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Power Over Ethernet Chipsets Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Type (PoE Power Sourcing Equipment (PSE) Chipset, PoE Powered Devices (PD) Chipset), By Standard (802.3af standard, 802.3at standard, 802.3bt standard), By End-use (Commercial, Industrial, Residential), By Device (Network Cameras, VoIP Phone, Ethernet Switch & Injector, Wireless Radio Access Point, Proximity Sensor, LED lighting), By Region & Competition, 2021-2031F

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Abstracts

The Global Power Over Ethernet Chipsets Market is projected to expand significantly, growing from USD 2.78 Billion in 2025 to USD 5.57 Billion by 2031 at a CAGR of 12.28%. These chipsets are integrated circuits essential for managing the concurrent transmission of data and electrical power through Ethernet cabling. The primary catalyst for this market growth is the increasing demand for cost-effective and flexible network infrastructure to support Internet of Things endpoints, such as wireless access points and IP cameras. According to the Ethernet Alliance, 33 percent of respondents in a 2024 survey intended to deploy high-power PoE devices exceeding 51 watts within the coming year, indicating a measurable rise in the adoption of higher-capacity power delivery systems that directly fuels the demand for advanced chipsets.

However, the market faces a substantial challenge regarding the interoperability of proprietary solutions and varying equipment standards. Incompatibility issues can lead to power delivery failures or device malfunctions, causing network administrators to

hesitate when considering infrastructure upgrades. Consequently, ensuring consistent performance across diverse hardware ecosystems remains a significant hurdle that manufacturers must overcome to achieve broad market acceptance.

Market Driver

The proliferation of Smart Building Automation and Connected Lighting Networks acts as a major force driving the adoption of advanced Power over Ethernet chipsets. As commercial facilities focus on centralized control and energy efficiency, PoE technology is increasingly deployed to power occupancy sensors, intelligent lighting systems, and HVAC controllers via a single Ethernet cable. This convergence removes the need for separate electrical wiring, thereby lowering capital expenditures and reducing installation complexity for facility managers. Data from the Association for Smarter Homes & Buildings? December 2025 report reveals that 91% of respondents are already utilizing smart building systems, highlighting a widespread integration of automated infrastructure that necessitates sophisticated chipsets capable of managing dynamic power loads and ensuring seamless endpoint communication.

Simultaneously, the rapid deployment of Wi-Fi 6/7 Access Points and 5G Small Cells is reshaping the market by requiring faster data throughput and higher power levels. Modern wireless access points, especially those supporting the Wi-Fi 7 standard, depend on robust PoE++ solutions to operate optimally without performance loss. According to the Wireless Broadband Alliance?s December 2025 industry report, 19% of executives have already deployed the Wi-Fi 7 standard, signaling a swift shift toward next-generation connectivity that relies on high-performance silicon. Furthermore, as Ericsson projects 5G subscriptions to reach 2.9 billion in 2025, the use of PoE for backhauling small cells is expanding, compelling manufacturers to prioritize chipsets compliant with IEEE 802.3bt standards to support these power-intensive technologies.

Market Challenge

The challenge of interoperability among proprietary solutions and different equipment standards remains a critical barrier hindering the growth of the Global Power Over Ethernet Chipsets Market. When chipsets fail to strictly adhere to universal protocols, network administrators face a high risk of device malfunctions or complete power delivery failures. This technical inconsistency creates operational volatility, causing buyers to hesitate before integrating new endpoints into their existing infrastructure. As the ecosystem grows more complex, the fear of investing in incompatible hardware acts as a bottleneck, preventing the seamless deployment of advanced power delivery

systems.

The market's sensitivity to this issue is clearly reflected in recent purchasing trends. According to the Ethernet Alliance, 96 percent of PoE professionals surveyed in 2024 indicated that Ethernet Alliance certification would influence their buying decisions, demonstrating that the vast majority of the market considers unverified interoperability a disqualifying risk. Consequently, pervasive uncertainty regarding equipment compatibility directly limits the addressable market for new chipsets, as stakeholders delay procurement to avoid the financial and technical repercussions of non-compliant infrastructure.

Market Trends

The convergence of Operational Technology (OT) and IT networks within the Industrial IoT sector is fundamentally altering chipset requirements. As factories transition from legacy fieldbus architectures to unified Ethernet-based infrastructures, there is a critical need for ruggedized PoE chipsets capable of powering actuators and sensors directly from the data cable. This shift simplifies cabling in harsh environments and facilitates seamless data flow for predictive maintenance. Highlighting this transition, HMS Networks reported in June 2024 that Industrial Ethernet captured 71% of all newly installed nodes in factory automation, confirming the dominance of standard Ethernet protocols that support advanced power delivery.

Concurrently, the advancement of Low-Standby Power Designs and Energy-Efficient architectures has become a decisive factor in chipset engineering. Manufacturers are aggressively optimizing silicon architectures to adhere to strict environmental regulations and minimize power loss, particularly for devices that remain idle for long periods. This focus on green technology is driving the production of responsible silicon solutions that reduce the carbon footprint of large-scale network deployments. For instance, STMicroelectronics noted in its April 2024 Sustainability Report that 82% of its new products were categorized as responsible due to their low-carbon characteristics and power efficiency, reflecting an industry-wide prioritization of sustainable performance.

Key Market Players

Analog Devices, Inc.

Cisco Systems Inc.

Microchip Technology Inc.

Monolithic Power Systems Inc.

NXP Semiconductors N.V.

On Semiconductor Corporation

Semtech Corporation

Silicon Laboratories Inc.

STMicroelectronics N.V.

Texas Instruments Incorporated

Report Scope

In this report, the Global Power Over Ethernet Chipsets Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Power Over Ethernet Chipsets Market, By Type

PoE Power Sourcing Equipment (PSE) Chipset

PoE Powered Devices (PD) Chipset

Power Over Ethernet Chipsets Market, By Standard

802.3af standard

802.3at standard

802.3bt standard

Power Over Ethernet Chipsets Market, By End-use

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- Commercial
- Industrial
- Residential

Power Over Ethernet Chipsets Market, By Device

- Network Cameras
- VoIP Phone
- Ethernet Switch & Injector
- Wireless Radio Access Point
- Proximity Sensor
- LED lighting

Power Over Ethernet Chipsets Market, By Region

- North America
  - United States
  - Canada
  - Mexico
- Europe
  - France
  - United Kingdom
  - Italy

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- Germany
- Spain

Asia Pacific

- China
- India
- Japan
- Australia
- South Korea

South America

- Brazil
- Argentina
- Colombia

Middle East & Africa

- South Africa
- Saudi Arabia
- UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Power Over Ethernet Chipsets Market.

Available Customizations:

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Global Power Over Ethernet Chipsets Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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