



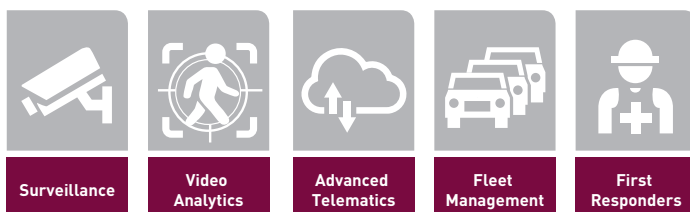
Rugged NVR Computers

As NVR video analytics and machine learning evolve, many organizations realize the value of aggregating and leveraging video data with NVR-backed processing power at the surveilled edge locations. By moving the NVR closer to the camera's real-time video data feeds, bandwidth is spared and latency avoided by the proximity. Deploying traditional NVRs at the edge, however, is easier said than done for remote, volatile and/or moving environments. In terms of mechanical form factor, a traditional NVR is not designed for the physical and logistical challenges of many edge surveillance deployments. This is where rugged NVR computers excel and provide valuable workload consolidation at the edge.

Premio's purpose-built Rugged NVR Computers leverage high-performance GPU cores to render visual inference analysis backed by machine-learning algorithms. Rugged NVR Computer applications use both robust sequential and parallel compute for biometric identification (including facial recognition), license plate recognition, behavioral detection, traffic flow optimization and virtually any other application leveraging inference of captured video data.

Another distinct feature of Rugged NVR Computers is support for PoE+ connectivity. Many modern surveillance deployments benefit from PoE/PoE+ cameras because of the ability to transmit power, video data and signals over a single CAT5 cable. The PoE+ connectivity also enables integration of other resource-constrained IoT security peripheral devices like those used for access control, alarms, beacons and event-response systems. But the main difference of Rugged NVR Computers is their ability to deliver mission-critical reliability in rigorous and harsh environments that traditional NVRs cannot endure. Rugged NVR Computers are purpose-built to deliver keen visual processing and recording at locations with constant or intermittent vibration and movement, contaminants, questionable power voltages and severe temperature conditions. As more and more IoT devices communicate valuable data, Rugged NVR Computers play a pivotal role for mobile and remote surveillance at the edge in real time.

KEY APPLICATIONS:



KEY PREMIO BENEFITS:

FANLESS ARCHITECTURE

Passive cooling technology eliminates the need for an active fan — a common point of failure for computers. With better means of regulating temperature, fanless computers remove the need for vents that often permit dust, pollutants and fluids to penetrate the case and damage critical electronics within.

PURPOSE-BUILT FOR CHALLENGING ENVIRONMENTS

Rugged NVR computers are rated to withstand shock, movement and vibrations for many industrial and in-vehicle deployments. Their wide operating temperature withstands extreme outdoor deployments or industrial environments with severe temperatures. Those for wet environments are rated for either IP65 or IP67 liquid resistance according to exposure. Wide voltage input allows usage with uncertain or fluctuating power sources, providing some resistance to electrical surges. In-vehicle models have a power ignition management function to safely power down at engine cutoff.

