Telematics Control Unit

iW-Rainbow-G26

The Telematics Control Unit is built to power your connected mobility and telematics applications across a range of connected vehicles. Integrated with multiple CAN ports, a wide range of protocol support and a multitude of wireless connectivity options such as 4G, Wi-Fi and Bluetooth, The globally certified TCU powers applications such as predictive maintenance scheduling, fleet management and personalized driving experiences.

Powered by NXP i.MX 6ULL application processor

LINUX 5.4 BSP with software flexibility

LTE Cat 4 / Cat M1 / Wi-Fi / BT Connectivity

3 CAN Ports: 1 x CAN FD and 2 x HS CAN

Accelerometer / Gyroscope / Magnetometer

ISO 15765-4 / J1939 / CANopen / UDS / K-Line

APPLICATIONS

Electric Vehicles

Motor Bikes

Electronic logging device

Fleet Management

Connected Car

Technical Specification

Processor

CPU	NXP i.MX 6ULL
RAM	512MB DDR3L SDRAM
FLASH	8GB eMMC Flash

Wireless Connectivity

Cellular Connectivity	LTE Cat 4 / Cat M1
Wi-Fi	802.11a/b/g/n/ac
Bluetooth	Bluetooth v5.0 BR/EDR/LE

Interfaces and Peripherals

CAN	3 Ports (HS CAN x 2 ports CAN FD x 1 port)
Ethernet	10/100Mbps x 1 port
Digital I/O	Digital Input x 1 port Digital Output x 1 port

Sensors

Accelerometer	±2/ ±4/ ±8/ ±16 g full scale
Gyroscope	±125/±250/±500/±1000/±2000 dps
Magnetometer[1]	Upto ±50 gauss magnetic range

Satellite Location

GNSS	GPS / GLONASS / BeiDou / Galileo

Antenna

Internal Antenna	GNSS, Cellular, Wi-Fi/BLE

SIM Provision

SIM connector	Micro SIM Connector/eSIM[1]

Battery Pack

Battery Capacity	Up to 1500mAh
Battery Technology	Lithium-ion Polymer (LIP)
Charging Temperature	0°C to 45°C

Power Characteristics

Power Input	9V – 36V
Sleep Current	5mA at 12V

Environmental

Operating Temperature	-40°C to +70°C[2]
Storage Temperature	-40°C to +85°C[2]

Enclosure

Protection Class	IP30
Mounting Options	Cable Tie
Dimension	106 X 87 X 28.5 mm

Certifications

Regulatory	CE / FCC / ISED

Software

Operating System	Linux 5.4.70
Protocols[1]	ISO 15765-4 CAN, ISO 11898, UDS, K-Line, CANopen

Note:

[1] Optional features: Please contact iWave sales team at mktg@iwavesystems.com

[2] Temperature range subject to use case and operational functionality

RELATED PRODUCTS

Rugged Telematics Device
The Rugged Telematics Device with IP67 protection class is integrated with 3 CAN Ports, RS232 and RS485 Ports, with various wireless connectivity options such as 4G, Wi-Fi and Bluetooth. Rugged device is built to track your vehicles even in tough conditions.
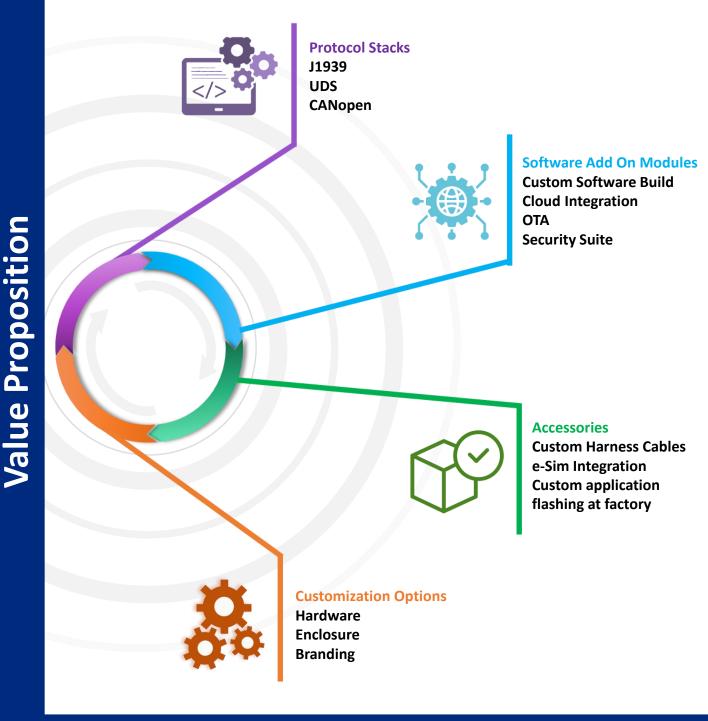

Telematics Gateway
The i.MX 8XLite powered Telematics Gateway is built with extensive interfaces: 4 CAN Interfaces, RS232, RS485, Analog Inputs and Digital Inputs. With the support for multiple protocols and powerful edge firmware, the gateway is suitable for wide range of applications.

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Value Proposition

Protocol Stacks
J1939
UDS
CANopen

Software Add On Modules
Custom Software Build
Cloud Integration
OTA
Security Suite

Accessories
Custom Harness Cables
e-Sim Integration
Custom application flashing at factory

Customization Options
Hardware
Enclosure
Branding

iWave Systems Technologies is a product engineering organization offering an extensive portfolio of Telematics Solutions, System on Modules and avionic solutions. With over 21 years of embedded industry experience and designing solutions for automotive customers across the globe, iWave is driven with the aim to be a reliable global technology partner.

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