

Celer

Onboard automotive router

Introduction

The Celer-series is Teldat's next-generation multiservice communication platform for vehicles. It provides 5G/4G broadband (LTE Cat.19), Wi-Fi 6, remote management and configuration, and monitoring through route mapping, secure connectivity with Teldat's firewall, artificial intelligence applications with Google Coral, and eSIM for the remote provisioning of up to 8 different operator profiles.

Interfaces

Cellular module	5G o 4G optionally
Wi-Fi module	Wi-Fi 6 802.11ax
Location system	GPS embedded
Digital I/O	Yes 1 PIN
Ethernet interface	2 x 2.5 GbE RJ45

Highlight

- 5G/4G with Wi-Fi 6
- Integrated firewall
- CNM compatibility
- Artificial Intelligence Google Coral
- GUI interface for easy installation and maintenanc
- GNSS Tracking Services
- Multi-gigabit Ethernet



Competitive Advantages

Dedicated cybersecurity embedded	Web filtering and traffic analyzer with multiple configurations available through cloud service.
Best performance WWAN	5G or optionally 4G with Wi-Fi 6 802.11ax/ac/b/g/n in dual band AP and client modes.
Artificial Intelligence applications	With the Google Coral chip the Celer has the state-of-art AI in-vehicule applications and its future updates.
Certified Platform	Celer-Series is a platform designed for embedded/industrial environments, ensuring compliance with all necessary certifications in the industry.

Key Features

- **4G or 5G configurable cellular module** Availability of chose between Celer-Series with the 5G modem (the best performance solution) and the Celer-Series 4G which is the cost effective one.
- **Cybersecurity embedded** Teldat's Security Solutions of Operational Technology to on-board systems.
- **Optimised hardware design for on-board environment** Extended temperature range (-25°C to 70°C). Anti-vibration design. 12-24 VDC for connection to batteries with optimising battery consumption capabilities.
- **Power supply protection (increase MTBF)** Power supply protection and ignition detection for delayed shutdown. Minimisation of failures due to unstable power supply. Temperature sensor for automatic shutdown.
- **Wi-Fi 6 802.11ax** Multi user 2x2 MiMo dual band Wi-Fi that seamless integrates with HotSpot and WebFilter applications, creating a full solution for on-board Internet connectivity.
- **AI Applications** Via TPU (Tensor Processing Unit) embedded Google Coral for dedicated applications such as video processing (Computer Vision), predictive maintenance and many other AI applications.
- **dual-SIM slot with eSIM** Dual SIM for each port to increase connection availability, using any telecommunications operator as a backup for the others in case of connection loss in a single module and eSIM availability to zero-touch provisioning.
- **Embedded GPS with Teldat's Mobility applications** Ideal for fleet management or telemarketing applications. The equipment has GPS accessible via TCP port that provides real-time geolocation information in NMEA standard.

HARDWARE TECHNICAL FEATURE

WWAN

5G-NR and LTE/HSPA+ or 4G module (external SMA antennas)
Wi-Fi: dual MiMo 2x2 radio in 2.4 and 5 GHz with SMA-RP connectors
GNSS: Support of GPS/GLONAS/BeiDo/Galileo SMA

SIM

Dual-SIM with one physical slot-tray and one eSIM per modem.

Dimensions and weight

145 x 150 x 55 mm (Large/width/height)
Approximate weight: 1.5 Kg
Flexible installation with DIN carril optionally

SOFTWARE TECHNICAL FEATURE

Management

Interface: User friendly GUI, CLI configuration and storage in a plain text
Cloud based Network Management with auto provision functionality.?
Certificates: RADIUS and TACACS+ compatible AAA support

IP Services and Protocols

DHCP, DNS, SFTP, and SSH server and client NTP, LDAP, Syslog
ARP, ARP Proxy, MTU discovery, NAT, ECMP, BFD RIP, OSPF, BGP
Multicast: IGMP (v1 to 3), PIM-SM, MSDP, MLDv2

Wi-Fi specific functions

HotSpot Gateway functionality to support HotSpot services
WLAN controller functionality for Teldat on-board APs

ADDITIONAL TECHNICAL FEATURE

TPU Google Coral (*Roadmap)

High-speed inferencing for machine learning (ML) models.
4 TOPS: capable of performing 4 trillion operations per second

Ethernet

2 x 2.5 GbE LAN/WAN
Duplex support
RJ45

Certifications

Regulatory: e-Mark, CE(EU), FCC, RED
Materials: RoHS, REACH
EN 60068-2, EN60950-1,EN55022, EN55024

Envirnomental

Ingress Protection: IP40 Solid particle protection > 1 mm
Operating temperature: -25 to + 70 °C
Storage temperature: min. -40 °C max. +75 °C

Security

IPSec in transport and tunnel mode, DMVPN, wireguard, OpenVPN and Pulsesecure
Certificates: CSR, SCEP, X.509v3, PKIX, LDAP revocation ?
NGFW with additional license.?

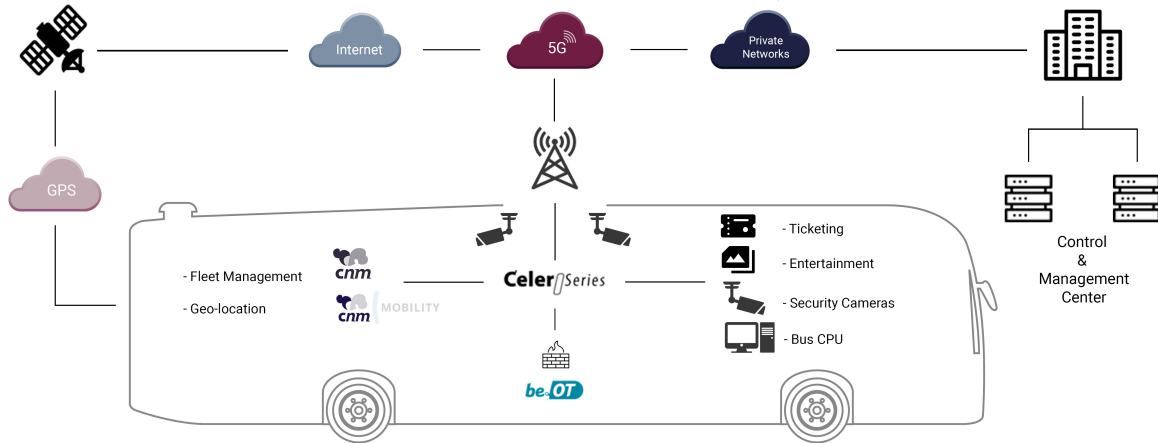
Quality of Services

Classification, marking, BW management, BW prioritisation and limitation

Bundle CNM & CNM Mobility

Global centralized device management tool
Info in real time of the vehicles
Coverage, signal signal strength, bandwidth or throughput among others.

Scenarios



Teldat Group