

1G-400G Networking Ports Market Tracker

Matthias Machowinski, Senior Research Director
Heidi Adams, Senior Research Director

ACTUALS AND FORECAST

Frequency, Time Period

- Delivered biannually
- 5-year annual forecast (2018 – 2022)
- Historical data (2006 – 2017)

Measures

- Revenue
- Ports
- Revenue per port

Regions

- Worldwide
- North America (US and Canada)
- Europe, the Middle East, Africa
- Asia Pacific (incl. Japan and Australia)
- Caribbean and Latin America (incl. Mexico)

PORTS COVERED

Ethernet ports:

- 1G
- 2.5G
- 10G
- 25G
- 40G
- 50G
- 100G
- 200G
- 400G

Optical ports:

- 2.5G
- 10G
- 40G
- 100G
- 200G

EQUIPMENT COVERED

Enterprise/data center:

- Enterprise routers
- Ethernet switches

Service provider:

- IP edge routers
- IP core routers
- Carrier Ethernet switches (CES)
- Broadband access
- WDM
- SONET/SDH

Consolidated view of Ethernet and optical ports on enterprise, data center, and service provider equipment

IHS Markit expects the total number of 1G-400G networking ports shipped on enterprise, data center, and service provider equipment to pass 700 million in 2021, and global revenue reaching US\$50 billion.

The combined spend over the five years from 2017 to 2021 on 1G-400G Ethernet and optical ports is forecast by IHS Markit to reach a cumulative US\$230 billion.

With so much revenue at stake, choosing the right technologies to invest in is critical. Led by analysts Matthias Machowinski and Heidi Adams, the 1G-400G Networking Ports Market Tracker helps clients make key strategy and R&D decisions by accurately estimating, forecasting, analyzing, and assessing demand for Ethernet and optical ports by speed on enterprise/data center and service provider equipment.

A subscription to this service, which is updated twice per year, includes:

Market Size and Forecasts report in Excel

- Revenue, port, and revenue-by-port forecasts and historical data by region and equipment type
- Customizable pivot tables allowing for ad hoc data comparisons and analysis in tables and charts

Market Analysis and Trends report in PDF

- Top takeaways of the period, analysis and trends by equipment type and geography, market drivers, and technology roadmaps

Analyst inquiry time

Key Issues Addressed

- What is the size of each port market segment now and what is the forecast?
- How fast is each segment growing?
- What are the trends affecting demand for various port speeds?
- Which technologies and speeds are being adopted on various types of enterprise and service provider equipment?

Applicable To

- Chip and component manufacturers
- Test and measurement companies
- Service providers
- Equipment manufacturers

LEAD ANALYSTS

Matthias Machowinski – Senior Research Director, Enterprise Networks & Video

A leading expert on enterprise networking and communications technologies, Matthias Machowinski has 17 years' experience as an analyst in the telecom and datacom industry and specializes in the data and communication technologies deployed by small/medium businesses (SMBs), enterprises, and public sector organizations. His areas of focus include emerging network use cases, network technologies, architecture adoption rates, wired/wireless convergence, the effects of downtime, and end-user spending trends.

Heidi Adams - Senior Research Director, Transport Networks

Ms. Adams joined IHS Markit in March 2016, bringing over 20 years of product management, marketing, go-to-market strategy and industry analysis expertise to the team. She has been active in introducing to the market new products and solutions that span access, aggregation, edge and core networks for service providers, mobile network operators and large enterprises. As the lead analyst for transport networks, including router and optical technologies, at IHS, she is uniquely positioned to assess the impact of emerging cloud-centric residential, business and mobile service architectures on the underlying IP and optical transport network infrastructure.

ABOUT IHS MARKIT

The Technology Group at IHS Markit is the leading source of information, insight and analytics in critical areas that shape today's technology ecosystem—from materials and components, to devices and equipment, to end markets and consumers. Businesses and governments in more than 150 countries around the globe rely on the deep market insight and expert independent analysis of our 300+ industry analysts in technology sectors spanning IT, telecom, media, industrial, automotive, electronics, solar and more.

Product Categories and Definitions

This report tracks ports and revenue for 1G-400G Ethernet and optical modules/interface cards only for the products listed below; we do not include non-network areas such as servers, blade servers, and NICs

Service provider: equipment sold to and deployed in service provider networks, but not service provider data centers

- **IP edge routers:** Layer 3 routers that route IP, supporting MPLS, RIP, BGP, ISIS, OSPF, and layer 3 VPNs; are deployed in service provider networks; designed for aggregating dedicated access connections, grooming multiple edge devices for the core, and packet processing (including BRAS and provisioning of network-based IP services)
- **IP core routers:** Layer 3 routers that route IP, supporting MPLS, RIP, BGP, ISIS, OSPF, and layer 3 VPNs; are deployed in service provider networks; designed to connect POPs and COs across wide areas and to other service provider networks
- **Carrier Ethernet switches (CES):** network devices used in service provider networks that have the following 5 carrier features: ability to deploy end-to-end SLAs, end-to-end sub 50ms protection, L2 point-to-point VPNs, L2 point-to-multipoint VPNs, and can carry TDM over Ethernet
- **Broadband access:** includes PON and Ethernet FTTH equipment
- **WDM:** Includes terminals, OADMs, amplifiers, OEO switches, and photonic switches
- **SONET/SDH:** includes ADMs and terminals, with or without DCS functions (includes MSPPs)

Enterprise/data center: equipment sold to and deployed at business, education, and government organizations, as well as service provider data centers

- **Enterprise routers:** forward traffic using layer 3 information; typically sit at the WAN edge to connect different networks and/or network segments; capable of being tied into network management systems; only includes routers deployed in enterprise networks, not service provider networks
- **Ethernet switches:** devices that connect PCs, laptops, servers IP phones, etc. to the network, and adhere to the IEEE 802.3 Ethernet standards

For each equipment type, we track port revenue and port shipments for each of the following port types (where applicable):

- **1G Ethernet**
 - Fiber (incl. GBIC, SFP)
 - Copper (1Gbase-T)
- **2.5G Ethernet**
 - Copper (2.5Gbase-T)
- **10G Ethernet**
 - Fiber (XFP, SFP+, XENPAK/X2)
 - Copper (10Gbase-T, 10Gbase-KR/KX)
- **25G Ethernet (SFP28)**
- **40G Ethernet (CFP and QSFP)**
- **50G Ethernet (SFP56)**
- **100G Ethernet (incl. CFP/CXP/CFP2/QSFP28)**
- **200G Ethernet (QSFP56)**
- **400G Ethernet (QSFP-DD/OSFP)**
- **2.5G optical (OC48/STM16, wavelength, or OTN)**
- **10G optical (OC192/STM64, wavelength, or OTN)**
- **40G optical (OC768/STM256, wavelength, or OTN)**
- **100G optical (wavelength or OTN)**
- **200G optical (200G+ ports, including flexible coherent modulation ports deployed at 200G and higher speeds)**

For more information [ihsmarkit.com/technology](https://www.ihsmarkit.com/technology)

WORLDWIDE

T +1 844 301 7334

E technology_us@ihsmarkit.com
technology_apac@ihsmarkit.com
technology_emea@ihsmarkit.com

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