

F R O S T & S U L L I V A N

FROST & SULLIVAN BEST PRACTICES AWARD

IP HARDWARE COMMUNICATIONS ENDPOINTS
GLOBAL

Market Leadership 2019



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Background and Company Performance

Industry Challenges

Frost & Sullivan categorizes IP hardware communications endpoints as physical telephone devices that leverage IP-based signaling protocols (such as H.323 or SIP) to connect with IP communications platforms, in a hosted/cloud or a premises-based environment, over data networks. The market of IP hardware communications endpoints includes personal devices such as IP desktop phones, IP video phones, and IP wireless phones. Across the years, the IP hardware communication endpoints industry has been facing certain challenges that have constrained its overall growth potential.

First, the usage of corporate-issued IP hardware communications endpoints such as IP desktop phones and IP wireless phones has been decreasing due to the proliferation of other types of communications endpoints such as smartphones and professional headsets. While circa 92.0 percent of global business users have a hard phone at their desk, real usage of desktop phone communications has been gradually decreasing in favor of other communications endpoints and interfaces.

The rise of software-centric communications and collaboration tools has compelled more businesses to invest in other endpoint alternatives that are better suited for use with a software based solution. Today, PC USB and unified communications and collaboration (UCC) headsets are no longer considered simple accessories, but intelligent endpoints that can significantly augment a software-based communications and collaboration experience. Additionally, and as internet traffic continues to grow, businesses that do consider IP desktop phones are visibly requesting models which include Gigabit ports for the adequate support of software applications, video calls, and other web based services.

Increasing worker mobility is also affecting users' choice of communications endpoints. Frost & Sullivan estimates that there are approximately 500 Million business users who use smartphones at work, of whom circa 36 percent use these devices to perform their job functions. Since the advent of smartphones and tablets, the usage of mobile devices to conduct work has become much more pervasive. The need of IP desktop phone and smartphone integration has also grown with more businesses demanding new IP desktop phone capabilities such as proximity features to allow pairing with the mobile device call history, contacts, etc.

In general, many early-generation IP communications devices are falling way behind the new requirements of businesses and users in terms of functionality, experience, performance, and overall support. Many do not fully support the robust security and collaboration features and capabilities delivered by contemporary unified communications and collaboration offerings. IP hardware communications endpoints should, therefore, evolve to live up to businesses' digital transformation aspirations by empowering users to work more intelligently and efficiently. Moving beyond today's generic voice offerings with next-gen IP devices is fundamental to satisfy the requirements of the office of the future. Advanced features and capabilities such as smartphone integration; latest security and

encryption support; HD video; Gigabit support; WiFi connectivity; headset integration; and support for cloud calling platforms will be key going forward.

Finally, customer price sensitivity has considerably increased, resulting in many businesses searching for the best bang for the buck. This shift in purchasing behavior, coupled with fierce competition in the enterprise communications endpoints market, is compelling many vendors to introduce newer features and capabilities at lower prices, which is limiting overall revenue opportunities. Today, businesses typically expect greater phone functionality at lower price points. Organizations are also looking for innovative ways to finance new IP phone deployments and refresh their existing estate. New strategies such as product-as-a-service and subscription based payment plans are becoming key strategic differentiators within an IP desktop phone vendor portfolio. Aside from CAPEX cost declines, more businesses are looking to decrease their operational costs for deploying phones. Today, customers and partners are looking for simple, secure, and light touch ways to deploy and manage IP endpoints.

At times of intense challenges, market share leadership provides a vendor with competitive advantages in terms of visibility, positioning for sales and partnership opportunities, and overall ability to thrive. Market share leadership status validates that the developer has adapted its offerings and strategies to address demanding industry conditions. Customers evaluating IP hardware communications endpoints frequently choose the market leader as they perceive it as the most reliable and trustworthy partner. Increased visibility builds company awareness and helps position product portfolios more successfully among decision makers and end users. Further, a market share leader is often more capable of coping with evolving industry trends and handling the competitive pressures of the market due to greater resources, accumulated experience and better-developed partner support strategies.

