



Intelligent Transportation Solutions



www.axiomtek.com

Built for Reliable Transportation Deployment

Stability, Reliability, and Flexibility

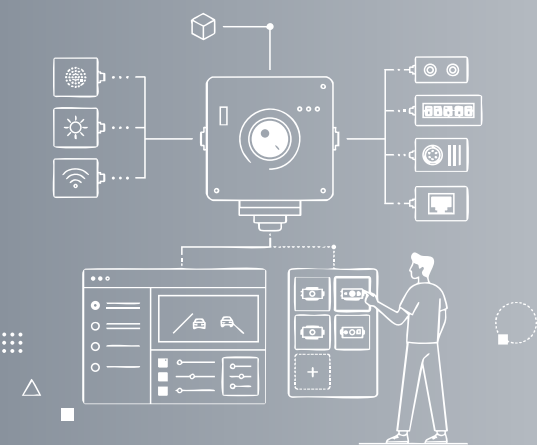


Manufacturing Capacity and Service

- Stable supply with global logistic service and long-term availability
- Complete product line for vehicle and railway applications
- System integration service with strong vertical domain experience

Operation in Real-World Conditions

- COC-ready vehicle and rolling stock certifications
- Stable performance under harsh onboard environments
- Engineered with a long product life cycle



Customization for Diverse Applications

- Modular system design with flexible I/O configuration
- Broad connectivity for cameras, sensors, and control systems
- Application-focused software support

More Than Hardware Axiomtek's Solution-Ready Package

Application-Oriented Hardware Design

- EN 50155, EN 45545-2, NFPA 130
- E-Mark, R118
- Fanless with wide operating temperature
- Wide power input with OCP, OVP, UVP, RPP
- Shock and vibration resistance

Unified APIs / Software

- Smart Ignition
- PoE Manager
- Remote monitoring/management APIs
- Axiomtek DigiHub for Mobility



Application-Oriented I/O Designs

- Dual CANBus/J1939
- Flexible I/O windows
- Dual SIM slots
- Swappable SATA drives

Peripherals & Modules

- Audio modules
- GNSS/GPS modules
- Accelerometer modules
- RTC SuperCAP modules
- Anti-vibration kit



Intelligent
Mobile
Surveillance



Onboard
Passenger
Information



Mobile
Communication



Driver Machine
Interface

Advanced Railway Systems for Onboard Monitoring & Computing

AI Railway Station
Transfer
EXIT

①

④

⑤

③

②

Main Features of Rolling Stock Embedded Platform Series

Rugged & Reliable

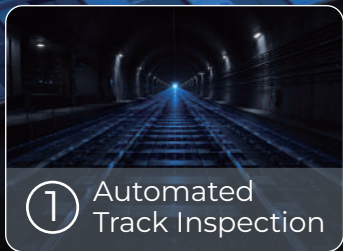
- Fanless operation
- Wide operating temperature range from -40°C to +70°C
- Enhanced thermal conductivity
- Shock and vibration resistance

Railway Certifications

- EN 50155
- EN 50121-3-2
- EN 45545-2
- CE (Class A)
- FCC

Rugged & Reliable

- Versatile plug-in I/O module slots for customized requirements
- Expansion with value-added modules



① Automated Track Inspection

Edge AI System with NVIDIA® AGX Orin™ for Video Analytics

- CE, FCC, LVD, EN 50155 and EN 45545-2 certified
- NVIDIA® AGX Orin™ up to 275 TOPS
- M12 10GbE LAN, 4 M12 PoE, 2 M12 CANBus (SocketCAN)



tBOX600



② Mobile Surveillance

Fanless Embedded System for Train Onboard Surveillance and Connectivity

- 12th gen Intel® Core™ i processor
- Value-added modules for various I/O options
- 2 swappable 2.5" SATA drives



tBOX520



③ Data Collection Unit

Rail-Grade Fanless Embedded System for Onboard Surveillance & Gateway Application

