



- Road Vehicle Certified, ITxPT
- AI Acceleration
- Industry Leading Cybersecurity
- Built-in Global LTE and 5G Ready
- Open Platform
- Customizable



## Features

**Road Vehicle Certified, ITxPT :** Designed to meet ITxPT, with E-Mark certification wide operating temperature, wide range power supply with transient protection, isolated and protected interfaces

**AI Acceleration :** AI workload acceleration: i.MX 8M Plus providing a 2.3TOPS AI accelerator and quad core Cortex A53 performance for general purpose AI, image processing and computer vision

**Industry Leading Cybersecurity :** Designed to be secure: hardware anti-tampering, TPM 2.0 and optional IEC 62443-4-1/-4-2 assessment (Professional Service)

**Built-in Global LTE and 5G Ready :** Carrier certified and ready to deploy, with a global Cat 4 LTE modem and 5G ready

**Open Platform :** Features Everyware Software Framework (ESF), the IoT Java/OSGi based-middleware for IoT gateways that accelerates gateway development and enables remote management

**Easy to Program :** Full support for classic and visual programming, plus Everyware Software Framework (ESF), the IoT Java/OSGi based-middleware for IoT gateways that accelerates user application development

**Open, No lock-in :** Based on open standards and Cloud provider agnostic, it can be integrated with all major platform and service provides

**Customizable :** Personalization and full customization options are available, ranging from branding (“skins” and color) to deep HW/SW configurations

## Description

The DynaGATE 10-14 is a E-Mark certified Edge Gateway for Public Transport and Road Vehicles that enables a fast transition to ITxPT both in existing and new deployments.

Fully compliant with the ITxPT installation requirements, the DynaGATE 10-14 also provides legacy interfaces (e.g., serial RS-232/485/422) to support the integration in fleets that are still depending on them.

The DynaGATE 10-14 consolidates multiple devices in one, with significant savings while dramatically simplifying the installation and the interoperability challenges; DynaGATE 10-14 packs all the functions that would require dedicated GNSS units, Wi-Fi/BT to LTE/5G routers, IP and GSML II camera processors, CAN-FD controllers.

The DynaGATE 10-14 combines a rugged IoT Gateway with an AI and Computer vision platform: for instance, IP and GMSL II (factory option) video feeds from vehicle cameras can be processed by the integrated 2.3TOPS AI accelerator.

The DynaGATE 10-14 is a global product, certified by major LTE carriers and ready to deploy in North America, Europe and Japan; it is also 5G ready and additional cellular operator and country certifications are available as a professional service.

Cutting-edge cybersecurity is often a critical requirement: the DynaGATE 10-14 is PSA certified and can even be certified according to IEC 62443-4-1/-4-2 cybersecurity (Professional Service). System integrity and authenticity against unauthorized manipulations is layered across hardware and software: at the

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hardware level TPM 2.0 and an innovative, always-on, power-independent hardware antitamper monitor assure that the system has not been manipulated and that its sensitive data are safe. At a higher level, technologies such as Secure Boot and ARM Trust Zone expand the protection perimeter to the whole system.

The DynaGATE 10-14 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.

