



IoT eSIMs FOR INDIAN CONNECTED VEHICLE FLEETS

AIS-140 TRACKING AND BEYOND SIMPLIFIED FOR MANUFACTURERS

Kigen's eSA-certified SGP.32 eSIMs simplify secure telematics, tracking, and advanced autonomy for connected cars, passenger and freight transport, empowering manufacturers to expand with a single architecture. With multiple profiles and a SAS-certified remote eSIM manager (eIM), Kigen Automotive eSIMs allows businesses to ease vehicle device integration, leverage multiple networks intelligently, and prepare security to support digital sovereignty.

SOLUTION BRIEF



Kigen's expertise in eSIM technology empowers manufacturers of connected mobility vehicles, such as cars, two- or three-wheeler EVs, and autonomous fleets, to accelerate towards new growth opportunities. This solution guide explores a few emerging opportunities.

India's road network spans more than **6.62 million km**, while road transport carries **more than 70%** of the country's freight. As fleets become larger and more connected, automakers are embracing eSIM to move beyond basic tracking and turn visibility into savings that payback for decades.

The Indian government's AIS-140 (Automotive Industry Standard 140) mandate requires all public transport and commercial vehicle fleets to deploy Vehicle Location Tracking Devices (VLTDs).



See our detailed take on [Location Tracking with AIS-140 in India](#)

At the heart of an AIS-140 device is an embedded eUICC (eSIM). Unlike standard SIM cards, an AIS-140 compliant eSIM must feature multi-operator dual profiles to guarantee constant network connectivity, switching networks automatically if one carrier loses signal.

Role of eSIMS applications



ESIM APPLICATION ACROSS VEHICLE CATEGORIES FOR VEHICLE TRACKING

Vehicle Type	AIS-140 Mandate Applicability	Role of eSIM Tech
Commercial Cars & Taxis	Mandatory. All app-based cabs, corporate rental fleets, and yellow-plate commercial cars must deploy it.	Manages real-time data streaming to government VAHAN servers and triggers alerts via emergency panic buttons.
Three-Wheelers & E-Rickshaws	Generally Exempt (but State-Dependent).Central guidelines exempt basic passenger e-rickshaws and local 3-wheelers from strict central AIS-140 compliance.	While central rules exempt them, regions like Delhi (via DIMTS) require tracking. Modern electric 3-wheelers increasingly embed eSIMs for digital payments, battery telematics, and cybersecurity.
Auto Fleets (Trucks/Buses)	Mandatory. Comprehensive rule for logistics, school buses, hazardous trucks, and mining fleets.	Ensures continuous asset tracking, remote immobilization, fuel monitoring, and cross-state network switching via OTA updates.

AIS-140 sets the national standard for passenger and vehicle safety.

95% of vehicle makers are going beyond basic tracking: tapping into the benefits of advanced telematics capabilities with eSIMs and equipping vehicles with deeper integration of payments, fuel monitoring, and vehicle condition.

Which eSIMs are best? ➔

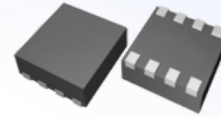


With the right implementation, connected fleet strategies can contribute to 5-15% lower operating costs, 10-15% better fuel efficiency and 10-20% higher asset utilization.

For years, vehicle fleets relied on single network SIM cards, but the sunsetting of 2G/3G networks, the mandate for emergency and SOS capabilities, and the integration of services are all making the move to 4G essential. The new GSMA SGP.32 eSIM standard now evolves digital profile activation to fully automated, zero-touch provisioning for complete vehicle fleets through eIM and IPAe. Kigen collaborates closely with local Indian OEMs and Telecom Providers to offer specialized chip-to-cloud security and OS stacks that are natively compliant with Indian automotive regulations.

KIGEN ESIM BENEFITS FOR AUTOMOTIVE FLEET MANUFACTURERS

Certified eSIM with leading edge features and centralized remote management



MFF2 (DFN8)
5x6mm²



MFF4
2x2mm²

World's first GSMA **eSA-certified eUICCs** supporting **SGP.32** latest features able to **accommodate multiple profiles with minimal footprint**. Soldered directly onto PCB, and in standard form factors that reduce design respins.