- CE, FCC, LVD, EN 50155 and EN 45545-2 certified
- 14th/13th/12th gen Intel® Core™ i processor
- 4 M12 2.5 GbE LAN, isolated 6DI/2DO, 2/4 SATA drives



tBOX210



④ Train Onboard HMI

12.1" XGA TFT LCD Railway Touchscreen PCAP Panel PC

- Intel Atom® processor x6425E, 12W (Elkart Lake)
- Alternative keypad control on the front bezel
- Auto-dimming for different environments
- EN 50155 Class S3 20 ms power interruption protection



GOT712A



⑤ Passenger Infotainment System

18.5" Full HD Open Frame Railway Monitor



P7180

12.1"/10.4" XGA TFT LCD Railway Touchscreen Monitor



P712
P710

Intelligent In-Vehicle Solutions for Safer Mobility



Main Features of Rolling Stock Embedded Platform Series

Automotive Standards

- ISO 7637-2
- E-Mark
- CE (Class A)
- FCC

Smart Ignition Features

- Power on/off scheduling
- Vehicle battery protection
- Multiple power modes

Durability & Reliability

- Fanless operation
- Wide operating temperature range from -40°C to +70°C
- Supports 9 to 36 VDC and typical in-vehicle power input of 12/24 VDC

Modular Configuration

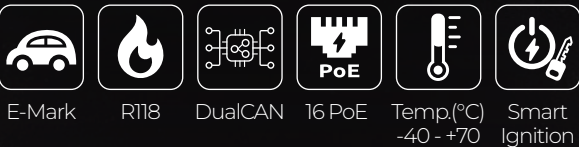
- Flexible I/O windows
- Easy expansion design
- Value-added modules



① Mobile Surveillance

Fanless Embedded System with Intel® Core™ i for Intelligent Surveillance Application

- LGA1700 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 or Celeron® processor (35W) with Intel® R680E
- Qualified Intel® ESQ for Metro AI Suite Devices
- 8/16 2.5 GbE PoE port by M12/RJ-45 connector
- Supports M.2 Key B and M.2 Key E
- Up to 4 swappable SATA trays



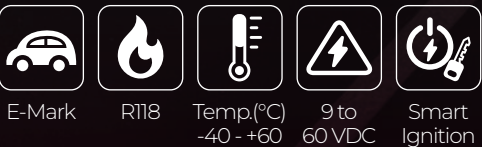
UST520



② License Plate Recognition

Fanless Edge AI System with NVIDIA® Jetson Orin™ NX Series for Onboard Video Analytics

- CE, FCC, LVD and E-Mark certified
- NVIDIA® Jetson Orin™ NX 8GB/16GB, 70/100 TOPS
- 4 M12 2.5GbE PoE, or 4 GMSL and 2 M12 2.5GbE LAN



UST600



③ Passenger Counting

Vehicle-Grade Fanless Embedded System for Intelligent Surveillance Application

- CE, FCC, UKCA, E-Mark, and R118 certified
- 14th/13th/12th gen Intel® Core™ i processor
- One side I/O, 3 2.5GbE LAN
- Dual CANbus with SocketCAN, and optional J1939
- Built-in accelerometer



UST220



④ PIS Display Controller

E-Mark and EN-Certified Fanless Embedded System for Onboard Gateway Application

- CE, FCC, LVD, E-Mark, EN 50155, and EN45545-2 certified
- Compact design with rich I/O connectivity and TPM 2.0 support



