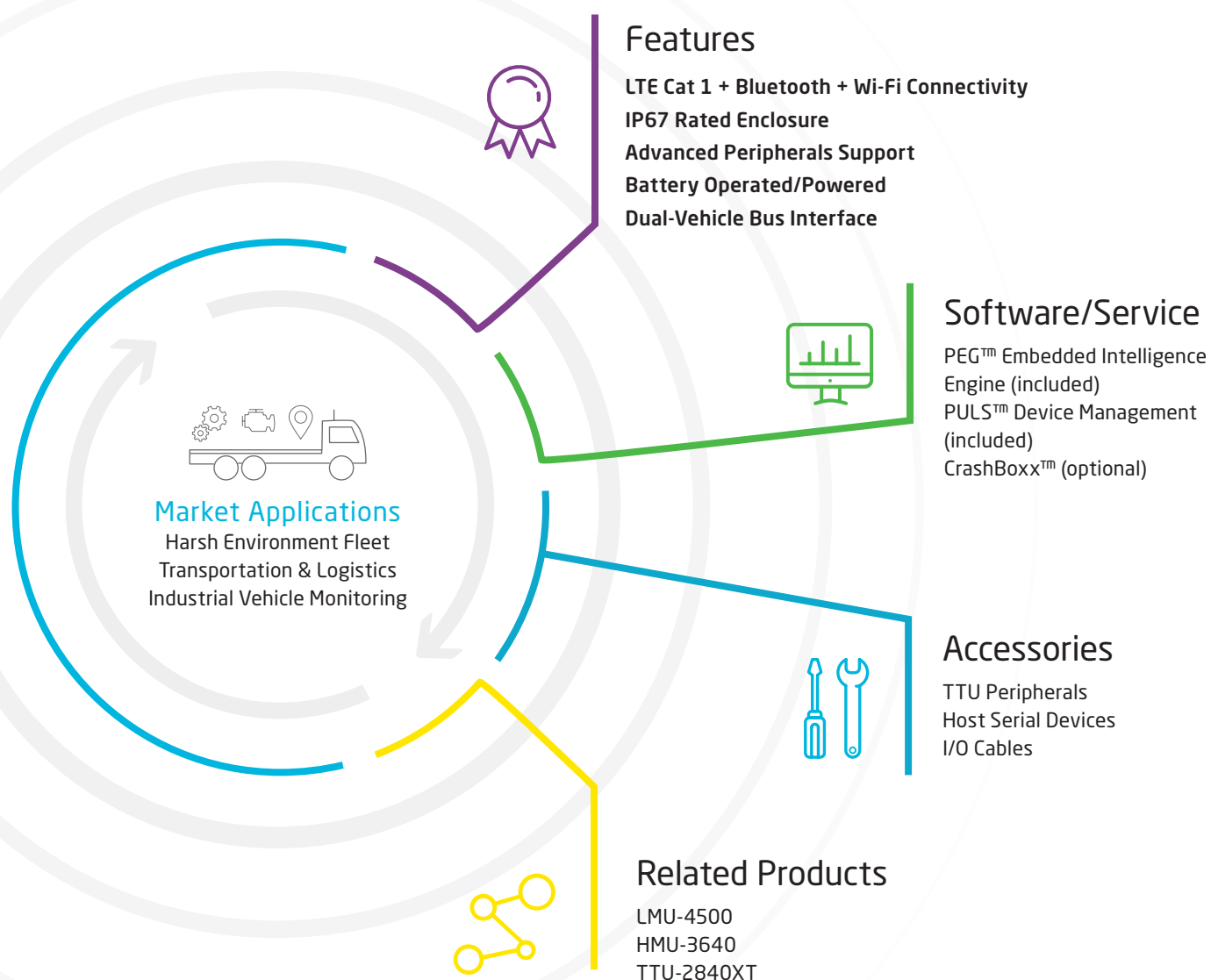


TTU-3640™



Weatherproof Telematics Gateway Built for Rugged Environments

The TTU-3640™ is a next-generation telematics gateway built for extreme environments. Providing enterprise applications and fleet features utilizing both cellular and peripheral connectivity (Bluetooth/Wi-Fi) combined with our leading ECU (Engine Control Unit) interface to deliver instant vehicle updates for both light and heavy duty vehicles.