GSMA SAS-certified Kigen eSIM remote IoT manager (eIM) to support multiple network profile operations. All profiles, all eSIMs, one platform: giving you full control and ensure uninterrupted connectivity to monitoring systems.

Leveraging Infineon's TEGRION SLM22 and SLM17 high-reliability silicon, ready for factory-fitted connectivity

Certified to meet AEC-Q100, CC EAL6+, FIPS, ISO/SAE 21434, -40°C to +105°C, and chosen by top automotive tier-1 suppliers for embedded cellular systems.

eSIMs within advanced tracking applications 



EQUIPPING YOU FOR THE NEXT GENERATION OF TELEMATICS CAPABILITIES

Kigen eSIMs provide a common OS lineage, hardware platform, development environment, and a management approach across Automotive, IoT, and Consumer, which helps OEMs reduce fragmentation across passenger cars, two-wheelers, commercial vehicles, and industrial fleets.

◀ Security for what comes next

Foundation for long-life connected vehicles

eUICC qualified to AEC-Q100 with 17-year data retention, CC EAL6+, and ISO/SAE 21434 credentials, a platform that integrates with monitoring servers through APIs.

Tested and proven architecture with a world-leading ecosystem

Tested with 60+ Secure with Kigen modules, supporting 5G, 4G, 3G, NB-IoT, CAT1-bis, as well as GPS, Glonass, GNSS, and NavIC to support advanced telematics and location tracking.

Trusted by all national and global connectivity providers

Kigen collaborates and is trusted by all telecom providers in India.

Next generation cyberdefence with post-quantum security

Kigen enables evaluation of hybrid classical and quantum-safe key establishment using its C-SDK, test eSIMs, and PQC-capable secure hardware.



Cargo_001: Dest.: 50° 43' 50.34" N 6° 10' 55.294" E
Arrival: 08:55 pm - Distance load 56: 783 mi
Driver: CPU 9847-43 UPDATE-C64Cw - Automated drive
TCP/IP:192.56.327.684.1
SYNC: enabled | Sensors: active | Cameras: active
LOAD: 5pc legal industry mechanics 7 tons - cp:4635172

Cargo_002: Dest.: 50° 48' 10.624" N 6° 28' 51.978" E
Arrival: 09:35 pm - Distance load 56: 883 mi
Driver: CPU 8843-47 UPDATE-C64Cy - Automated drive
TCP/IP:192.56.327.652.2
SYNC: enabled | Sensors: active | Cameras: active
LOAD: 6pc ACP carg, 33 lbs. 12 bag 5 tons - dp:911048

Emerging opportunities in connected fleets



Combining the strengths of Kigen secure eSIMs across Automotive, IoT, and Consumer, automakers can achieve advanced visibility, efficiency, safety, diagnostics, and actionable intelligence. This is what's coming next in the world of connected mobility at the edge:

After Sales Revenue Opportunities:

For OEMs, connected vehicle strategies create a data layer around the vehicle that can support customers throughout the vehicle lifecycle, creating new opportunities for service, customer engagement and connected-vehicle offerings.

For private fleets: visibility = cost savings

For a private fleet, every unnecessary kilometer, idle hour, and avoidable breakdown affects the bottom line. Connected fleet strategies can contribute to 5-15% lower operating costs, 10-15% better fuel efficiency and 10-20% higher asset utilization.

For Logistics: maximize margins with vehicle productivity

Logistics operators connect vehicle location, driver behavior, route performance, vehicle condition and asset utilization into a single operational picture.

Emerging opportunities in connected fleets ➔



Kigen's eSIMs offer native multi-carrier support directly connecting to major international carriers, leaving our unparalleled global terrestrial and satellite connectivity ecosystem.

Our technology delivers freedom to choose from 200+ terrestrial and satellite networks, compliant to EU and USA cybersecurity and data regulations for export products, with proven interoperability on leading chipsets and modules.

