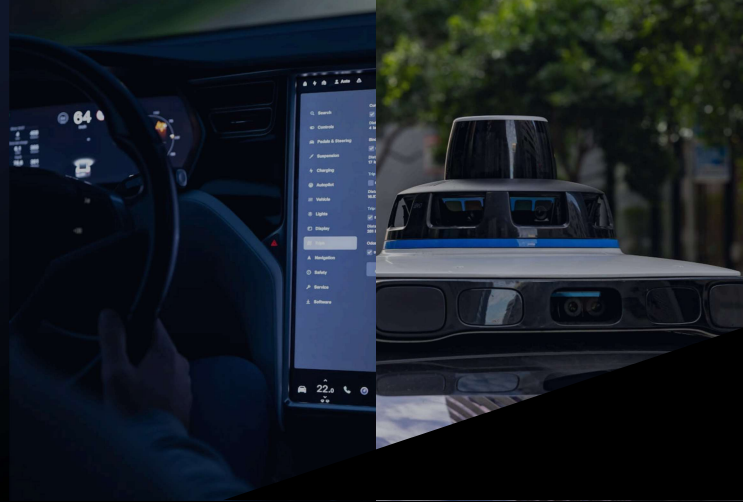


Connected Vehicle / V2X:

GoCV — Connect the Roadway to Every Vehicle



GoCV brings vehicle-to-everything (V2X) infrastructure into the GoATMS platform, managing Roadside Units (RSUs) as first-class, fully managed entities. Operators create, configure, and monitor every RSU from a single console — naming it, placing it on the linear referencing system with road name, reference point, and direction, and viewing it live on interactive map layers.

GoCV speaks the standards deployed in the field. It communicates with RSUs using NTCIP 1218 over SNMP, polling system status, channel health, firmware version, and uptime on a configurable per-RSU schedule. The same connection captures the Basic Safety Messages (BSMs) received from passing vehicles and keeps GoCV's view of each RSU in sync with the device.

Two-way V2X is at the core of GoCV. Operators broadcast Traveler Information Messages (TIMs) through an RSU's message slots, with GoCV building a standards-compliant SAE J2735 TIM payload behind the scenes. Broadcasts can be triggered manually or tied to an active traffic event, and a per-RSU broadcast queue tracks every active, expired, and stopped message.

GoCV turns raw V2X traffic into operational insight. Incoming BSMs are decoded into vehicle position, speed, heading, braking, and more — and screened for hard-braking and potential crash conditions. A dedicated RSU dashboard surfaces device health, message-volume trends, broadcast success rates, average-speed trends, and message-slot utilization.

Connected Vehicle / V2X Feature Highlights:

- RSU Management
- TIM Broadcast
- BSM Ingestion

V2X STANDARDS & MESSAGING

RSU COMMS	<i>NTCIP 1218 over SNMP</i>
TIM ENCODING	<i>SAE J2735 UPER-encoded payloads</i>
MESSAGE TYPES	<i>BSM receive, TIM broadcast</i>

BSM DATA INGESTION

CAPTURED DATA	<i>Position, heading, speed, accel, yaw, braking</i>
CRASH DETECTION	<i>Hard-braking & crash condition screening</i>

TIM BROADCAST & QUEUE

BROADCAST QUEUE	<i>Per-RSU active/expired/stopped, device-synced</i>
EVENT-TRIGGERED	<i>Broadcasts tied to active traffic events</i>

RSU MANAGEMENT & ANALYTICS

RSU DASHBOARD	<i>Health, volume, broadcast & speed charts</i>
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** V2X message types and RSU capabilities scale to device firmware and NTCIP 1218 support.
* Poll intervals are configurable per RSU.*