Smart-Vision®: AI-Powered CMS for Buses & Coaches

Smart-Vision Camera Monitoring System (CMS) replaces traditional Class 2, 4, 5, and 6 mirrors with an Artificial Intelligence (AI)-powered camera and display system.

High-dynamic-range (HDR) imaging, Advanced Driver Assistance Systems (ADAS) functions, and embedded Blind Spot Information System (BSIS, UNECE R151) and Moving Off Information System (MOIS, UNECE R159) safety systems deliver unmatched visibility, predictive guidance, and real-time protection of Vulnerable Road Users (VRUs).

Technical Highlights

👁 Camera Field of View
Wide-angle coverage for Class II, IV, V, VI mirror replacement (typical >100° horizontal)

IP Ingress Protection
Automotive-grade sealing (IP67/IP69K) with vibration/shock resistance for bus applications

HDR Performance
HDR sensors optimized for glare, direct sunlight, and night visibility

Latency Breakdown
<80 milliseconds total (capture → process → display) for real-time driver feedback

Connectivity
CAN bus and Ethernet-ready; supports wireless connectivity and Over-the-Air (OTA) software updates

Integration Flexibility
Retrofit-capable for existing fleets; designed for OEM bus/coach platforms

VRU Protection
Detects pedestrians and cyclists in side and front danger zones with BSIS & MOIS (UNR151 & R159)

Performance Specifications

Core Performance
Latency:	<80 ms end-to-end
Operating Temperature:	−40°C to +85°C
Standard Cameras:	3 MP HDR
Optional Cameras Driver/Passenger:	8 MP HDR

Display & Hardware
Main Display:	12" standard / 15" optional
Corner Displays:	9" (optional)
Wing Options:	Ultra-compact single-camera or dual-camera aerodynamic designs

System Packages

Feature	Smart-Vision Core	Smart-Vision Plus	Smart-Vision Max
Configuration	2 cameras, 1 ECU, two 12" displays	Up to 4 cameras, 1 ECU, two 12" displays	Up to 4 cameras, 1 ECU, two 12" main + 9" corner display(s)
ADAS Features	Standard CMS functions	Embedded BSIS (R151): pedestrian & cyclist Detection	Embedded BSIS (R151) & MOIS (R159), adaptive overlays, dynamic safety lines
Field of View	Standard rear & side view, class 2/4	Extended field with additional cameras, class 2/4	Extended coverage with Class 2/4 & 5/6, SafetySide (R151) and SafetyFront (R159)
Connectivity	Streaming of metadata to video recorders or connected telematic gateways	Streaming of metadata to video recorders or connected telematic gateways	Wireless connectivity, streaming & recording
Guidance Tools	Static pivoting maneuver lines for lane-change assistance	Static pivoting maneuver lines for lane-change assistance	Adaptive & dynamic overlays and safety lines for lane-change assistance

![Gauzy logo]

Options & Add-ons

Hardware

- ✓ 15" main display upgrade
- ✓ 9" additional corner display(s)
- ✓ All-weather manual or automatic camera cleaning
- ✓ Aerodynamic wing designs

Software

- ✓ Pedestrian & cyclist detection module
- ✓ Fleet telematics connectivity packages
- ✓ Recording & analytics extensions
- ✓ Class 5/6 field of view

Operator & Fleet Benefits

Enhanced Safety
AI-enhanced maneuver safety and reduced collision risk

Accelerated Training
Faster driver onboarding with predictive overlays

Compliance Support
Event recording aids compliance & training

Future-Ready
Modular upgrades ensure system longevity

Standards Compliance
Meets and exceeds EU safety standards for buses & coaches

Seamless Installation
Retrofit-ready and OEM-friendly with minimal downtime

Competitive Advantages

Upgrade Path
Fleets can start with Core and evolve to Plus or Max through software and hardware add-ons

Innovation
Options and ADAS functions not offered on competitor CMS platforms

Certifications & Standards

- ✓ Federal Motor Vehicle Safety Standards (FMVSS, USA)
- ✓ Canada Motor Vehicle Safety Standards (CMVSS, Canada)
- ✓ Technischer Überwachungsverein (TÜV, Germany)
- ✓ Union Technique de l'Automobile du motocycle et du Cycle (UTAC, France)
- ✓ Vehicle Certification Agency (VCA, UK)

- ✓ Dynamic Test Center (DTC, Switzerland)
- ✓ VINCOTTE (Belgium)
- ✓ IDIADA (Spain)
- ✓ ISO 26262

Smart-Vision: The New Standard in AI-Powered CMS.

Contact us today to explore integration options, system configurations, or technical specifications for your fleet.

Scan to learn more