Tejas Networks

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Intro

TATA backed Tejas Networks is the leading telecom ancillary in India which owns the value chain from design to deployment of the equipment. When telecom industry was competing for the spectrum, higher ARPU, lower CAC and stable bottom line, TATA decided to enter the telecom from the back door supplying the equipment. The company's product portfolio consists of both wired and wireless with an extensive list which can cater to demands of telecom, data centers, FTTX and various other players where connectivity, data transfer, communication and hold prime importance. Tejas Networks (TN going forward) is the trusted ancillary partner of Airtel, Jio and Vodafone Idea and successfully completed the upgradation of 10K+ sites for BSNL with 4G/5G services.

Industry

India, once celebrated as the "Sone ki Chidiya" (Golden Bird), is reclaiming its economic prominence in the modern era, driven by government initiatives such as Atmanirbhar Bharat, Digital India, GIFT City, Smart Cities, and advancements in artificial intelligence. The rapid progress in information and communication technology (ICT) can be attributed to affordable data, expanding connectivity, diverse digital use cases, and a supportive domestic market. With a young, tech-savvy population and strong policy support, India is well-positioned to capitalize on its growth potential.

Telecommunication has become an essential part of daily life, enabling seamless connectivity and data access. Globally, the telecom industry is projected to spend $1.6 trillion in 2024, with the sector contributing approximately 6-7% to GDP—making it a strategic focus for India's future growth, especially through initiatives like the Production Linked Incentive (PLI) schemes. India boasts the world's second-largest telecom subscriber base and the second-highest number of internet users, with a tele-density of 84.46%. The industry's gross revenue stood at $10.46 billion as of Q2 FY25 and it's expected to grow at CAGR 9% till 2033. Industry attracted $40 billion in foreign direct investment (FDI) between April and September 2024.

As data and connectivity become integral to everyday life, competition among telecom players has intensified, driving them to deliver higher bandwidths and more reliable connectivity across both wired and wireless networks. Tejas Networks estimates a total addressable market (TAM) of $50 billion for wireline products and $58 billion for wireless products by 2029, reflecting the vast opportunities in India's rapidly evolving telecom landscape.

Moat

Tejas Networks operates in a sunrise industry poised for rapid growth over the next decade. As the sector's attractiveness draws increased competition, it is essential to assess whether Tejas Networks possesses the strengths required to sustain and grow its leadership position amid evolving external factors and competitive pressures.

External Environment

- **Political:** The telecommunications sector is highly regulated due to its critical role in data and communication infrastructure. Current government policies are largely supportive, recognizing the sector's strategic importance.
- **Economic:** India's robust economic growth continues to attract significant foreign direct investment (FDI) into the telecom industry, further fueling expansion.
- **Social:** With the world's second-largest subscriber base and a rapidly increasing digital adoption rate, India presents significant market opportunities for telecom players.
- **Technological:** While global giants like Nokia and Ericsson drive technological advancements, there is a risk that rapid innovation from such players could challenge ancillary providers.
- **Environmental:** The company's products do not have a significant negative environmental impact.
- **Legal:** Tejas Networks operates fully within Indian legal frameworks and currently faces no major legal proceedings.

Core Competencias

- **Software-Defined Hardware:** Tejas Networks focuses on software development and outsourcing hardware manufacturing to Electronic Manufacturing Services (EMS) partners. This approach enables the company to standardize hardware, leverage its polymorphic nature, and easily configure or upgrade systems as needed—achieving economies of scale and operational flexibility.
- **Asset-Light Model:** Despite being an OEM, Tejas Networks maintains a light asset base. Its Bengaluru facility primarily handles minor assembly and software development, keeping capital expenditure low.
- **End-to-End Solutions:** The company offers a comprehensive platform for multi-technology integration, providing end-to-end services—including maintenance—which reduces both financial and operational burdens for clients.
- **Versatile Product Portfolio:** Tejas Networks' products address bandwidth needs ranging from a few megabits to tens of terabits, supporting applications

such as mobile backhaul, broadband access, enterprise services, wholesale bandwidth, data centre interconnectivity, critical infrastructure, and network modernization.

- **Direct-to-Mobile Technology:** In collaboration with Intel and IIT, Tejas Networks has developed a chip ready for commercial production that leverages TV broadcast waves to deliver content directly to mobile devices without requiring Wi-Fi or internet connectivity.
- **Bharat 6G Alliance:** As a founding member, the company is actively engaged in research and development of 6G technologies in partnership with leading institutions and government agencies.
- **Cost Efficiency:** With all software R&D and maintenance handled by Indian engineers, Tejas Networks benefits from lower operational costs and a strong talent pool.