Market Leadership of Cisco Systems

Frost & Sullivan is pleased to recognize Cisco Systems for its outstanding performance in the enterprise IP hardware communications endpoints market. Cisco has received this award based on the company's relentless pursuit of technology excellence in IP hardware communications endpoints such as IP desktop phones, IP video phones, and IP wireless phones. In 2018 Cisco Systems achieved global market leadership in:

- IP desktop phone shipment, with a market share of 24.0 percent, 9.5 percentage points ahead of the closest contender.
- IP video phone shipment (a sub-segment of the IP desktop phone market) with a market share of 26.6 percent, 5.8 percentage points ahead of the closest contender.
- IP wireless phone shipment, with a market share of 40.3 percent, 21.2 percentage points ahead of the closest contender.
- Total IP hardware communications endpoints revenue, with a market share of 31.2 percent, 20.6 percentage points ahead of the closest contender.

In a market that is evolving at a fast pace, Cisco has maintained its leadership position through growth strategy and implementation excellence, brand strength, technology leverage, as well as through delivering superior customer service experiences.

Growth Strategy Excellence

Cisco has always demonstrated the ability to relentlessly identify, prioritize, and pursue emerging growth opportunities. The company has not only been constantly refreshing its IP hardware communications endpoints portfolio with new models and firmware releases to address evolving market trends, but has also spearheaded the shift towards software-based communications and collaboration services.

In the IP hardware communications endpoints realm, in particular, Cisco has considerably enhanced its desktop and wireless devices to address important customer needs. For occasional-to-light usage in lobbies, hallways, elevators, and guest rooms, the company offers the cost-effective and value-oriented Cisco Unified SIP Phones 3900 Series and Cisco Unified IP Phones 6900 Series. For general business usage with affordability in mind, Cisco offers the full-featured, high-fidelity and secure Cisco IP Phone 6800 and 7800 Series. Last but not least, for advanced enterprise communications and collaboration requirements, Cisco offers its next-generation IP Phone 8800 Series portfolio, which includes high definition (HD) video-capabilities (via video phones); integration with personal mobile devices on select models; support for in-campus mobile workers (via wireless phones); support for audio conferencing services (via a tabletop audio conference phone); large color displays; and advanced voice over IP (VoIP) features. The company also recently worked with the American Council for the Blind (ACB) to introduce new text-to-speech accessibility features to its Cisco IP Phone 8800 Series range, to help organizations meet inclusion obligations and remove barriers to enabling visually impaired users to use their office phone. This work was recognized by the FCC with the Chairman's Awards for Advancement and Accessibility (Chairman's AAA).

Within the last couple of years, Cisco also complemented its IP hardware communications endpoints by announcing its Cisco IP DECT 6800 Series, made up of the Cisco IP DECT 210 Multi-Cell base station and the Cisco IP DECT Phone 6825 handset; and launching its own line of professional headsets under the Cisco Headset 500 Series composed of six different corded and cordless models. Cisco Headsets integrate with Cisco IP Phones and soft clients to create simple user experiences – e.g. wizards to set up and configure a headset connected to a phone, menu options to customize a headset audio setting, etc.

While Cisco IP hardware communications endpoints can be deployed with the vendor's on-premises and cloud solutions, Cisco also offers multiplatform (MPP) firmware versions of most of its devices to integrate with approved third-party UCaaS providers. While the MPP portfolio is an emerging business for Cisco, the company is expected to see healthy uptake within both the Cisco BoradWorks and Cisco Webex Calling customer base.

In the IP communication software client market, on the other hand, Cisco pioneered advanced unified communications clients and various collaborative applications intended to make teamwork more efficient. Today, Cisco's portfolio of software communications and

collaboration endpoints includes Cisco Jabber Unified Communications Client, the company's UCC software endpoint; and Cisco Webex Teams, the company's flagship team collaboration service purpose-built to help teams stay more connected and work better. Today, Cisco Webex Teams brings together messaging, file sharing, video meetings, white boarding, calling, and other tools under the same product umbrella. Cisco's software endpoints complement its hardware devices to provide more options to businesses and more holistically address evolving user needs.

