



CONNECTED BUS



WHAT IS IT?

At Wavecom, we see the **Connected Bus** as an integrated system supported on 5G, providing: Wi-Fi connectivity for passengers, Real-Time Fleet Information, Advanced Passenger Counting, Origin & Destination Matrixes and managed connectivity for other onboard sub-systems (confort and air quality monitoring, CCTV, seat occupancy...)

WHAT DOES IT CONSIST OF?

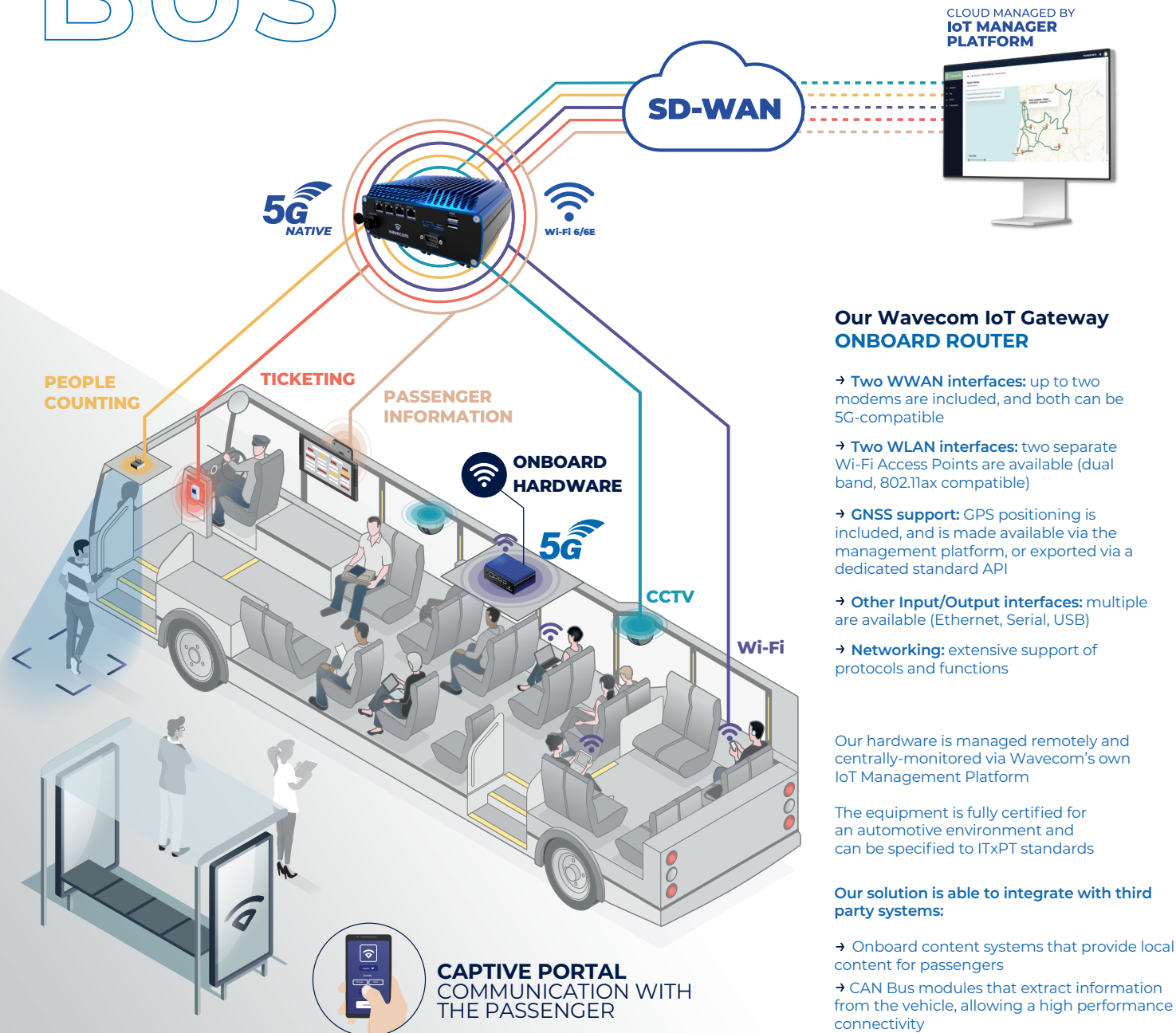
Wavecom's automotive certified Gateways provide the interfaces and high performance required for bus and coach's communications, providing multiple 5G modems for redundant internet connectivity, Wi-Fi 6/6E service to passengers and managed connectivity through Ethernet and Serial for onboard systems.

Wavecom's IoT manager is a multi-tenant platform supporting all deployment sizes, from a few vehicles to hundreds, following a top/down organization, as required for fleet management.

It centrally manages the Gateways and orchestrates the applications running on the fleet: Wi-Fi Service for passengers, Passenger profiling statistics via Wi-Fi, Passenger counting, Origin & Destination matrix, Sensors data visualization, Connectivity for onboard systems, APIs, Monitoring, Service and support.