Business Model

Tejas Networks typically receive orders for components or complete system upgrades, including backhaul solutions. The company manages the entire process from design to deployment, delegating hardware manufacturing to EMS partners as per software specifications. This model allows for scalability, cost control, and efficient resource allocation.

Industry Forces Shaping Profitability

- **Suppliers:** With a wide range of component suppliers, Tejas Networks' software-defined hardware approach helps standardize requirements and reduces supplier power.
- **Buyers:** Major clients include telecom operators, railways, defence, and government agencies. While these buyers have bargaining power, alternative suppliers are limited, strengthening Tejas Networks' position.
- **New Entrants:** Barriers to entry are high due to the need for deep expertise and capital. Although Chinese players could pose a threat, regulatory restrictions have limited their market access in India.
- **Substitutes:** Switching costs are high, and there are few viable substitutes for advanced telecom hardware. Local sourcing is often preferred for large-scale projects due to maintenance and support advantages.

- **Rivalry:** Competition is intense, particularly from established global players like Nokia and Ericsson. However, Tejas Networks' Indian origin and proven track record provide a competitive edge in domestic markets.
- **Collaborators:** As an OEM, Tejas Networks relies on partnerships with entities such as Railtel for large installations. The company's reputation, bolstered by its association with Tata, facilitates long-term collaborations and trust.

Telecommunications hardware must adhere to global standards and protocols, limiting opportunities for product differentiation. As a result, profitability is driven primarily by volume, operational efficiency, and reputation. Tejas Networks' strategy of outsourcing hardware production while retaining software control enables rapid scaling, cost reduction, supply chain risk mitigation, and lower inventory and fixed costs.

Notably, 64% of Tejas Networks' shares are indirectly held by Tata—a brand synonymous with trust, ethics, and reliability. The Tata association not only enhances the company's credibility but also opens doors to new business opportunities that might otherwise be inaccessible.

Optimistic Future

- **Rising Tele-density and Data Demand:** India's tele-density has reached 89%, reflecting deep market penetration. With increasing digital adoption, demand for seamless connectivity and higher data consumption is expected to accelerate further, especially as more services and lifestyles shift online.
- **Expanding Beyond Urban Markets:** Rapid urbanization and changing consumption patterns are compelling telecom operators to expand their reach beyond metro and urban centers, targeting untapped rural and semi-urban segments. This expansion opens up significant new growth opportunities for the sector.
- **Diverse Use Cases and Infrastructure Modernization:** The telecom sector's impact extends far beyond internet connectivity. Critical applications include railway safety systems (such as Kavach), metro networks, and other infrastructure projects that require robust, reliable communication between endpoints. The emergence of satellite-based solutions like Starlink could disrupt traditional models, but Tejas Networks, through its subsidiary Sankhya Labs, is well-positioned with expertise in next-generation wireless and satellite technologies.
- **Leadership in Next-Gen Technology (6G):** As a founding member of the Bharat 6G Alliance, Tejas Networks is at the forefront of developing and standardizing 6G technology, aiming for deployment by 2030. The alliance is collaborating with European partners to ensure global compatibility and leadership in future telecom standards.

- **Strong Order Pipeline:** Tejas Networks is currently negotiating a substantial order book—potentially worth several thousand crores—with major projects including BharatNet, BSNL, Railway Kavach, and Vodafone. This robust pipeline underscores the company's strong positioning in large-scale, high-impact projects.
- **Production-Linked Incentive (PLI) Advantage:** The company remains eligible for India's PLI scheme until FY 2027. Should Tejas Networks achieve significant breakthroughs in 6G or related technologies, the PLI benefits may be extended, further supporting its growth trajectory.
- **Tata Group Backing and Strategic Moves:** Despite past setbacks in telecom (Tata Docomo, Tata-Idea), the Tata Group's renewed interest—potentially through partnerships or acquisitions such as with BSNL—signals strong long-term commitment. Tejas Networks, with 64% indirect Tata ownership, stands to benefit from the group's reputation, resources, and strategic direction.
- **Expanding Global Footprint:** Tejas Networks exports to over 75 countries, with a focus on developing economies. Exports now contribute nearly one-third of its revenue, highlighted by recent broadband project completions in Italy and Egypt. This international presence strengthens revenue diversification and resilience.
- **India's Growing Export Market:** India's telecom equipment exports reached $3.15 billion in 2023. Tejas Networks is well-positioned to become a significant contributor to this segment, leveraging its advanced product portfolio and global relationships.
- **Security and 'China+1' Opportunity:** Heightened concerns over data security and supply chain reliability are driving global customers to seek trusted partners. The 'China+1' strategy is benefiting Indian OEMs like Tejas Networks, as international clients diversify away from Chinese suppliers.

