

TELECOMMUNICATIONS

CURRENT TRENDS

- Analysts revised their revenue growth expectations for the telecommunications equipment market for 2021 after first-quarter revenue across multiple segments grew 15% over 2020.
- The transition to 5G is expected to generate a windfall for network, infrastructure and equipment vendors. Worldwide 5G network infrastructure revenues will likely reach \$80.5 billion by 2028.
- Optical transport equipment market growth slowed in 2020 because of the pandemic and reduced capital expenditures, and it remained flat through the first quarter of 2021.
- The market for refurbished smartphones rebounded in the second half of 2020. Analysts expected this growth to continue at a compound annual growth rate of 11.2% through 2024.
- Telecommunications networking equipment profit margins have increased slightly since 2016; however, companies are still under pressure to keep prices low because of heavy import competition.

PROJECTED VALUES (12-MONTH OUTLOOK)



APPROXIMATE NET RECOVERY ON COST

50-75%

finished goods

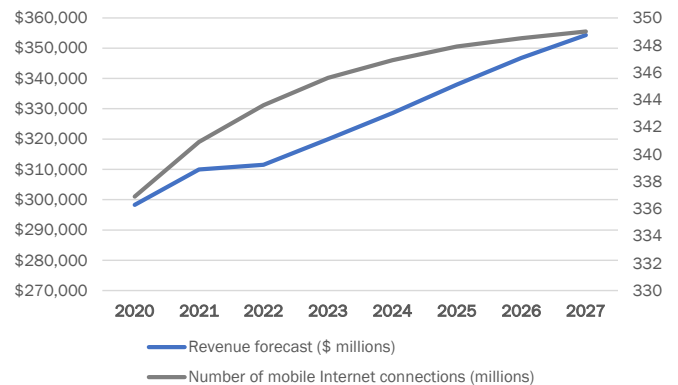
40-60%

work-in-process

30-50%

raw materials

U.S. WIRELESS TELECOMMUNICATIONS CARRIERS



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TELECOM EQUIPMENT MARKET REVENUE INCREASING:

The telecommunications industry played a critical role in keeping businesses and societies connected and running during the COVID-19 pandemic. People worldwide have come to rely on technology because of the pandemic's disruption, which accelerated data and voice traffic, digital transformation, video streaming and telehealth. This increased reliance on connectivity and digital services have allowed the telecommunications sector to remain countercyclical relative to the S&P 500 throughout the crisis, according to research firm S&P Capital IQ.

Industry research firm Dell'Oro Group recently revised its 2021 revenue growth expectations for the telecom equipment market after first-quarter revenue across multiple segments grew 15%, compared to the same period in 2020. Values for telecommunications equipment serving the broadband and wireless segment have remained stable. However, values for equipment serving campus and venue segments are gaining traction as states ease pandemic restrictions and people return to in-person school and work.

The overall telecom equipment market — including broadband access, microwave and optical transport, mobile core and radio access network and service provider router and switch segments — surged during the first quarter of 2021, according to the Dell'Oro Group. Factors for this surge included positive activity in multiple segments and regions, a weaker U.S. dollar and comparatively low figures from early 2020, when international supply chains buckled amid early-stage pandemic restrictions.

The early 2021 strength led the Dell'Oro Group to revise its expectations for the rest of the year. It expects collective revenue to increase from 5% to 10% this year, up from the group's previous expectation of 3% to 5%, keeping up with a market growth trend that began in 2018 and continued through the difficulties of 2020 and into 2021.

The first quarter 2021 market growth has not translated to any major market share shifts among vendors. The top seven vendors comprised around 80% of the total market, with Huawei continuing to lead global market share. Ericsson, in third place, approached parity with second-place Nokia after several years of the two growing closer in revenue share. Additionally, Samsung nudged slightly ahead of Ciena during the quarter to become the number six supplier in the market.

In the broadband access arena, Dell'Oro recently reported the market for 10G passive optical network equipment boomed during the first quarter of 2021. Further, upgrades from 4G to 5G not only drove radio access network purchases, but also increased investment in core and transport networks supporting 5G. Profit margins for telecommunications networking

equipment have increased slightly since 2016; however, companies remain under pressure to keep prices low because of heavy import competition.

OPTICAL TRANSPORT EQUIPMENT MARKET GROWTH SLOWS: Optical transport equipment revenue increased 1% in 2020, reaching \$16 billion, according to the Dell'Oro Group. All regions except North America and Latin America grew during the period.

"Between concerns on starting new optical builds during the start of the pandemic and aggressive plans on 5G deployments that required a larger share of a service provider's capital budget, the spending on optical transport dramatically slowed by the end of 2020," said Jimmy Yu, Dell'Oro Group Vice President. "It was a really dramatic drop in optical equipment purchases in the fourth quarter. While we anticipated a slowdown near the end of the year due to concerns around COVID-19, we were surprised by a 29% year-over-year decline in wavelength-division multiplexing (WDM) purchases in North America as well as a 12% decline in China. That said, there was good growth in the other parts of the world, especially Japan."

The pandemic brought about concerns over starting new optical builds and funding aggressive 5G deployment plans. This dramatically slowed spending on optical transport, according to Yu. He indicated there was a 29% year-over-year, fourth-quarter decline in WDM purchases in North America and a 12% decline in China. Capital expenditures remained flat through the first quarter of 2021.

REFURBISHED SMARTPHONE DEMAND INCREASING: In contrast to the first half of 2020, industry analysts reported a 4% increase in global sales in the second half of the year for refurbished smartphones, and they expect this growth to continue at a compound annual growth rate (CAGR) of 11.3% through 2024. Overall performance for 2020 was stronger than 2019, which saw a decrease in worldwide market volume. International secondhand phone market 2021 projections have been positive. The average selling rates of secondary items, often substantially lower, may stimulate market demand for products.

5G TECHNOLOGY GROWS SIGNIFICANTLY: After years of hype about gigabit speeds that will let users download full-length movies in seconds, 5G is now a reality. Communication service providers' significant investments to deploy 5G infrastructure globally for improved data services will likely drive the market at an expected CAGR of 49.8% from 2021 through 2028.

CONCENTRATED MARKETPLACE IN DOMESTIC WIRELESS INDUSTRY: The U.S. wireless industry exhibits a medium level of concentration, with high levels of competition and technology change. The major players in the U.S., Verizon Wireless, AT&T Inc. and Deutsche Telekom AG subsidiary T-Mobile U.S. Inc., account for approximately 64% of industry revenue, per data from research firm IBISWorld. This concentration is consistent with the high level of merger and acquisition activity over the past decade.

The industry has a low, but increasing, level of globalization. The third-largest U.S. carrier, T-Mobile, is a subsidiary of German telecommunications provider Deutsche Telekom AG. Sprint Corporation, formerly the fourth-largest carrier, was acquired first by Japanese SoftBank Group Corp., then by T-Mobile in 2020. With an increasingly homogeneous supply of products and services, operators are scrambling to build subscriber bases. A large subscriber base is critical to competitiveness, as it delivers considerable economies of scale and enables carriers to offer lower prices and attain higher margins.

The Expert: Brad Tarnutzer



Brad Tarnutzer specializes in the appraisal of high tech machinery and equipment and inventory for Gordon Brothers. His experience includes computer/server and consumer electronics manufacturers and distributors, contract manufacturers including EMS companies, defense contractors, and solar energy firms. Read his full bio [here](#).



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