NEXCOM Drives the Future of AI-Powered Transportation Management Solutions with the ATC 3750-IP7-8M

Farming Robotics, Autonomous Collision Warnings, and Advanced Driver-Assistance Technology is Improving Safety and Reducing Inefficiencies

FREMONT, CA, USA, August 23, 2024 /EINPresswire.com/ -- NEXCOM, a leading global supplier of intelligent in-vehicle appliances, announced today the launch of the NEXCOM ATC 3750-IP7-8M, designed to power the future of automated vehicle technology and artificial intelligence-backed transportation management. Advanced driver-assistance systems (ADAS), automatic number plate recognition (ANPR), autonomous mobile robots (AMR), railway safety assurance, and machine learning are transportation management technology solutions now powered by the ATC 3750-IP7-8M.

The compact and rugged ATC 3750-IP7-8M is equipped with the high-performance NVIDIA® Jetson AGX™ Orin SOM to deliver an impressive 200/275 TOPS workload on AI processing and inference. Designed as the perfect in-vehicle or in-rail companion, the IP67-rated compact computer can withstand shock, vibration, dust, and temperature extremes from -25°C to 70°C. It is also certified by CE/FCC Class A, UKCA, E-mark, and EN50155/ EN45545.

“Artificial intelligence has unlocked a new frontier of possibilities for transportation management. For instance, transportation applications are using high-performance AI processing to enhance object recognition, improve collision avoidance, collect agriculture data via mobile robots, and much more,” said Peter Yang, President of NEXCOM. “What truly sets the ATC 3750-IP7-8M apart is its ability to thrive in the harshest conditions. With a compact, fanless design and robust thermal solutions, it can sustain intensive workloads in rugged environments.”

> Transportation applications are using high-performance AI processing to enhance object recognition, improve collision avoidance, collect agriculture data via mobile robots, and much more"
>
> *Peter Yang, President*

NEXCOM's hardware and software specifications are meticulously engineered to overcome real-world challenges. For example, a Train Perception System utilizes GNSS technology to achieve satellite positioning and relay data back to a control center. In addition, the Surround View System and Anti-Collision System technology built for mining vehicles provides a comprehensive panoramic view and issues collision warnings to prevent accidents. To support the future of smart agriculture, AMRs are equipped with advanced capabilities for crop recognition and RTK precise positioning.

With a comprehensive suite of I/O options, including MIPI camera interfaces, GbE ports, USB 3.2, CANBus, and HDMI, the ATC 3750-IP7-8M provides flexible connectivity options for AI-based sensing and edge computing applications. It provides a high-speed, low-latency ADAS, achieved by enabling communication between various sensors, including high-resolution cameras, LiDAR, radar, and the processing unit. In addition, 5G and Wi-Fi options enable over-the-air collaboration with cloud systems for AI model retraining. The computer also features 9~36VDC/24VDC rail with IGN control and 8 MIPI/GMSL2 for seamless access to MIPI CAM sensors.

For Edge AI platforms with Jetson modules, the NEXCOM Accelerator Linux (NAL) is an optimized Ubuntu 20.04 LTS derived from the Jetpack SDK. Programmers can access supported 5G, Wi-Fi, GNSS, IMU, CAN bus, MCU, I/O interfaces, and other peripherals through in-house design utility and APIs – allowing developers to use physical signals from peripherals and sensors as data sources for AI inference engines. Minimal knowledge is required for hardware installation and configuration, and product stability and data integrity in harsh environments is ensured.

To streamline edge AI development, the NVIDIA JetPack 6.0 upgrade features new Jetson Platform Services that add foundational and AI analytics services, generative AI capabilities, and multiple building blocks, including the Video Storage Toolkit (VST) and NVIDIA DeepStream software development kit. These simplified development tools eliminate the need for repetitive development on NVIDIA Jetson, empowering quicker assembly of full-featured edge AI systems and overall management of edge AI applications. Through REST APIs, developers can access microservices to support the construction of unified cloud-to-edge vision AI applications. This functionality delivers the seamless replication of cloud-developed microservices and trained AI models to edge devices using IoT gateway and OTA.

To learn more, please visit NEXCOM website.

Features:

- Built-in NVIDIA® Jetson AGX Orin™ SOM, up to 200/275 TOPS (INT8) performance

- Designed to be IP67 rated, rugged, and compact
- 8 MIPI/GMSL2 & 2.5GbE (X-coded) for MIPI CAM/IP CAM/LiDAR sensors
- HEVC/H.265 hardware DECODE, supporting up to 7 x 4K30
- 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
- 9~36VDC & 24V rail combined, ignition control & OCP/OVP
- NEXCOM Acceleration Linux (NAL) integrated w/ JetPack 5.1.1
- Military standard of MIL-STD-810H for anti-vibration/shock
- CE/FCC, UKCA, E-mark, EN50155 (EN55011, EN50121-3-2, EN61373, OT3) certified

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.

Peter Yang
NEXCOM
+1 510-386-2266
peteryang@nexcom.com
Visit us on social media:
LinkedIn