tBOX110



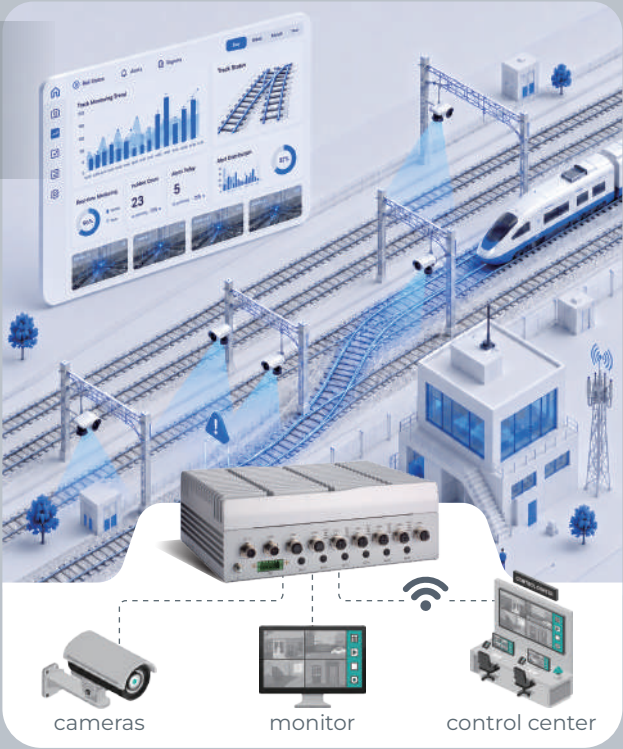
Application Story

Enhancing Railway Safety and Operation Efficiency

AI-Ready Automated Track Inspection for Passenger Safety

Challenges:
Automated track inspection requires reliable integration of multiple cameras, real-time video analytics, and stable long-term operation under demanding railway environments.

Solution: tBOX600
The tBOX600 serves as a centralized high-performance onboard edge AI platform powered by NVIDIA® Jetson AGX Orin™, with a rich set of PoE ports. It combines real-time track image analysis, camera integration, and EN-certified reliability into a deployment-ready system for automated railway track inspection.



Enhancing Railway Safety and Operation Efficiency

In-Vehicle Passenger Information System

Challenges:
Passenger information systems deployed in buses and commercial vehicles require stable display output, compact installation, and reliable operation under continuously moving environments.

Solution: tBOX110
The E-Mark-certified tBOX110 acts as a compact onboard display controller, enabling reliable passenger information delivery while simplifying deployment in space-constrained vehicle environments.



HMI for Onboard Train Control

Challenges:
Train operation and monitoring systems require responsive HMIs capable of maintaining clear visualization and stable operation under vibration, power fluctuation, and changing onboard lighting conditions.

Solution: GOT712A
The GOT712A serves as a railway-ready HMI platform designed for onboard monitoring and control, combining intuitive touchscreen interaction, stable operation, and certified reliability for demanding railway environments.



Passenger Flow Management

Challenges:
AI-based passenger occupancy detection requires real-time processing of multiple onboard video streams while maintaining stable operation under harsh mobile conditions.

Solution: UST520
The UST520 functions as a high-performance in-vehicle edge AI platform with E-Mark & R118 certification and up to 16 PoE ports. It supports real-time occupancy analytics, large-scale camera integration, and reliable deployment for intelligent transportation systems.



Value-Added I/O Modules

for the tBOX500 Series

tBOX500 Series



VAM100	VAM102	VAM200	VAM600	VAM900
4 x Isolated 4-wire RS-232/422/485	4 x Isolated CANBus 2.0A/B	1 x Isolated DIO 8-in/8-out	2 x PCIe Mini Card slot with SIM socket	1 x Isolated DIO 8-in/8-out, 1 x COM, 1 x CANbus, 3 x PCIe Mini Card slot + 2 x SIM socket

VAM700/701	VAM702/703	VAM704/705	VAM706/707	VAM708
4 x M12 A-coded GbE with & without PoE	4 x RJ-45 GbE with & without PoE	4 x M12 D-coded 10/100 Mbps with & without PoE	4 x M12 X-coded GbE with & without PoE	4 x M12 A-coded GbE LAN with 2-CH LAN Bypass

Peripherals

MIO108	EIO118	Anti-Vibration Kit
Full-size PCIe mini module with 2 CANBus for the UST500 and UST510 series	Full-size PCIe LTE mini module	Anti-vibration kit for the tBOX and UST series