CONNECTED BUS



Our Wavecom IoT Gateway ONBOARD ROUTER

- **Two WWAN interfaces:** up to two modems are included, and both can be 5G-compatible
- **Two WLAN interfaces:** two separate Wi-Fi Access Points are available (dual band, 802.11ax compatible)
- **GNSS support:** GPS positioning is included, and is made available via the management platform, or exported via a dedicated standard API
- **Other Input/Output interfaces:** multiple are available (Ethernet, Serial, USB)
- **Networking:** extensive support of protocols and functions

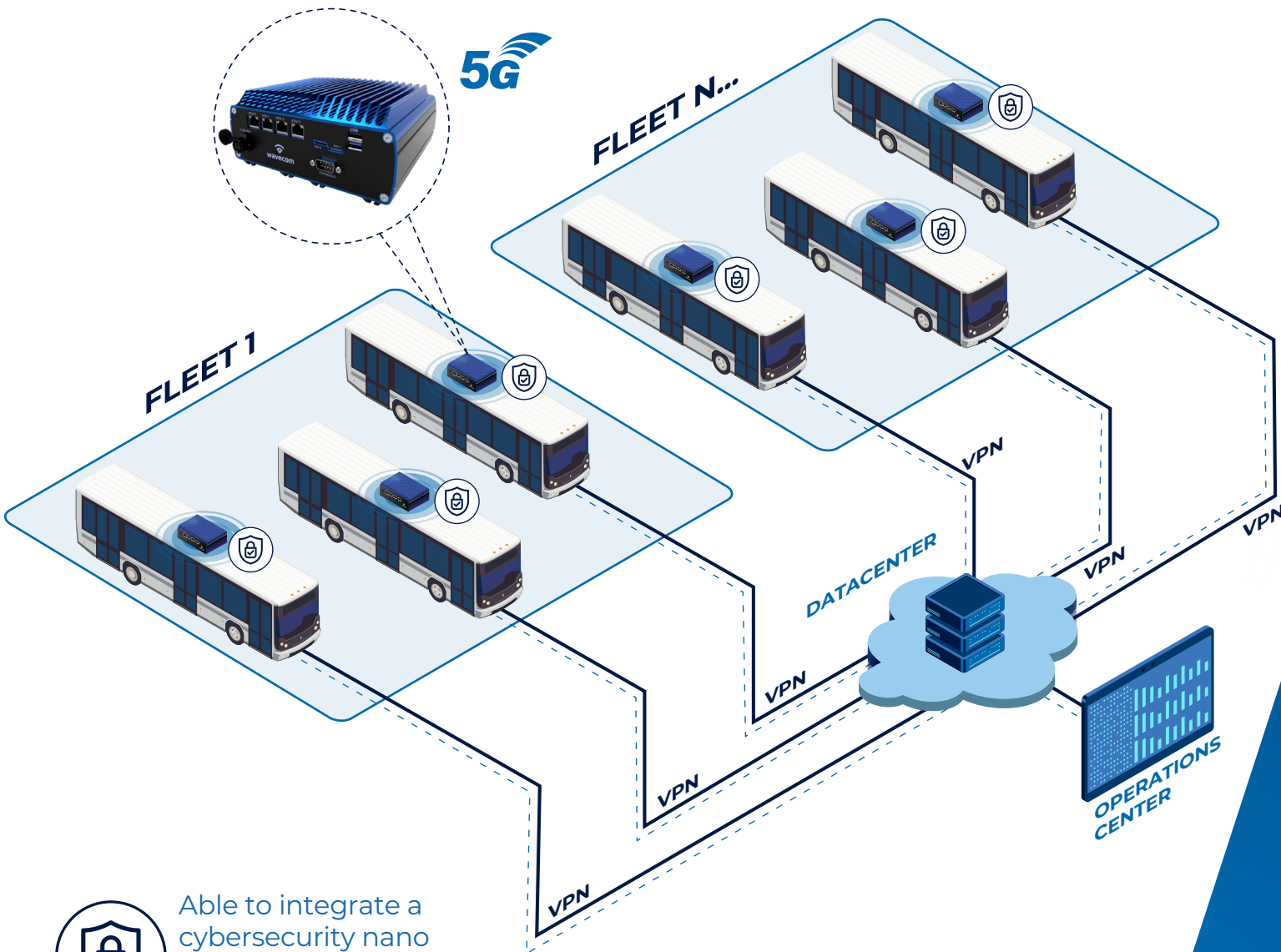
Our hardware is managed remotely and centrally-monitored via Wavecom's own IoT Management Platform

The equipment is fully certified for an automotive environment and can be specified to ITxPT standards

Our solution is able to integrate with third party systems:

- Onboard content systems that provide local content for passengers
- CAN Bus modules that extract information from the vehicle, allowing a high performance connectivity

COMMUNICATIONS SYSTEM



Able to integrate a cybersecurity nano agent from 3rd party firewall manufacturers.

CLOUD MANAGED IoT MANAGER PLATFORM



- **Multi-tenant** cloud-based architecture
- **Unique backoffice** interface for the multiple services (Fleet information, people counting, Wi-Fi Captive portal)
- **Advanced Captive Portal** Management
- A single panel for **profiles configuration** (bandwidth limits, data traffic limits, time limits)
- Security/privacy according with **GDPR standards**

- **Real-time** fleet functionalities
- Vehicle's position **history**
- **API's for third party** integrations
- **Passenger Counter** *
- **Origin and Destination** matrix *

*Optional Services





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NP 4457:2021, ISO 9001, ISO 14001, ISO 45001:2018, ISO 27001