

Updated: Gartner's 5-Year Semiconductor Outlook by Application (2025–2029F)

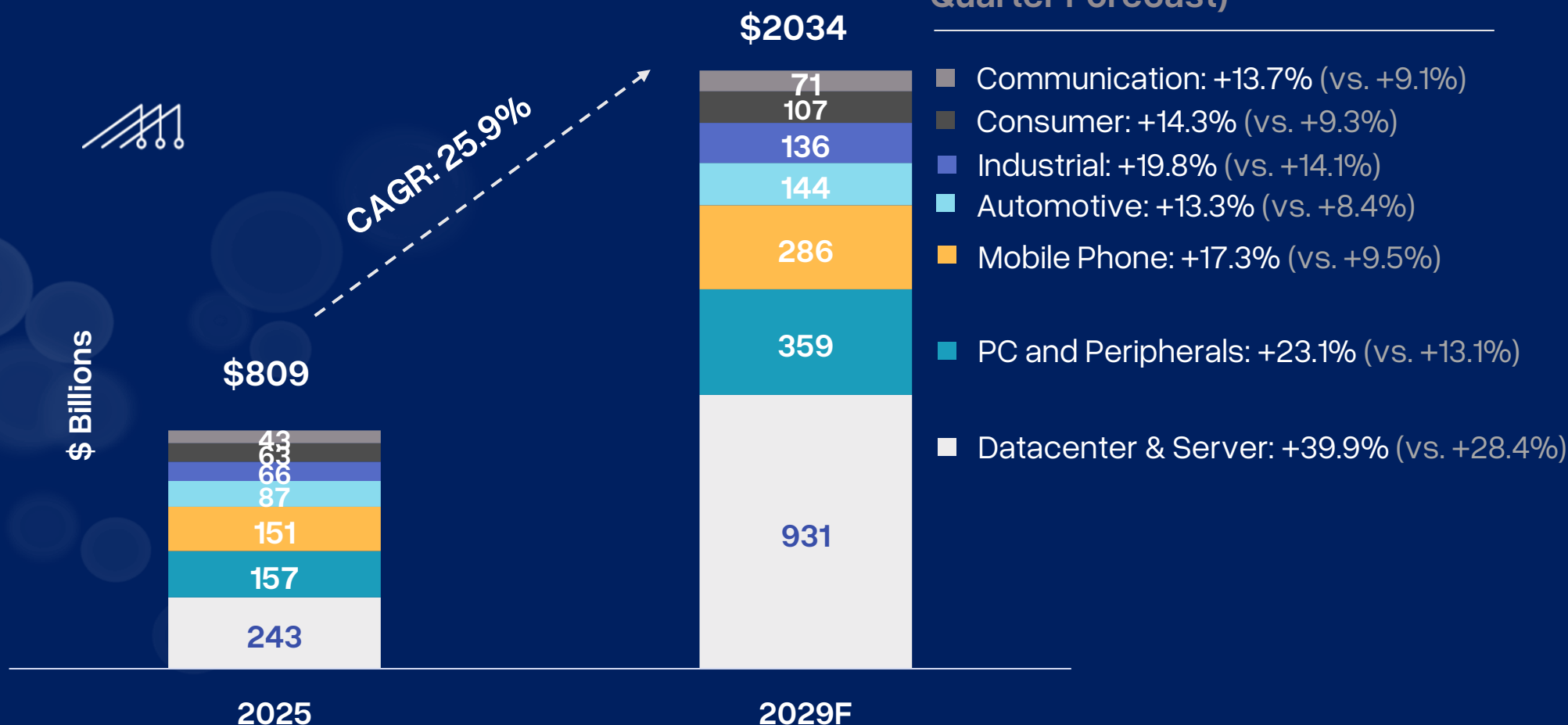
Forecast from Jun'26

Gartner's Semiconductor Market Forecast by Application

- The overall semiconductor CAGR for 2025–2029 is 25.9% (as of Jun'26), up from the earlier forecast of 17.1% (Mar'26), driven primarily by sustained AI infrastructure investments and an explosive memory pricing cycle
- Growth strengthened across all segments, particularly in Datacenter, Industrial and PC and Peripherals

2025–29F Semiconductor Revenue

CAGR by Application (vs. Previous Quarter Forecast)



Growth Drivers Application

Category	Details
Key Growth Drivers	
Datacentre & Server	Driven by massive corporate spending on Generative AI infrastructure, cloud service providers are rapidly building out hyperscale data centers
Steady Growth Segments	
Industrial Applications	Growth is driven by long-term corporate investments in smart factory automation, IoT infrastructure, and renewable energy grid systems
Automotive Demand	Growth sustained by EV transition and ADAS adoption, driving higher demand for microcontrollers and power chips per vehicle
Consumer Electronics	AI-enabled devices (smart home devices, wearables, and gaming consoles) stabilize the segment, lifting it modestly after years of stagnation
Slower Growth	
Mobile Phones & PCs	AI PCs and smartphones excite but growth is limited by mature markets, saturation, and high component costs
Communication	Global telecom companies are shifting spending from traditional macro network hardware to cloud-native software architectures and specialized edge routing



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