NEXCOM Powers Smarter and Safer Railway Operations with the ATC 3540 and ATC 3750 Series

Edge AI Platforms for Rolling Stock Deliver Advanced Driving Aids and Safety Features

FREMONT, CA, USA, July 25, 2023 /EINPresswire.com/ -- NEXCOM, a leading global supplier of intelligent in-vehicle appliances, announced today the launch of the ATC 3540 and ATC 3750 series, the company's latest advanced Edge AI platforms for smart transportation infrastructure. The cutting-edge computers are designed to power railway vehicles, enabling advanced driving aids, obstacle detection, and collision avoidance applications for rolling stock.

ATC 3750/3540 Series
NVIDIA® Jetson AGX Orin™/Orin™ NX SOM Solution Performance
Edge AI Computing for Rail

NEXCOM's ATC 3540 and ATC 3750 series utilize the NVIDIA® Jetson Orin™ NX and NVIDIA® Jetson AGX Orin™ artificial intelligence (AI) inference accelerators. They are designed with multiple PoE+ ports to facilitate seamless connectivity with vital smart sensors and cameras, enabling real-time data transmission via 5G. Additionally, Wi-Fi 5/6 and 10GbE technologies are utilized to transmit recorded driving and railway data to the headquarters' NVR from each train at the end of the day. The mobile computers facilitate real-time monitoring of information with integrated IP cameras, mmWave radar, or LiDARs.

Advanced railway computers play a crucial role in detecting and eliminating blind spots and unexpected obstacles, helping to minimize accidents, damage, and delay – while maintaining transportation volume and revenue. The technology works to reduce accident risks and prevent derailments with early braking alerts. The ATC 3540 offers advanced-edge AI computing in a compact, fanless mobile computer. With a wide temperature range and an IP67 rating, the ATC 3540 excels in harsh environments. The ATC 3750 is a robust vehicle computer featuring increased processing power and peripheral connectivity options, including 6x GbE PoE+ and an optional 10GbE.

"NEXCOM's ATC 3540 and ATC 3750 series computers provide the essential functions railway operations depend on, such as driving and braking control, collision protection, people counting, traffic light detection, railway ballast bed monitoring, and station monitoring," said Peter Yang, President of NEXCOM. "Powerful, mobile computing solutions are required to power the future of smart transportation. These technology solutions improve safety in rolling stock applications, but they require high computing power working in complex and sometimes harsh environments."

The ATC 3540 and ATC 3750 are backed by NEXCOM's comprehensive software service. The NEXCOM Accelerator Linux (NAL) provides integration of the NVIDIA® Jetson Jetpack 5.1.1 package, Ubuntu 20.04, an onboard MCU Library, and custom-made peripheral I/O functionality drivers. It also provides developers with efficient control over the hardware and NVIDIA® Jetson SOM through APIs, sample code, and I/O utility. This facilitates a seamless solution to accelerate customers' APP developments.

Delivering unmatched reliability, the railway SKUs for the ATC 3540 and ATC 3750, along with an optional power isolation kit VTK PWA series, provide complete power protection. Holding an EN 50155 certification, they are also equipped with an M12 X-coded connector to prevent wire detachment. Additionally, the ATC 3750 offers passive cooling and an optional fan kit for hybrid cooling, providing effective heat dissipation over a wide temperature range.

"The ATC 3540 and ATC 3750 are game-changing devices, set to revolutionize the transportation industry by providing efficient, cost-effective, and safe technology solutions," said Yang. "They have become widely adopted, setting a new standard for innovation and technological advancement within the transportation sector."

Features
- ☐ Built-in NVIDIA® Jetson AGX Orin™ SOM, up to 200/275 TOPS (INT8) performance
- ☐ Designed to be fanless, rugged, and compact
- ☐ 6-port GbE PoE+ (X-coded) for IP CAM/LiDAR sensors, optional 1-port 10GbE (X-coded)
- ☐ HEVC/H.265 hardware DECODE up to 7 x 4K30 performance
- ☐ Wide range operating temperature of -25°C~70°C
- ☐ Ultra-speed PCIe 4.0 x4 NVMe SSD for data integrity
- ☐ Expansible for GNSS, LTE/5G NR & Wi-Fi 5/6
- ☐ 24V DC-IN w/ power isolation, ignition control & OCP/OVP
- ☐ NEXCOM Acceleration Linux (NAL) integrated w/ JetPack 5.0.2/5.1.1
- ☐ Military standard of MIL-STD-810H for anti-vibration/shock
- ☐ CE/FCC, UKCA, EN50155 (EN55011, EN50121-3-2, EN61373) certified

To learn more, please visit the [NEXCOM website](#).

About NEXCOM
Founded in 1992, NEXCOM integrates its capabilities and operates eight global businesses, which are Industrial Mesh, Intelligent Platform @ Smart City, Intelligent Video Security, Mobile Computing Solutions, Medical and Healthcare Informatics, Network and Communication Solutions, Smart Manufacturing, and Open Robotics and Machinery. This strategic deployment enables NEXCOM to offer time-to-market, time-to-solution products and services without compromising cost.

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