Ordering Code: DYGATE-10-14-XX

XX		-31	-33	-35
<b>PROCESSOR</b>	CPU	NXP i.MX 8M Plus, 4 Core ARM Cortex A53 1.8GHz + 1 Core ARM Cortex M7 800MHz		
<b>ACCELERATORS</b>	Neural Processor	Integrated, 2.3 TOPS		
	2D/3D GPU	Integrated, Shader, Vivante GC520L, Vivante GC7000UL		
<b>MEMORY</b>	RAM	4GB LPDDR4 (Up to 8GB); Inline ECC (Contact Eurotech for more information)		
<b>STORAGE</b>	Embedded	32GB eMMC (Up to 128GB)		
	Other	1x microSD Slot (User Accessible)		
<b>I/O INTERFACES</b>	Ethernet	2x 10/100/1000, M12 X-Coded (Factory Option: up to 4x 10/100/1000)		
	USB	2x Host 3.0 (Noise and Surge Protected), Type A		
	CAN	2x CAN-FD bus with 5V (100mA) Power Out, Protected and Isolated, with Termination and Fail-safe Resistors		
	Serial	2x RS-232/422/485 (Factory Option: up to 4x RS-232/422/485)		
	Serial Protection	Isolated, Surge Protected, with Termination and Fail-safe Resistors		
	Serial Console	1x Serial Console		
	Camera Input	IP Camera	IP Camera and 4 x GMSL 3.12Gbps Coax Input (FAKRA)	
	Digital I/O	11x Digital Input 36V, 1.5kV Isolated; 3x Digital Output (36VAC/DC), 500mA sink, 1kHz Max Switching, 1.5kV Isolated; 3x Digital Output (5VDC, Log-level, Non-isolated)		
	Analog I/O	2x Analog Input 36V, 11-bit, Isolated		
	Video Out	1x HDMI with 2D/3D Acceleration		
	Audio	Stereo Line-level Audio Output		
<b>RADIO INTERFACES</b>	Internal Cellular	No	LTE Cat 4 (Global) - Factory Options: Cat 6, 12, 18; 5G Ready	
	SIM Slot	No	2x microSIM (User Accessible; LTE CAT 4 only supports 1x)	
	GNSS	GPS, Galileo, GLONASS, BeiDou, QZSS		
	GNSS Type	Untethered Dead Reckoning (UDR); Factory Option: Real Time Kinematics (RTK) sub-meter		
	Wi-Fi	No	802.11 a/b/g/n/ac (2.4GHz, 5GHz)	
	Bluetooth	No	BT/BLE5.0 (2.4GHz)	
	Ext. Antennas	No	2x Cellular, 1x Wi-Fi/BT, 1x GNSS Fakra (Factory Option: SMA/RP-SMA)	
<b>CYBERSECURITY (HARDWARE)</b>	TPM	TPM 2.0		
	Hardware	Yes (Enclosure and Service Panel - Always-on Monitoring and Event Logging with Time Stamping)		
<b>OTHER</b>	RTC	Yes (SuperCAP Backup)		
	Watchdog	Yes - Dedicated Chip		
	EEPROM	256 Kbit		
	Temp. Sensor	Yes		
	Accelerometer	3D Accelerometer / 3D Gyroscope		
	LED	1x Power Blue, 1x Cellular Activity Green, 4x User Configurable (2x Green/Yellow, 2x Green/Red)		
	Buttons	1x Reset Button and 1x Programmable Button		
<b>EXPANSIONS</b>	Internal Expansion	Internal, M.2, Internal Bay #1, Internal Bay #2 (Contact Factory for Expansion Options)		
<b>POWER</b>	Input	Nominal: 12 and 24 VDC, Range: 9 to 35 VDC with Transient Protection and Vehicle Ignition Sense		
	Power Backup	10s Hold-up After Power Failure (Safe-shutdown); Configurable Sleep Timer, to Manage Shutdown		
	Consumption	10W Typical (Sleep <1.2W)		
<b>ENVIRONMENT</b>	Operating Temp.	-40 to +70°C		
	Storage Temp.	-40 to +70°C		
	Humidity	5 to 95% Relative Humidity (Non-condensing) at +40°C		

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<b>CERTIFICATIONS</b>	Cybersecurity	Secure Boot, TrustZone Architecture, PSA Level 1, California SB-327, Always-on Antitamper Monitor, TPM 2.0; IEC 62443-4-1/-4-2 - Hardened Production-only Images		
	IoT Platform	AWS IoT Core Qualified; Microsoft Azure Certified; Everyware Cloud Native		
	Regulatory	EU/UK: CE, RED, UKCA; North America: FCC, ISED, PTCRB (cellular variants); Japan: TELEC, JATE; Other Countries (Factory Option)		
	Cellular	EU/UK: Any; North America: AT&T, Verizon, T-Mobile; Japan: Any; Other carriers (Factory Option)		
	Safety	EN 62368, UL 60950 (S)		
	Road	E-Mark, ITxPT		
	Environment	RoHS3, REACH		
	Ingress	IP40		
<b>MECHANICAL</b>	Enclosure	Material: Aluminum; Color: Black Anodized		
	Dimensions	270 x 123 x 51mm (WxDxH) - Excluding Connectors		

§ UL, NRTL listing Factory Option.

SOFTWARE

<b>SOFTWARE</b>	OS	Eurotech Everyware Linux
	SDK	Yocto-based Eclipse Tooling, Azul Java
	IoT framework	Everyware Software Framework (Java/OSGi)

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