Converged Railway Gateway Strengthens Passenger Retention by Offering In-Train Internet Access and Facial Recognition

[R6S](#)

EN50155 Certified Railway Embedded PC with Intel® Core i7-7600U Processor

Today's transportation service operators are facing challenges to improve safety, mobility efficiency and infotainment in order to strengthen passenger retentions. Among these, mobile Internet access has been the most demanded. In fact, onboard Wi- Fi has been implemented by some commercial airlines on their aircrafts. Therefore, service providers have to consider the future impact on the traffic growth over Wi-Fi connections.

Secondly, security- related technology such as facial recognition can improve passenger retentions in the safety aspect. Thus, transportation operators are seeking highly-converged computing gateways based on open architecture in order to reduce compatibility and stability issues with other in- train subsystems, while implementing new services.

Requirements

A local system integrator in St. Petersburg worked with Lanner to provide a converged railway gateway to offer Internet access and infotainment systems for passengers in the mentioned region. As discussed, surveillance and facial recognition were also the considerations. Thus, the gateway shall meet the following rail automation and digitalization requirements:

- EN50155 certified: The converged railway gateway device must support wide working temperature range from -40 to 70°C.
- EN 61373 Railway applications: robust and rugged to withstand vibrations, shock and other extreme conditions in a rail transportation environment.
- Rich RF & wireless connectivity: multiple Mini- PCIe sockets for the installations of Wi- Fi, 3G/4G- LTE modules to work with the in- train modems in order to provide cellular connections and in- carriage Wi- Fi. Also, GPS and Glonass RF must be equipped for location tracking.

- Video Surveillance: plenty of PoE ports to connect Wi- Fi APs and IP Cameras for situational awareness and facial recognition applications.

Converged Railway Gateway Enables In-Train Internet Access and Facial Recognition
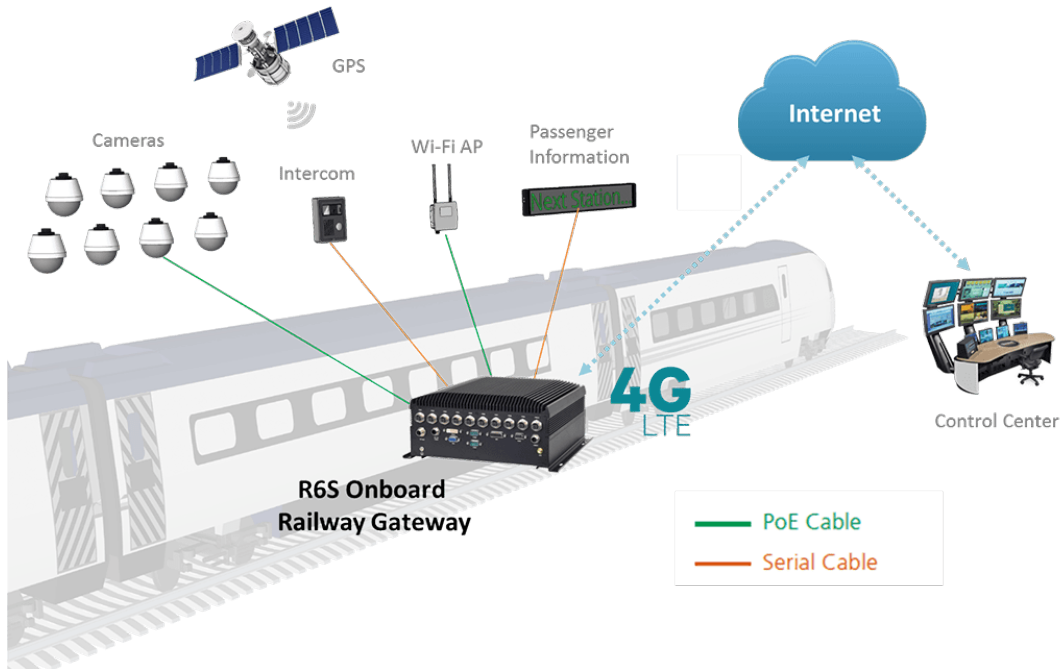
Lanner's Solution

Lanner has proven records in the expertise and experience of its customization services for clients in North America, Europe and Japan. This time, Lanner's Russian representative provided the highly converged railway gateway R6S for the local system integrator in St. Petersburg.

Lanner's R6S has been certified by EN50155 and EN45545 standards to meet the required ruggedness and robustness in railway applications. R6S is powered by ultra- performance Intel Core i7-7600U processor to perform multiple graphic-intensive tasks like facial recognition and video surveillance. In fact, R6S comes with 10 rugged PoE ports to connect with multiple modems, wireless APs and IP cameras.

In addition, R6S offers a wide range of RF and wireless connectivity by being equipped with multiple mini- PCI Express sockets for Wi- Fi/3G/4G LTE modules. The gateway also comes with onboard GPS receiver module to receive signals from the satellites.

About Lanner

Lanner is a leading OEM with more than 30 Years of experience designing, building and manufacturing embedded and network computing hardware. From x86 rackmount systems to wide- operating temperature rugged industrial hardware, our appliances cover a diverse set of popular and niche

applications.