Noteworthy

- Pay-as-you-grow modular hardware design reduces initial costs and allows customers to scale network capacity as needed.
- Reusable hardware and software components enable cost-effective, highly customizable products with faster time-to-market.
- Optical transport portfolio supports 400/600G speeds, enabling multi-terabit backbone networks for high-capacity data transmission.

- Acquisition of Saankhya Labs adds expertise in 5G Open RAN, satellite applications, and chip design with 250+ R&D engineers and 73 patents.
- Direct-to-Mobile (D2M) broadcast technology streams content directly to mobiles using broadcast spectrum, easing network congestion.
- One-third of revenue comes from exports to 75+ countries across Africa, Middle East, South & Southeast Asia, Europe, and Americas.
- Subscription-based NMSaaS cloud platform simplifies network management, reducing equipment footprint and lowering Capex and Opex.
- Products cover bandwidth needs from a few megabits to tens of terabits, serving mobile backhaul, broadband, enterprise, and critical infrastructure.
- Software-Defined Hardware™ allows deployment across multiple geographies with country-specific adaptations, saving costs and achieving scale.
- Trusted by major Indian telcos and public utilities, including Airtel, Jio, Vodafone-Idea, BSNL, RailTel, Indian Railways, and Power Grid.
- Leading supplier for national projects like BharatNet, defense networks, and smart cities, supporting India’s digital infrastructure and security.
- Filed over 445 patents and developed 350+ semiconductor IPs, demonstrating strong innovation and R&D capabilities.
- Active participant in global telecom standards development for 5G and 6G through TSDSI, ITU-T, IEEE, 3GPP, and O-RAN.
- Delivered radio and baseband equipment for BSNL’s 100,000-site 4G/5G network, one of the largest single-vendor RAN deployments worldwide.
- Signed MoUs with Telecom Egypt and partners to replicate BharatNet and NKN projects, establishing local manufacturing and R&D in Egypt.

Financials

Evaluating Tejas Networks using traditional valuation methods such as free cash flow or peer comparison is challenging. As a young, high-growth company focused on capturing market share, Tejas Networks does not exhibit predictable cash flows or steady financial patterns typical of mature firms. Instead, its valuation is better approached through a blend of qualitative factors—such as management quality, innovation, and market positioning—supported by financial health, the size of the total addressable market (TAM), and, crucially, the company’s ability to rapidly scale without sacrificing profitability.

Asset light model

The core of Tejas Networks' business model is its asset-light approach, where hardware is defined by in-house software and most manufacturing is outsourced. Fixed assets (including intangibles) have consistently formed a modest share of the balance sheet—averaging around 12% of total assets and 28% of sales from FY2020 to FY2025, with a spike in FY2023 due to the Saankhya Labs acquisition. Notably, intangibles such as patents and software account for over 60% of the fixed asset bundle, underscoring the company's focus on innovation and intellectual property.

	2020	2020	2022	2023	2024	2025
% of Total Assets	8.51%	10.33%	8.41%	16.34%	12.00%	12.80%
Intangibles / FA	50.93%	66.36%	69.20%	78.03%	64.20%	61.53%
% of Sales	27.05%	25.73%	32.23%	64.01%	42.52%	15.84%
Growth		28.27%	30.97%	231.67%	67.20%	36.08%

R & D Spending

Tejas Networks' core competence lies in its strong control over hardware design through in-house software, enabling cost-effective, upgradable solutions for customers. The company has demonstrated a steadfast commitment to innovation, consistently increasing its R&D investments; even during challenging periods from 2020 to 2023 when it faced operational losses. R&D expenses grew at an average rate of over 25% year-on-year, rising from ₹109.4 crore in FY2021 to ₹557 crore in FY2025. Although R&D as a percentage of revenue has declined with rapid sales growth (from 25.8% in FY2021 to 6.2% in FY2025), absolute investment continues to grow, underscoring Tejas Networks' focus on technological leadership and long-term value creation.

