The Automotive Connectivity SoC, NAD and TCU Markets

1st Edition

The Automotive Connectivity SoC, NAD and TCU Markets is a strategy report from Berg Insight covering the OEM segment for passenger cars and commercial vehicles. This strategic research report from Berg Insight provides you with 90 pages of unique business intelligence including 5-year industry forecasts and expert commentary on which to base your business decisions.

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The total TCU market value reached € 8.6 million in 2024

Virtually all of the world's leading vehicle OEMs have launched mass-market connected services in key regions today. Connected vehicles rely on a telematics control unit (TCU), which provides communications between the vehicle and external networks and navigation satellite systems. Examples of connected car services offered include eCall and roadside assistance, stolen vehicle tracking (SVT), vehicle diagnostics, over-the-air (OTA) updates, connected navigation, entertainment services such as music and video streaming, convenience services, Wi-Fi hotspots as well as AI personal assistant services.

Berg Insight estimates that global shipments of TCUs for both passenger cars and commercial vehicles reached 74.4 million units in 2024. Growing at a compound annual growth rate (CAGR) of 5.0 percent, global shipments are expected to reach 95.0 million units in 2029. The total global market value of TCUs is forecasted to grow from € 8.6 billion in 2024 to € 11.5 billion in 2029. Berg Insight estimates that 78 percent of all new passenger cars and commercial vehicles sold worldwide in 2024 were equipped with a TCU, up from 74 percent in 2023. The vast majority of all sold TCUs today feature 4G LTE connectivity, though many carmakers plan to use 5G TCUs for the next generation of cars that will be released in the upcoming years. Berg Insight expects that 5G TCUs will account for about 70 percent of total shipments in 2029.

The OEM hardware telematics ecosystem spans TCU vendors, network access device (NAD) vendors and system-on-chip (SoC) suppliers. The value chain is characterised by powerful actors at both ends. Vehicle OEMs hold substantial leverage over their suppliers and dictates both technical specifications and commercial terms. At the opposite end, SoC suppliers maintain significant bargaining power, underpinned by high technological barriers to entry and a highly concentrated market structure. Consequently, NAD and TCU vendors operate in a constrained middle ground between dominant upstream and downstream players. These players must continuously balance the competing demands of OEMs and SoC suppliers, adapting their designs and business terms to maintain these relationships. Success in this environment largely depends on flexibility, technical agility and the ability to align closely with OEM requirements while effectively managing SoC supplier dependencies.

The design and development of TCUs is complex as these have to integrate with other vehicle systems, fulfil strict quality standards and ensure performance during the long lifecycle of a vehicle model. For this reason, TCUs are generally developed by established automotive suppliers in cooperation with car manufacturers. Berg Insight ranks LG Electronics as the leading TCU vendor in terms of shipments. Aumovio and Harman were the runners-up, both holding significant market shares. Other major TCU vendors include Actia, Bosch, Denso, Desay SV Automotive, Gosuncn WeLink, Hyundai Mobis, Lear, Lan-You Technology, Marelli, Neusoft Corporation and Valeo.

Important players in the TCU ecosystem include SoC vendors and NAD module vendors. The automotive connectivity SoC segment is heavily dominated by Qualcomm, which has long-standing relationships with all of the largest NAD module vendors, TCU suppliers and automotive OEMs. MediaTek ranks second and has strategically pivoted its IoT business towards high-end 5G applications, with a strong focus on the automotive sector in recent years. Other important automotive connectivity SoC vendors are China-based UNISOC and ASR Microelectronics. The SoCs are in turn integrated into NAD modules. NAD module developers include both specialised cellular module providers, as well as TCU vendors that operate as vertically integrated TCU makers with in-house NAD module design capabilities. Quectel is the leading provider of NAD modules for the automotive industry, followed by Rolling Wireless. Other major NAD module vendors include the TCU vendors LG Electronics and Aumovio, as well as specialised module vendors like Favalon (Fibocom), MeiG and Kontron.

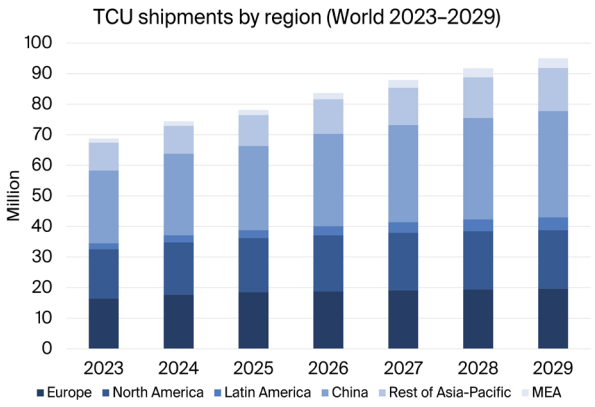


Table of contents

Hightlights from the report

Insights from numerous interviews with market leading companies.

Comprehensive overview of the TCU value chain.

In-depth analysis of market trends and key developments.

