



- Ready to Plug
- Ready to Code
- Ready to Connect
- Ready to Deploy



Features

Ready to Plug - Contains all the hardware needed to get started, including one DynaGATE 10-12 and a complete set of cables and accessories

Ready to Code - Features Everyware Software Framework (ESF), the Java/OSGi based-middleware for IoT Edge Gateways that accelerates gateway application development

Ready to Connect - Includes a free trial account for Everyware Cloud (EC), the Eurotech IoT Integration Platform for device connectivity, data collection, and remote device management

Ready to Deploy - Designed to comply with global certification requirements and to quickly move IoT applications solutions from prototype to global deployment

Description

The DynaGATE 10-12 Development Kit allows for quick development and prototyping of IoT applications on an automotive grade platform which is precertified for global deployment. The kit targets all aspects of an IoT application from hardware interfacing, to development of on-board software and cloud connectivity.

Based on the TI AM335x Cortex-A8 (Sitara) processor family, with 1GB of RAM, 4GB of eMMC and a user-accessible microSD slot, the DynaGATE 10-12 is a low power gateway suitable for demanding use cases: it supports a 6 to 36V power supply with transient protection and vehicle ignition sense, two protected RS-232/485 serial ports, two CAN bus interfaces, three noise and surge protected USB ports, and four isolated digital interfaces.

All interfaces are suitable for applications with a high level of shock and vibration: front panel USB ports feature high retention connectors and all other signals are delivered by locking connectors or screw-flange terminal blocks.

The DynaGATE 10-12 features a wide range of connectivity capabilities: it integrates an internal LTE Cat 1 cellular modem with dual Micro-SIM support, Wi-Fi, Bluetooth Low Energy, and two Fast Ethernet ports; an internal GPS (optionally: Untethered Dead Reckoning GPS) provides precise geolocation capabilities.

The DynaGATE 10-12 comes with Everyware Software Framework (ESF), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/OSGi middleware for IoT Edge Gateways.

Distributed and supported by Eurotech, ESF supports ready-to-use field protocols (including Modbus, OPC-UA, S7), MQTT connectivity, web-based visual data flow programming and deep configuration.

ESF is also integrated with Everyware Cloud (EC), Eurotech IoT Integration Platform (separately available), enabling advanced diagnostics, provisioning, and full remote device access and management.

The DynaGATE 10-12 is Microsoft Azure certified and can also be integrated with 3rd party cloud services such as Amazon Web Services IoT.

Ordering code: DYGATE-10-12-XX-DK01

| XX | | - 65 | - 66 |
|-------------------------|---------------------|---|--------------------------------|
| PROCESSOR | CPU | TI AM3352 1GHz, 1 Core | |
| MEMORY | RAM | 1 GB DDR3 | |
| STORAGE | Embedded | 8GB eMMC | |
| | Other | 1x microSD Slot (User Accessible) | |
| I/O INTERFACES | Ethernet | 2x 10/100Mbps - RJ45 | |
| | USB | 3x Host 2.0 (Noise and Surge Protected) - Type A (Front Panel: High Retention) | |
| | Serial | 1x RS-485 protected and isolated, 1x RS-232/RS-485 (Surge Protected, RS-485 Termination and Fail-safe Resistors), 1x Serial Console TTL | |
| | CAN 2.0B | 2x CAN bus with 5V (100mA) Power Out | |
| | Digital I/O | 2x Digital Input 36V, 1KV Optoisolated – 2x Digital Output (40VAC/DC), 500mA Sink, 1KHz Max Switching | |
| | Exp. Connector | Yes, for Eurotech Side Expansion Modules (ReliaO 10-12, ReliaLORA 10-12) | |
| RADIO INTERFACES | Internal Cellular | LTE Cat 1 (NA), 3G Fallback | LTE Cat 1 (EU), 2G/3G Fallback |
| | Wi-Fi / BT | a/b/g/n, BLE 4.2 | |
| | GPS | Internal (72 channels GPS, Galileo, GLONASS, BeiDou) – Untethered Dead Reckoning GNSS | |
| | Antennas (External) | 1x SMA GPS, 2x SMA Cellular, 2x RSMA Wi-Fi/BT | |
| OTHER | RTC | Yes (SuperCAP Backup) | |
| | Sensors | Temperature, 3-axis digital Accelerometer, 3-axis digital Gyroscope | |
| | LEDs | 1x Power, 1x Cellular, 4x Programmable | |
| | Buttons | 1x Reset, 1x Programmable | |
| | SIM Slot | 2x microSIM (User Accessible) | |
| POWER | Input | 6-36VDC, with Transient Protection, Vehicle Ignition Sense | |
| | Consumption | 2W Idle (15W Max) | |

For more specifications and certifications, please check the DynaGATE 10-12 datasheet.

Included Software

| | | |
|-----------------|---------------|---|
| SOFTWARE | OS | Yocto Linux |
| | SDK | Yocto-based Eclipse Tooling, Oracle Java SE |
| | IoT Framework | Everyware Software Framework (Java/OSGi) |

Included Accessories

| | | |
|-----------------------|---------------|---|
| I/O INTERFACES | Ethernet | 1x RJ45 Male Cable |
| | Serial | 1x Serial Cable (2x RS-232/RS-485 Interfaces - 3 Wires Each - RS-232 Default Pinout) with 2x DB9 Screw Terminal Male Connectors (for Fast Pinout Switching: RS-232/RS-485) Wired on a 10P Terminal Block with 2P for Each Cable Reserved for the Termination Resistors – 1x Serial Cable (RS-232/RS-422/RS-485 - 9 Wires - RS-232 Null Modem Default Pinout) with DB9 Screw Terminal Female Connector (for Fast Pinout Switching: RS-232/RS-422/RS-485) – 1x USB to Serial TTL Cable Converter (Debug Port) |
| | CAN 2.0B | 1x CAN bus Cable (2x CAN bus Interfaces - 4 Wires Each) with DB9 Male Connector wired on a 8P Terminal Block |
| | Digital I/O | 1x Digital I/O Cable (2x Digital IN + 2x Digital OUT - 8 Wires) wired on a 8P Terminal Block |
| RADIO | Antennas | 1x 5in1 Adhesive Mount Antenna providing: 2*LTE MIMO (Main + Diversity, on SMA connectors), 2*Wi-Fi/Bluetooth (2.4GHz Wi-Fi/BT + 5GHz Wi-Fi, on RP-SMA connectors), 1*GNSS (on SMA connector) |
| OTHER | Adapter | 1x DB9 Female to Female Gender Changer – 1x DB9 Male to Male Gender Changer – 1x Breakaway Male to Male Pin Strip (40P), Gender Changer for Digital I/O Cable |
| | Resistor | 2x 120 Ohm Termination Resistors for RS-485 Interface |
| | Documentation | 1x Quick Start Guide, 1x Everware Cloud Setup Guide |
| POWER | AC-DC PSU | 1x 24VDC (24W) Power Supply Unit with Terminal Block |
| | Blades | 3x Power Blades for Wall Mount Adapter (US, JP, EU, UK) |