	2020	2021	2022	2023	2024	2025
Expenses	109.4	106.05	131.23	258.79	403	557
% of revenue	25.79%	19.23%	22.10%	25.86%	15.89%	6.21%
Growth		-3.06%	23.74%	97.20%	55.72%	38.21%

Revenue Growth

Tejas Networks has demonstrated strong revenue growth over the past five years. Total sales increased from ₹391 crore in FY2021 to ₹8,455 crore in FY2025, representing a remarkable CAGR. The company's revenue mix has shifted significantly, with private sector sales in India rising from 52% to 94% of total revenue, while contributions from government and international markets have declined. Notably, FY2025 saw an exceptional 265% year-on-year sales growth, driven primarily by a surge in domestic private sector demand.

	2020	2021	2022	2023	2024	2025
Goods	343.82	480.12	479.49	806.56	2148.77	8276.55
Services Rendered	46.72	46.48	71.1	113.01	165.55	178.41
Total Sales	390.54	526.6	550.59	919.57	2314.32	8454.96
Total sales growth		34.84%	4.56%	67.02%	151.67	265.33
India Pvt	52.0%	43.0%	47.0%	50.0%	54.0%	94.0%
India Govt	15.0%	17.0%	17.0%	26.0%	36.0%	3.0%
International	33.0%	40.0%	36.0%	24.0%	10.0%	3.0%

Other Ratios

	2020	2021	2022	2023	2024	2025
RoA	-7.62%	0.08%	-9.19%	-3.80%	-1.19%	3.51%
RoIC	-11.50%	0.13%	-13.09%	-5.37%	-1.60%	5.09%

RoE	-12.86%	1.66%	-7.72%	-1.84%	2.35%	14.75%
Net Profit Margin	*-0.33*	*0.03*	*-0.20*	*-0.05*	*0.03*	*0.06*
Asset Turn over	*0.34*	*0.42*	*0.28*	*0.28*	*0.31*	*0.86*
Equity multiplier	*1.15*	*1.18*	*1.38*	*1.47*	*2.68*	*2.99*
Current Ratio	6.91	6.07	10.45	6.26	1.43	1.35
Quick Ratio	2.08	2.28	4.47	2.35	0.13	0.13
Inventory Days	451.79	316.21	308.63	316.16	511.61	173.25
Days Sales Outstanding	426.10	301.48	234.07	160.79	155.82	136.89
Days Purchases Outstanding	59.91	132.27	104.73	83.41	83.91	109.03
Debt to Capital	0.03	0.02	0.01	0.02	0.37	0.47
Debt to Equity	0.03	0.02	0.01	0.02	0.60	0.89

- **Return on Assets (RoA):** RoA has steadily improved, turning positive to 3.51% in FY2025 after several years of negative returns, reflecting better asset utilisation as the company scales. However, profitability is still affected by high operating and fixed costs, particularly employee and other operational expenses.

- **Return on Invested Capital (RoIC):** RoIC remained negative until FY2024, turning positive at 5.09% in FY2025, signaling that the company has finally overcome operational losses and is generating value from its invested capital.

- **Return on Equity (RoE):** RoE reached 14.75% in FY2025, up from negative or low single digits in previous years. This improvement has been primarily driven by an increasing asset multiplier (leverage) rather than pure profitability, but the trend is positive.

- ***Net Profit Margin:*** The net profit margin has gradually improved, reaching 6% in FY2025, indicating progress toward sustainable profitability despite earlier losses.
- ***Asset Turnover:*** Asset turnover rose sharply to 0.86 in FY2025 from a range of 0.28–0.42 in prior years, showing more efficient use of assets to generate revenue as the business grows.
- ***Equity Multiplier:*** The equity multiplier increased from 1.15 in FY2020 to 2.99 in FY2025, highlighting greater leverage and its contribution to the improved RoE.

- **Current Ratio & Quick Ratio:** Both ratios have declined over the years (current ratio from 6.91 in FY2020 to 1.35 in FY2025; quick ratio from 2.08 to 0.13), reflecting earlier inefficiencies in working capital utilisation. However, the company has improved working capital management, bringing these ratios to a more manageable level recently.
- **Inventory Days & Days Sales Outstanding:** Inventory days dropped significantly to 173 in FY2025 from 452 in FY2020, and DSO improved to 137 from 426, demonstrating better control over inventory and receivables and addressing past challenges in managing working capital.
- **Debt Levels:** The company operated with minimal debt until FY2023, relying on strong cash reserves. Debt to equity rose to 0.89 in FY2025 as the company took on debt to support large orders, such as for BSNL, marking a strategic shift to fund growth.