Whether deployed with premises-based communications platforms or hosted IP communications/UCC services, Cisco's endpoint portfolio features diversified capabilities to address the distinct user functions within different customer organizations, departments, and lines of business.

Implementation Excellence

Cisco's implementation excellence in the IP communications endpoints space is evidenced by the company's ownership of the largest installed base of IP hard and soft communications endpoints in the world. Since the early days of the VoIP market in 1997 up until now, Cisco Systems has shipped over 100 million IP endpoints to more than 200,000 customers worldwide, with 95 percent plus penetration in Fortune 500 companies. Key tenets of the company's successful implementation strategy include:

- the execution of efficient technology migration programs including the trade-in of eligible products to receive credit toward the purchase of new Cisco equipment
- the introduction of attractive software subscription plans to upgrade customers to the latest software communications releases
- the continuous refresh of the company's entire IP hardware and software communications endpoints portfolio
- the delivery of high-quality, superior-design, and feature-rich endpoints
- the extension of the IP endpoint offerings to different customer segments (e.g., by size, vertical industry), technology environments and geographical regions.

Channel partners have also helped to grow Cisco's extensive line of IP hardware communications endpoints. One of the largest partner ecosystems in the world, Cisco's reseller channel helps ensure consistent global sales, extensive service offerings and sustained innovation.

Brand Strength

Cisco is one of the strongest enterprise communications and collaboration brands in the world. The company has always invested considerable time and resources to share its vision, direction, and overall strategy, gaining the trust and confidence of business customers and partners around the world. Today's Cisco's IP hardware communications endpoints brand is synonymous with high technology reliability, advanced functionality, and industry innovation.

Cisco has always focused its efforts on promoting its brand as “the IP communications and collaboration vendor of choice” and has thus achieved one of the highest mind shares among enterprise decision makers around the world. Today, hundreds of thousands of customers trust Cisco’s brand for their enterprise communications. Cisco’s solid brand reputation over the years has granted it the well-deserved recognition as one of the key developers associated with best-of-breed data networking solutions, IP communication systems, and next-generation unified communications and collaboration solutions. This is why Cisco is the technology partner of choice for most of the world’s top service providers, independent software developers, resellers and enterprises alike.

Technology Leverage

Cisco continues to raise the bar in terms of brand strength by leading industry innovation in key ICT areas such as cloud communications and collaboration, Internet of Things (IoT), data analytics, machine learning, artificial intelligence, and cognitive collaboration, among others. The company has not only constantly evolved its commercial business according to main industry trends, but has always managed to position itself as one of the leading innovative companies shaping the enterprise communications and collaboration industry.

As various new trends emerge in the communications and collaboration market and shape the ever-changing competitive landscape, Cisco’s response to these trends is to embrace technology innovation, striving to address the evolving requirements of businesses around the world. Cisco’s strong commitment to customer-centric innovation has been key to the vendor’s concentrating its efforts on enabling flexible deployment and consumption of UCC solutions. The company puts considerable R&D resources into its products and technologies, continually creating competitive differentiators in the enterprise communications and collaboration marketplace.

The ultimate objective of Cisco’s never-ceasing innovation is to offer customers a broad range of choices and the most complete and integrated communications and collaboration experience. Today, no one can deny that Cisco’s name is synonymous with innovation and technological advancements in the enterprise communications market.

Customer Service Experience

The Cisco Worldwide Customer Service organization is fully dedicated to serving Cisco customers across geographies with high standards of support. Highly trained and certified professionals provide streamlined assistance across the entire purchase-to-payment cycle. Technical support is offered via telephone queue, e-mail, online via interactive two-way video and web chat, through web forums, as well as in person in the field.