TTU-3640™ Technical Specifications

Cellular/Network

North American Variant	
LTE Cat 1	1900 (B2)/AWS 1700 (B4)/850 (B5)/700 (B12) MHz
HSPA/UMTS	850 (V)/1900 (II) MHz

Data Support

SMS, UDP, TCP, CalAmp Telematics Cloud API

Satellite Location (GNSS)

Constellation Support	Hybrid GPS, GLONASS, SBAS Engine (WAAS, EGNOS, MSAS)
Channels	55 Channel
Tracking Sensitivity	-167 dBm
Acquisition Sensitivity	-156 dBm (hot start) -148 dBm (cold start)
Location Accuracy	~2.0m CEP Open Sky (SBAS 24 hours static)
Location Update Rate	Up to 4 Hz
AGPS Location assistance capable	

Comprehensive I/O

Ignition Input	1 (fixed bias)
Digital Inputs	4 (high/low bias selectable 0-30 VDC)
Digital Outputs	3 (open collector relay 150mA)
Analog Inputs	1 external ADC inputs
1-Wire® Interface	1 (driver ID/temperature sense)
DC Power Outputs	1 switched VIN, 2 (reference voltage 3.3V)
Accelerometer	Built in, triple-axis (driver behavior, impact detection, motion sensing, tilt detection)
Status LEDs	4 (GPS, cellular, VBUS, LAN)
Serial Interface	2 TTL ports

Certifications

Industry Certifications FCC, IC, PTCRB, RoHS

Device Management

PULS™ Monitor, manage, upgrade firmware, configure and troubleshoot devices remotely

Embedded Intelligence Engine

PEG™ Update device functionality or develop new on the edge applications

CALIFORNIA PROPOSITION 65



WARNING:

This product can expose you to chemicals including Carbon black and Nickel, which are known to the State of California to cause cancer, and including Bisphenol A and 1,3-Butadiene, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Electrical

Operating Voltage	12/24 VDC Vehicle Systems 9-30 VDC (start-up, operating) 7-32 VDC (momentary)
Power Consumption	Typical 500uA @ 12V (deep sleep) Typical 15mA @ 12V (radio-active sleep) Typical 100mA @ 12V (active tracking with GPS and cell enabled)

Battery Pack

Battery Capacity	Up to 5200 mAh
Battery Technology	Lithium-Ion
Charging Temperature	0° to +45° C

Environmental

Temperature	-30° to +60° C (connected to primary power) -10° to +60° C (operating on internal battery) -20° to +25° C ≤ 6 months (long term storage with battery)
Humidity	95% RH @ 50° C non-condensing
Shock and Vibration	U.S. Military Standards 202G, SAEJ1455
ESD	SAEJ1113-13 (4KV Limit)
Ingress Protection Rating	IP67

Physical/Design

Dimensions	7.1 x 3.4 x 2.2" (178.7 x 86.1 x 55.9 mm)
Weight	12 oz. (340g) (w/ 5200mAh Battery)

Connectors/SIM Access

Vehicle BUS I/F	34-Pin 2.5mm Pitch Sealed
SIM Access	Internal (2FF SIM)

Interface Standards

Bluetooth	Classic Bluetooth v2.1+EDR and BLE v4.0
Wi-Fi	802.11 a/g/b/n client mode
Heavy Duty Truck Data	J1939, J1708
Light Duty Vehicle Data	J1850 PWM, J1850 VPW, SW-CAN ISO 9141-2, KWP 2000, ISO 15765 CAN

Product Options

RS-232 on Aux 2
I/O wiring harness
200, 1000 mAh Lithium-Ion backup battery