The company has shown a marked improvement in profitability and operational efficiency, particularly in the last two years. While earlier years were impacted by operational losses and working capital challenges, recent trends indicate better financial management, improved leverage, and a strategic use of debt to capitalise on growth opportunities, positioning the company on a stronger, more sustainable financial footing.

Growth opportunities quantified

Telecommunication is capital intensive in both expansion and maintenance, and the industry survives economies of scale with lease room for differentiation. India being a fast-paced developing country thriving for growth in the ITES and aspiration for business hub holds immense potential and the same with rest other developing nations.

As per the annual report of Tejas Networks, the total addressable market is going to be $108 Billion (50 - wireline & 58 - wireless) by the end of 2029. Considering the potential of the company and the growth opportunities, I am optimistic that the company would be able to capture 5% of the market share in next 5 years. As of FY-25 its clocking in revenue which is ~1% of the TAM. To reach the target of 5% of the TAM, the company must grow at a CAGR of 40% for the next 5 years. It does not seem to be infeasible for Tejas Networks.

$108 Billion = ₹8,96,400 crore @ exchange rate of ₹83

5% of the TAM = ₹44,820 crore

For the sake of simplicity, I have assumed the growth of revenue to be 40% for the next 5 years.

	2026	**2027**	**2028**	**2029**	**2030**	**Comments**
Sales	11836.94	16571.72	23200.41	32480.57	45472.80	*Increasing 40% YoY*
COGS	7812.38	10937.34	15312.27	21437.18	30012.05	*60% of Sales + 10% to accommodate inflation*
Employee Cost	559.83	699.78	874.73	1093.41	1366.76	*Increasing 25% YoY*
Other Op costs	1183.69	1657.17	2320.04	3248.06	4547.28	*10% of Sales*
Fixed Assets	1741.00	2263.30	2942.29	3824.97	4972.47	*Increasing 30% YoY*
D & A	522.30	678.99	882.69	1147.49	1491.74	*30% of Fixed Assets*
EBIT	1758.74	2598.44	3810.69	5554.44	8054.97	

Forecasted EBIT is growing at 30% YoY, lets assume the growth slows down after 2023 and it increases by 10% and there on grows at 5% till perpetuity. With the cost of capital of 20% and the present value of total EBIT will be ₹20,931 crore.

PV of 2026	*PV of 2027*	*PV of 2028*	*PV of 2029*	*PV of 2030*	*PV of Terminal Value*
1465.62	1804.47	2205.26	2678.64	3237.11	9540.10

As an optimistic investor, I see a huge potential for the company and its future cash flows considering the sector it's operating in, moat is enjoying and the growth opportunities. TATA has already burnt its fingers in telecom twice once as an operator of TATA DoCoMo and Once in partnership with idea. It has chosen Tejas Networks to make a comeback in the telecom sector.

Value lies in the eyes of the beholder. Reevaluate the facts and numbers from your PoV before jumping to conclusions.

References:

- Annual reports and earnings conference call transcripts
- https://www.trade.gov/country-commercial-guides/india-information-and-communication-technology
- https://www.digitalindia.gov.in/
- https://www.investindia.gov.in/blogs/opportunities-indian-telecommunication-sector
- https://www.ibef.org/industry/telecommunications
- https://www.trai.gov.in/sites/default/files/2025-01/QPIR_01012025_0.pdf
- https://www.datainsightsmarket.com/reports/telecom-industry-in-india-13966
- https://www.pib.gov.in/PressReleasePage.aspx?PRID=2127534
- https://www.grantthornton.in/insights/articles/transformation-indias-telecommunications-through-2025/
- https://www.investindia.gov.in/sector/telecom
- https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2127534
- https://www.investindia.gov.in/sector/telecom
- https://bharat6galliance.com/bharat6G/Home/content/Objectives/Objectives
- https://telecom.economictimes.indiatimes.com/news/industry/satellite-innovations-challenge-bharatnets-future-in-rural-connectivity/121477305
- https://telecom.economictimes.indiatimes.com/news/portal-in-portal/satcom/sateliot-negotiates-to-enhance-european-military-communications-with-5g-satellite-technology/121477521?utm_source=latest_news&utm_medium=homepage