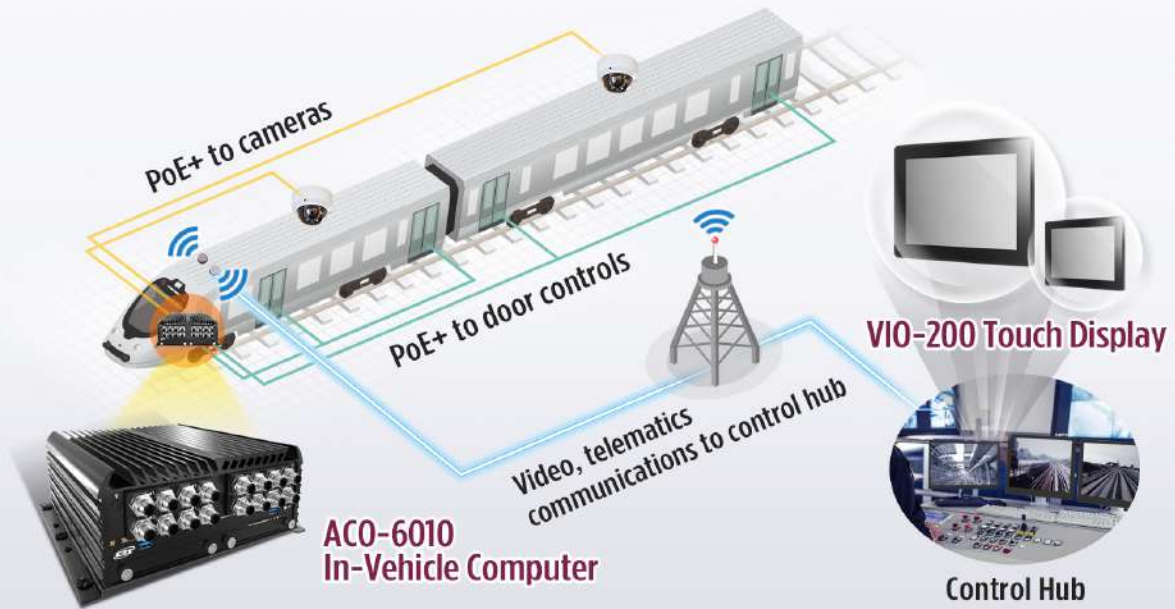
SEAMLESS MOBILITY

Mobile broadband connectivity like 4G/LTE (and eventually 5G) enables vehicle-to-everything (V2X) transmissions that can provide GPS and telematics data, and alert operators to traffic, detours or hazardous conditions in real-time. Additionally, a Rugged NVR Computer outfitted with Bluetooth technology may integrate high-speed sensor and device data into the surveillance or operations deployments.

FOUNDATIONAL SECURITY

A trusted platform module (TPM) with TPM 2.0 technology provides foundational protection for the Rugged NVR Computer of the edge surveillance system. Discrete TPM crypto processors secure the hardware level, offering boot security that prevents successful injection of malware. TPMs also enable encryption on Rugged NVR Computers, preventing exposure of video and accompanying data to unauthorized parties. These protections can help organizations comply with numerous data privacy controls like General Data Protection Regulation (GDPR), California Consumer Privacy Act (CCPA) and Health Insurance Portability and Accountability Act (HIPAA).

Mobile Onboard Edge Surveillance



Wireless Connectivity for Untethered Surveillance

Rugged NVR computers leverage 4G/LTE with SIM modules for continuous connectivity throughout remote and mobile deployments. Dispatched NVR computers can maintain contact with the cloud, other hardware and security control hubs without the limitations of wide area wired connections. Video and audio, communications, GPS, vehicle telematics, hazard warnings and myriad other business critical data are relayed quickly between vehicles and control hubs. Rugged NVR computers are highly scalable through connectivity with wireless cameras and other devices.

PoE Supplies

Peripheral Agility

Surveillance at the edge often entails deployments in limited-power areas. Low-consumption network cameras and peripheral security devices can receive power directly from the CPU via power-over-ethernet (PoE) connectivity. Rugged NVR computers support up to 16 PoE+ connections, allowing strategic placement of high-resolution IP cameras, sensors and peripheral security devices in spots with resource constraints.

Image Analysis with Edge Immediacy

Powerful GPUs allow for real-time visual inference analysis that can drive myriad active or passive responses. Rugged NVR computers evaluate rich network camera data in the surveilled environment without the latency of centralized systems. GPUs quickly process event triggers, procedural aberrations, traffic flow and dwell time, biometric cross-referencing, thermal scanning, license plate recognition, behavior patterns, threat detection and other visual parameters warranting immediate responses. Machine learning capabilities refine inference analyses with every fresh input, improving speed and accuracy through the system's lifetime.



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