One of the company’s main goals is to create the most innovative, Internet-based customer service organization in the world. For this, Cisco provides customers with different online tools, e-learning modules, and downloadable material designed to not only address customer needs and requirements, but to also educate them about the various options available.

For order taking, the Cisco Internet Commerce Applications allow customers to easily and rapidly place orders, track them, and monitor the status online, avoiding complexities and streamlining product ordering. Finally, the company has conducted an Annual Customer Satisfaction Survey since 1992 designed to assess customers' various needs and increase customer satisfaction levels. Customers appreciate the company's proactive approach, which helps address their needs and challenges effectively and in a timely manner.

Conclusion

Cisco's robust growth strategy and implementation effectiveness, its differentiated and innovative portfolio, its tight customer focus, and its strong brand recognition in the IP hardware communications endpoints market are among the factors that have helped the company to excel in this market and stand out from the competition.

With its strong overall performance, Cisco has achieved a leadership position in the IP hardware communications endpoints market with a revenue market share of 31.2 percent, and Frost & Sullivan is proud to bestow the 2019 Market Leadership Award.

Significance of Market Leadership

Ultimately, growth in any organization depends on customers purchasing from a company, and then making the decision to return time and again. Loyal customers become brand advocates, brand advocates recruit new customers, and the company grows, and then attains market leadership. To achieve and maintain market leadership, an organization must strive to be best in class in 3 key areas: understanding demand, nurturing the brand, and differentiating from the competition.



Understanding Market Leadership

Driving demand, strengthening the brand, and differentiating from the competition all play critical roles in a company's path to market leadership. This three-fold focus, however, is only the beginning of the journey and must be complemented by an equally rigorous focus on the customer experience. Organizations that demonstrate best practices, therefore, commit to the customer at each stage of the buying cycle and continue to nurture the relationship once the customer has made a purchase. In this way, they build a loyal, ever-growing customer base and methodically add to their market share.

Key Performance Criteria

For the Market Leadership Award, Frost & Sullivan Analysts focused on specific criteria to determine the areas of performance excellence that led to the company's leadership position. The criteria include (although are not limited to) the following:

Criterion	Requirement
Growth Strategy Excellence	There is a demonstrated ability to consistently identify, prioritize, and pursue emerging growth opportunities.
Implementation Excellence	Processes support the efficient and consistent implementation of tactics designed to support the strategy.
Brand Strength	The brand is respected, recognized, and remembered.
Product Quality	The product or service receives high marks for performance, functionality, and reliability at every stage of the life cycle.
Product Differentiation	The product or service has carved out a market niche, whether based on price, quality, or uniqueness of offering (or some combination of the three) that another company cannot easily duplicate.
Technology Leverage	There is a commitment to incorporating leading-edge technologies into product offerings for greater product performance and value.
Price/Performance Value	Products or services offer the best value for the price, compared to similar offerings in the market.
Customer Purchase Experience	Customers feel they are buying the optimal solution that addresses both their unique needs and their unique constraints.
Customer Ownership Experience	Customers are proud to own the company's product or service, and have a positive experience throughout the life of the product or service.
Customer Service Experience	Customer service is accessible, fast, stress-free, and of high quality.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate award candidates and assess their fit with best practices criteria. The reputation and integrity of the awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify award recipient candidates from around the world	• Conduct in-depth industry research • Identify emerging industries • Scan multiple regions	Pipeline of candidates that potentially meet all best practices criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best practices criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	• Confirm best practices criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best practices positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized award candidates
6 Conduct global industry review	Build consensus on award candidates' eligibility	• Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible award candidates, representing success stories worldwide
7 Perform quality check	Develop official award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best practices award recipient	• Review analysis with panel • Build consensus • Select recipient	Decision on which company performs best against all best practices criteria
9 Communicate recognition	Inform award recipient of award recognition	• Present award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of award and plan for how recipient can use the award to enhance the brand
10 Take strategic action	Upon licensing, company is able to share award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess award's role in strategic planning	Widespread awareness of recipient's award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of the research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best practices models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit <http://www.frost.com>.