RUGGED EDGE COMPUTERS FOR MOBILE EQUIPMENT

From simple, low-cost CAT M1/NB-IoT tracking devices to highly-capable, well-connected mobile computers, Appareo's telematic and connectivity solutions can meet a broad range of tracking and communication needs.

TECHNOLOGY APPLICATION

Asset Tracking | Machine Control | Telematics | Virtual Terminal Support

On one side of the spectrum Appareo offers low-cost, cellular, IP69K-rated asset tracking devices with ultra-long battery lives. These products can be globally deployed using CAT M1 LTE and NB-IoT networks with GPS, with battery life lasting up to five years without the need to service the device.

With capabilities beyond that of a simple tracking device, your cloud application can reach out to the device to change its configuration, such as frequency of updates and sensor-interface settings (e.g. receiving a movement report from the device's integrated accelerometer). For extended battery life applications, the device can persist for long periods in a low-power sleep state and be woken on demand by a text message requesting that it sends its current location.

On the other side of the spectrum, Appareo manufactures the Gateway series of telematic devices -- combining the high-power computing performance of a dual-core processor with the ruggedness of an IP67 or IP69K enclosure. Appareo Gateways are trusted by global OEMs, and meet their stringent environmental requirements. They contain 6 CAN buses, Automotive Ethernet, WiFi, Bluetooth, and Cellular Connectivity for EU, North America, South America, Australia, and Russia.

I/O customized to include:

- Up to 6 CAN buses
- 802.11 b/g/n WiFi
- Bluetooth
- BroadR-Reach
- Ethernet
- LTE CAT 1/4 with 2G/3G
- GPS
- Short-range 433 MHz radio
- Iridium SBD

SOFTWARE DEVELOPMENT KIT (SDK)

Appareo Gateways are built on Yocto Linux with Docker support to allow developers to quickly deploy applications, whether that software be written by your in-house team, or by Appareo on your behalf. In addition, hardware-abstraction libraries are provided to provide easy porting to variants of hardware platforms. As custom variants, technology improvements and upgrades are built into future designs, the same abstractions can be used to run on multiple platforms. These libraries also allow for rapid development of custom applications to be run on target. Hardware abstraction libraries exist in C/C++, but Python, Rush, Google Go (GoLang), and .NET and can all be run on Appareo Gateways. The Appareo team worked with Microsoft to enhance the .NET core libraries to enable further hardware interaction for embedded Linux, usable on our devices.

SUPPORTED LANGUAGES:
C/C++, Python, Rust, Google Go (GoLang), .NET

Microsoft Azure Certified

Certain Appareo Gateway models are Azure Certified for Microsoft Azure IoT Edge, ensuring that the hardware will work seamlessly with Azure IoT.

POSSIBILITIES

From remote diagnostics (securely accessing Gateways to troubleshoot equipment in real time) to inexpensively deploying firmware updates through differential software updating tools, Appareo has the real-world telematic deployment experience to support your business. Beyond the wide area network capabilities of the Gateways, Appareo products have been used extensively for the local area network connection of phones and tablets to off-highway equipment for both control and monitoring purposes.

REGULATORY & NETWORK CERTIFICATION

Iridium Network | Verizon Network | Vodafone | CE | IC | FCC | RCM

The team at Appareo is dedicated to turning acumen and ambition into tangible technology, and we're always ready to work with partners that share our drive.

Visit our website to learn more about our services and capabilities:
www.appareo.com

RADIOS | VISION SYSTEMS | GPS | INERTIAL SENSING & AHRS | LOW-POWER & BATTERY-POWERED DEVICES | ARTIFICIAL INTELLIGENCE | AUGMENTED REALITY | SATELLITE