All your eSIMs unified with **Kigen Pulse**

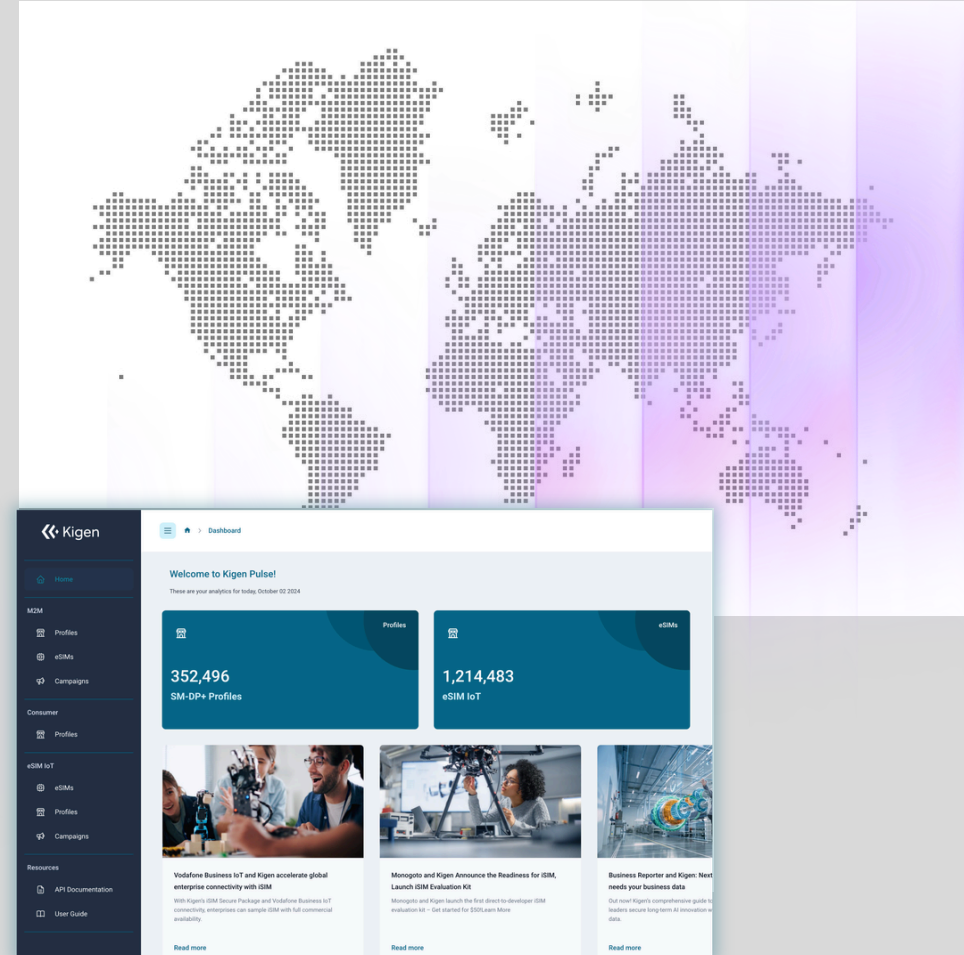
No matter what device. Compliant to the requirements set out for even the most data and network constrained IoT devices. It works with any SM-DP+.

No matter what eSIM type. Consolidated view of all your M2M, Consumer and IoT RSP eSIMs, available as a friendly UI or via Open APIs for your integration.

All your eSIM fleets unified with **Kigen eSIM development suite**

Packed with rich features. Build, create and operate with the Device C-SDK tools, benefit from single SKU with Kigen IFPP and smarter device control for business continuity.

Emerging opportunities in connected fleets 



KIGEN BRINGS **UNRIVALLED EXPERTISE ...**

Scan the QR code and leave your information.
We will contact you shortly.
For more information, please visit [Kigen.com](https://kigen.com).
Or follow @Kigen and the #FUTUREOF**SIM**
conversation on LinkedIn.

Email: sales.india@kigen.com





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