Detailed profiles of 26 TCU, NAD and SoC vendors.

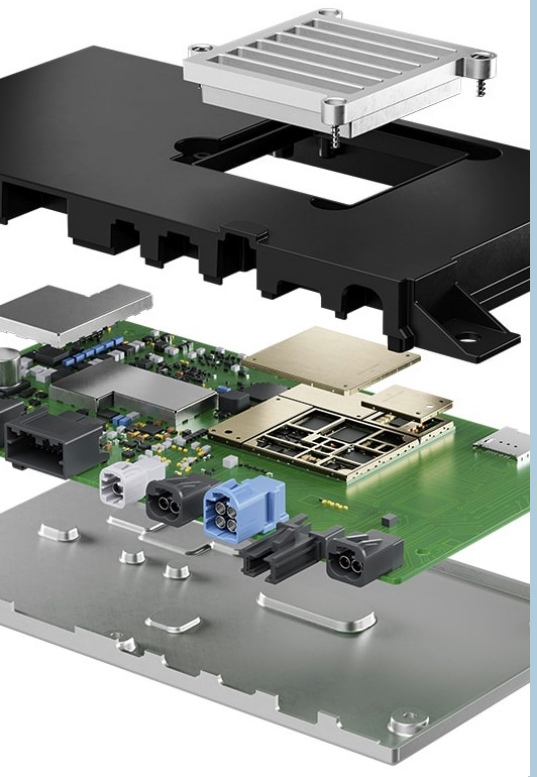
Market share data covering the leading TCU, NAD and SoC vendors.

New data on vehicle populations and new vehicle registrations worldwide.

Market forecasts by region lasting until 2029.

This report answers the following questions

- Which are the leading providers of TCUs, SoCs and NADs and what are their market shares?
- What is the split between 4G LTE and 5G TCU shipments in the next years?
- What is the outlook for emerging technologies such as 5G RedCap and satellite IoT?
- How will the market evolve in Europe, North America, Latin America, Asia-Pacific and MEA?
- How is the geopolitical environment impacting the TCU industry?
- Which are the drivers and barriers on the global vehicle telematics hardware market?
- Which are the key future trends in this industry?



About Berg Insight's IoT market research

Our market reports offer comprehensive information and analysis on key IoT technologies and markets, addressing important concerns including total addressable market, market penetration, market shares, industry landscape, regulatory environment, market trends and forecasts. Our research portfolio today comprises more than 80 items, where each market report focuses on a specific vertical application area or cover horizontal themes. All market reports come with complementary data sets in Excel format that can be easily analysed and converted into tables and charts. We offer a range of different license options together with bundled packages and subscriptions to suit your specific needs.

AUTOMOTIVE

The Automotive Connectivity SoC, NAD and TCU Markets

This report focuses on the hardware part of the connected vehicle value chain, and specifically the devices installed by the passenger car and commercial vehicle OEMs. Berg Insight estimates that global shipments of TCUs for both passenger cars and commercial vehicles reached 74.4 million units in 2024. Growing at a CAGR of 5.0 percent, global shipments are expected to reach 95.0 million units in 2029. Get up to date with the latest industry trends in this new 90-page strategy report from Berg Insight.

PUBLISHED DATE	November 2025
EDITION	1st
PAGES	90
AUTHORS	Martin Cederqvist and Fredrik Stålbrand

PDF & EXCEL: 1 user license	€ 1 500
PDF & EXCEL: 2–10 user license	€ 2 250
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Who should read this report?

The Automotive Connectivity SoC, NAD and TCU Markets is the foremost source of information about the passenger car and commercial vehicle telematics hardware market for OEM installation. Whether you are a telematics hardware vendor, vehicle telematics service provider, vehicle manufacturer, telecom operator, investor, consultant, or government agency, you will gain valuable insights from our in-depth research.

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Martin is a Senior Analyst covering mainly the automotive sector. He performs strategic analysis of OEM and aftermarket car telematics services, data monetisation services such as insurance telematics and shared mobility, among many other topics. Martin holds a Master's degree in Industrial Engineering and Management from Chalmers University of Technology and joined Berg Insight in 2022.

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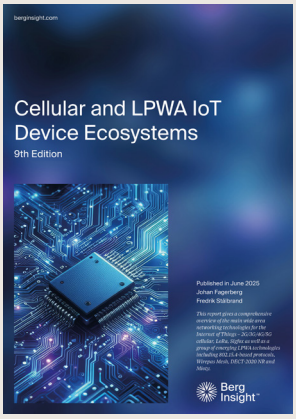

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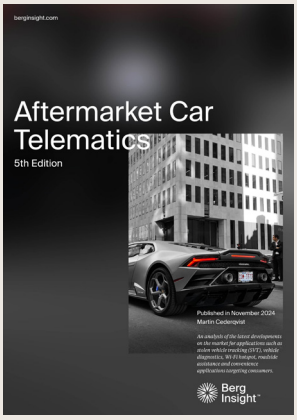

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