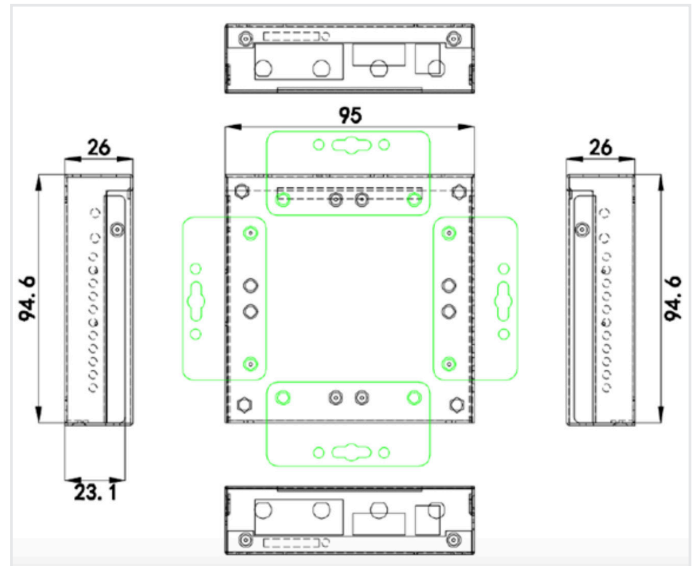
PACKING LIST

M2M IoT Gateway	1
2.4GHz Wi-Fi Antenna	1
4G Cellular Antenna	1
Power Adapter + Cable	1 set
Catalogue	1

ORDER INFORMATION

Device	Part No.
M2M IoT Gateway	TS-4G-GW400

Product Dimensions





**G.19, Oxford House, 12-20
Oxford St, Newbury RG14 1JB,
West Berkshire, United Kingdom**

www.truesync.io
support@truesync.io

This document is for basic information and planning purposes only and is not intended to modify or supplement any specifications or warranties relating to products of Truesync IoT Systems Global Ltd. We may make changes to specifications and descriptions at any time, without notice.

The LoRa® Mark and LoRa Logo are trademarks of Semtech Corporation. The LoRaWAN® Mark and LoRaWAN® Logo are trademarks of LoRaWAN® alliance.