Full Certifications

tBOX Series

	tBOX110	tBOX210	tBOX520	tBOX600
CE (Class A)	●	●	●	●
FCC	●	●	●	●
EN 50155	●	●	●	●
EN 50121-3-2	●	●	●	●
E-Mark	●	-	-	-
ISO 7637-2 (E-Mark)	●	-	-	-
EN 45545-2*	●	●	●	●
NFPA130*	-	●	-	-

○: compliance ●: certified *test report

UST Series

	UST200	UST210	UST220	UST520	UST510	UST600
CE (Class A)	●	●	●	●	●	●
FCC	●	●	●	●	●	●
E-Mark	●	●	●	●	●	●
ISO 7637-2 (E-Mark)	●	●	●	●	●	●
R118*	-	-	-	●	-	-

○: compliance ●: certified *test report

Transportation Monitors & Panel PCs

	P710 10.4" Monitor	P712 12.1" Monitor	P7180 18.5" Monitor	GOT710A 10.4" Panel PC	GOT712A 12.1" Panel PC
CE (Class A)	●	●	●	●	●
FCC	●	●	●	●	●
EN 50155	●	●	○	●	●
EN 50121-3-2	●	●	○	●	●
EN 45545-2*	●	●	●	●	●
UIC 612-01	-	-	-	○	-

○: compliance ●: certified *test report



ASIA

Axiomtek Co., Ltd (HQ)

8F., No.55, Nanxing Road, Xizhi District,
New Taipei City 221, Taiwan

T/ +886-2-8646-2111
F/ +886-2-8646-2555
E/ info@axiomtek.com.tw

Axiomtek Technology (Shenzhen) Co., Ltd.

Unit G, 19F, Building 6 (Block B), Baoneng
Science and Technology Park, Longhua
Street, Qinghu Community, Qinghu Village,
Longhua District, Shenzhen China

T/ +86-0755-83487887
F/ +86-0755-66865899
E/ axcn@axiomtek.com.cn

Axiomtek Japan Office

Tokyu Building 4-21-3, 3F (Room 311),
Shimbashi, Minato-ku Tokyo, 105-0004,
Japan

T/ +813-6895-7522
E/ info@axiomtek.com.tw

Axiomtek (Malaysia) Sdn. Bhd.

No 16, Jalan Tandang 51/205A,
Seksyen 51, 46050 Petaling Jaya,
Selangor, Malaysia

T/ +603-77731203
T/ +603-77724403
E/ info@axiomtek.com.my

Axiomtek (Thailand) Co., Ltd.

7/17 Moo 6, Tumbol Banmai,
Amphur Pakkret, Nonthaburi,
Thailand 11120

T/ +662-573-4725
F/ +662-573-4726
E/ sales@axiomtek.co.th

USA

Axiomtek (U.S. HQ)

18138 Rowland Street, City of Industry,
CA 91748, USA

T/ +1-626-581-3232
F/ +1-626-581-3552
E/ info@axiomtek.com
sales@axiomtek.com

Regional Sales Office

Western Region ext. 116
Northeast/Southeast Region ext. 123
North Central Region ext. 189

T/ +1-626-581-3232

Axiomtek Systems

300 Griffin Brook Drive, Methuen,
MA 01844, USA

T/ +1-978-258-0108

EU

Axiomtek Deutschland GmbH

Elisabeth-Selbert Strasse 21a
40764 Langenfeld, Germany

T/ +49-2173-399360
E/ welcome@axiomtek.de

Axiomtek UK Limited

Peter House, Oxford Street,
Greater Manchester, M1 5AN

T/ +44(0)1612093680
E/ info@axiomtek.co.uk

Axiomtek ITALIA S.r.l.

Via Pavia, 21, 20835 Muggiò (MB), Italy

T/ +39 02 664 2991
E/ info@axiomtek.it



V618