DynaGATE 10-14

AUTOMOTIVE GATEWAY - i.MX 8M Plus - 5G - Carrier Certified - Wi-Fi/BT - IEC 62443-4-2 - ITxPT VCG



- **Road Vehicle Certified, ITxPT VCG (Vehicle Communication Gateway)**
- **AI Acceleration**
- **Industry Leading Cybersecurity**
- **Certified 5G RedCap and LTE Cat 4**
- **CAN-FD and Read-Only CAN**
- **Open Platform**
- **Customizable**

Features

Road Vehicle and ITxPT Certified : With E-Mark and ITxPT VCG (Vehicle Communication Gateway) certifications, 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: RED-DA certified, hardware anti-tampering, TPM 2.0 and optional IEC 62443-4-2 (Professional Service)

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

CAN-FD and Read-Only CAN : Supports CAN-FD and HW Read-Only CAN interfaces (factory option), providing both bidirectional and unidirectional (device isolaton mode) channels

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 an E-Mark certified Edge Gateway for Public Transport and Road Vehicles that enables a fast transition to ITxPT VCG both in existing and new deployments.

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 5G and LTE routers, IP camera processors, bidirectional CAN-FD and HW Read-Only CAN (factory option) controllers. Support for up to 4x RES-232/422/485 serial ports allows compatibility with legacy devices, making it possible to transition more gradually to a pure ITxPT vehicle architecture.

The DynaGATE 10-14 combines a rugged IoT Gateway with an AI and Computer vision platform: for instance, IP 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; additional 5G and LTE cellular operator and country certifications are available as a professional service.

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

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and software: at the 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.

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Ordering Code: DYGATE-10-14-XY						
Hardware Configuration (Y)		Y=1	Y=3	Y=6	Y=8	Y=9
PROCESSOR	CPU	NXP i.MX 8M Plus, 4 Core ARM Cortex A53 1.6GHz + 1 Core ARM Cortex M7 800MHz				
ACCELERATORS	Neural Processor	Integrated, 2.3 TOPS				
	2D/3D GPU	Integrated, Shader, Vivante GC520L, Vivante GC7000UL				
MEMORY	RAM	4GB LPDDR4 (Up to 8GB); Inline ECC (Contact Eurotech for more information)				
STORAGE	Embedded	32GB eMMC (Up to 128GB)				
	Other	1x microSD Slot (Service Panel)				
I/O INTERFACES	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, Protected and Isolated, with Termination and Fail-safe Resistors; Factory Option: HW Read-Only CAN				
	Serial	2x RS-232/422/485			4x RS-232/422/485	
	Serial Protection	Isolated, Surge Protected, with Termination and Fail-safe Resistors				
	Serial Console	1x Serial Console				
	Digital I/O	11x Digital Input 36V, 1.5kV Optoisolated; 4x Digital Output (36VDC), 500mA sink, 1kHz Max Switching, 1.5kV Optoisolated; 3x Digital Audio Outputs protected and non-isolated				
	Analog I/O	2x Analog Input 36V, 12-bit, Isolated				
	Video Out	1x HDMI with 2D/3D Acceleration				
	Audio	Stereo Line-level Audio Output				
RADIO INTERFACES	Internal Cellular	-	LTE Cat 4 (Global) - Factory Options: Cat 6, 12, 18	5G RedCap (Global)		LTE Cat 4 (Global) - Factory Options: Cat 6, 12, 18
	SIM Slot	-	2x microSIM (Service Panel; 5G RedCap and LTE Cat 4 support only 1x) - eSIM Option (Contact Eurotech)			
	GNSS	GPS, Galileo, GLONASS, BeiDou, QZSS				
	GNSS Type	Untethered Dead Reckoning (UDR); Factory Option: Real Time Kinematics (RTK) sub-meter				
	Wi-Fi	-	802.11 a/b/g/n/ac (2.4GHz, 5GHz)			
	Bluetooth	-	BT/BLE5.0 (2.4GHz)			
	Ext. Antennas	1x GNSS Fakra (Factory Option: SMA/RP-SMA	2x Cellular, 1x Wi-Fi/BT, 1x GNSS Fakra (Factory Option: SMA/RP-SMA)			
CYBERSECURITY (HARDWARE)	TPM	TPM 2.0				
	Anti-Tamper	Yes (Enclosure and Service Panel - Always-on Monitoring and Event Logging with Time Stamping)				
OTHER	RTC	Yes (SuperCAP Backup)				
	Watchdog	Yes				
	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				
EXPANSIONS	Internal Expansion	Internal, M.2, Internal Bay #1, Internal Bay #2 (Contact Factory for Expansion Options)				
POWER	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)				

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Hardware Configuration (Y)		Y=1	Y=3	Y=6	Y=8	Y=9
ENVIRONMENT	Operating Temp.	-40 to +70°C				
	Storage Temp.	-40 to +85°C				
	Humidity	5 to 95% Relative Humidity (Non-condensing) at +40°C				
CERTIFICATIONS	Regulatory	EU/UK: CE, RED; North America: FCC, ISED; Japan: JATE; Other Countries: Factory Option	EU/UK: CE, RED; North America: FCC, ISED; Japan: TELEC, JATE; Other Countries: Factory Option	EU/UK: CE†, RED†; Other Countries: Factory Option		EU/UK: CE, RED; North America: FCC, ISED; Japan: TELEC, JATE; Other Countries: Factory Option
	Cellular	-	EU/UK: Any Carrier; North America: PTCRB, AT&T, Verizon*; Japan: KDDI; Other Countries: Factory Option	EU/UK: Any Carrier; Other Countries: Factory Option		EU/UK: Any Carrier; North America: PTCRB, AT&T, Verizon*; Japan: KDDI; Other Countries: Factory Option
	Safety	CB, EN 62368-1, UL 62368-1§				
	Vertical	E-Mark, ECE R10, ECE R118, ITxPT VCG (Vehicle Communication Gateway)				
	Environment	RoHS3, REACH				
	Ingress	IP40				
MECHANICAL	Enclosure	Material: Aluminum; Color: Black Anodized				
	Dimensions	270 x 123 x 51mm (WxDxH) - Excluding Connectors				

§ UL, NRTL listing Factory Option.

† ETA Q2 2026

* Certification in Plan

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Software Configuration (X)		X=5	X=6	X=6YGE
OS	Eurotech Everyware Linux	Yes		
IOT FRAMEWORK	Everyware Software Framework (Java/OSGi)	-	Yes	
Suite and Services	Everyware GreenEdge (EGE)	-		Yes
SOFTWARE HARDENING	Hardening	-	Factory Option	
	Secure Boot	Yes		
CERTIFICATIONS	RED-DA	Yes - EN 18031-1 (RED-DA) - Off-the-shelf Compliance		
	Cybersecurity	-	Factory Option (ISASecure/IEC 62443-4-1/-4-2 SL2 Host)	
	IoT Platform	-	AWS IoT Core, AWS IoT GreenGrass	
	ITxPT Compliance	ITxPT Services Must be Implemented by the Customer	ITxPT Services are Provided by the ESF ITxPT Add-on	

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