

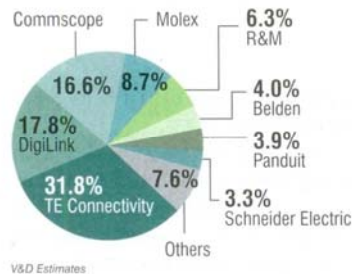


Technology uptake is maturing more than ever before and businesses are increasing their dependence on technology day by day. The demand of structured cabling solutions is increasing which is now the inseparable part of bandwidth-hungry applications, internet-led applications such as VoIP and video conferencing, other IP applications, high computing business needs, and virtualization.

The Indian structured cabling market since 2007 has been going through ups and downs. According to V&D estimates structured cabling market stood at ₹1,167 crore in 2008, and then there was a dip due to global recession by 25 and 15% in 2009 and 2010, respectively. The market size was ₹950 crore in 2009 and ₹900 crore in 2010. However since 2010 the market has been recuperating;

MARKET SHARE

Total Market Size: ₹1,382 crore (FY 2010-11)



the industry bigwigs are confident of the exponential growth in this networking industry. The year 2010 has been better than 2009 as the industry revived from recession. Another important factor of gaining higher revenue in 2010 was because several companies resumed

projects which were previously halted due to global financial meltdown.

Structured cabling market will have a huge growth due to the stability in economy. There was consistency in demand and supply because the raw materials did not fluctuate frequently in 2010 though raw material prices remained high. Infrastructural expansion in India is increasing which has resulted in exponential growth.

Market Performance

Thanks to the data explosion, massive demand for bandwidth-hungry applications, and colossal growth of the Indian economy, structured cabling market has maintained a smooth journey since 2005 though it was slightly hit in 2009-10 because of recession. The market has not betrayed vendors' expectations in this financial year, rather it has lived up to



Structured Cabling

the expectations of vendors who were still optimistic during recession. This fiscal 2010-11, the market size is poised at ₹1,382 crore. It has registered a growth of 24.7%. In FY 2010 the revenue was ₹1,108 crore.

TE Connectivity (Prior, Tyco Electronics) is the market leader in India, with its revenue clocking ₹440 crore in FY 2010-11; which is a compounded revenue of Tyco Electronics and ADC Telecommunication. FY 2011 has been one of the significant years for TE Connectivity with the acquisition of ADC Telecommunications in December 2010. Last year in 2010, revenue of Tyco Electronics and ADC was ₹272 crore and ₹53 crore, respectively. TE Connectivity's impressive growth rate has risen to 35.4% with a market share of 31.8%.

Since 2008, DigiLink's revenue was ₹215 crore; and in FY 10-11 it has a decent growth of ₹246 crore. It has remained in #2 position this year as well. Its growth rate is 14.4% and the market share is 17.8%. In May 2011, Schneider Electric completed the acquisition of DigiLink's structured cabling business. This move is very instrumental to DigiLink as it will now be positioned as a global brand which had more presence in India and Middle East before. Tyco Electronics and DigiLink had been glued to their positions as #1 and #2 player in the market from past 4 years. But next year would be very interesting to both TE Connectivity and DigiLink (as part of Schneider Electric) as they are the contenders for the position of #1 market leader in India.

Commscope Systemax too has maintained its #3 position in Indian market. It has recuperated and has accelerated its revenue to ₹230 crore in FY 2011. It has registered a y-o-y growth rate of 21.1% along with a market share of 16.6%. In FY 2010 its revenue declined to ₹190 crore as against ₹221 crore in FY 2009.

Molex Premise Networks is placed at #4 position. The company has increased its revenue from ₹100 crore in FY 2010 to ₹120 crore in FY 2011. It has indicated

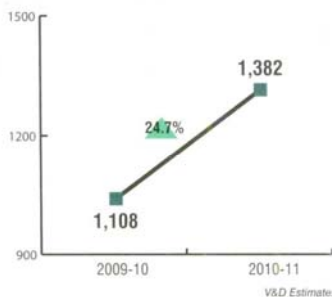
Top Players (FY 2010-11)

Players	Revenue (in ₹crore)		Change (%)
	FY '10-11	FY '09-10	
TE Connectivity	440	325	35.4
DigiLink	246	215	14.4
Commscope	230	190	21.1
Molex	120	100	20.0
R&M	87	80	8.8
Belden	55	41	34.1
Panduit	54	38	42.1
Schneider Electric	45	35	28.6
Others	105	84	25.0
Total	1,382	1,108	24.7

*Others include Sterlite Technologies, Belkin, Sigma Byte, Siemon, Hubbel, 3M, Leviton, Dax Networks

V&D Estimates

MARKET SIZE (in ₹crore)



a y-o-y growth rate of 21.1%. Its Indian market share is 8.7%.

Reichle & De-Massari AG (R&M) is positioned at #5. It has clocked its revenue at ₹87 crore in this fiscal, while the previous year's revenue was ₹80 crore. R&M's growth rate is 8.8% and its Indian market share is 6.3%. R&M had a comparatively good year in FY 2010 as its revenue augmented to ₹80 crore from ₹66 crore in FY 2009.

CDT Belden has witnessed a growth of ₹55 crore revenue in this FY with a y-o-y growth rate of 34.1%, while its previous FY revenue was ₹41 crore. CDT Belden has 4% market share in India.

Meanwhile Panduit has accounted an impressive y-o-y growth rate of 42.1% in this fiscal. Its revenue in this FY has been ₹54 crore and in 2010 the revenue was ₹38 crore. Presently, the market share of Panduit is 3.9%.

Schneider Electric has grown by 28.6% in FY 2011. The company depicts a revenue of ₹45 crore in this fiscal; its revenue in previous year was ₹35 crore. In this fiscal year it had a market share of 3.3%; since May 2011, its market share has increased to 19.5% with the acquisition of DigiLink. Forthcoming years are very promising for Schneider Electric in the cabling business.

Other cabling vendors viz, Sterlite Technologies, Belkin, Sigma Byte, Siemon, Hubbel, 3M, Leviton and a few others who are operating in India have collectively registered a growth rate of 25% and their market share is 7.6%. They have recorded a revenue of ₹105 crore in FY 2011. Amongst them, Belkin has stepped up to a revenue of ₹14 crore. It began operations in May 2010.

Dax Networks' passive cabling revenue alone is pepped up at ₹29 crore. Dax Networks is also very active in different segments including routers, switches, wireless, LAN, and voice solutions. Its

Future Plans of Top Players	
Companies	Strategies/Focus Area FY 2011-12
TE Connectivity–Tyco Electronics + ADC Krone	Gearing up to meet the networking needs of the future, expect to add more people and offices in B and C Class cities, train more network engineers to address cabling needs.
DigiLink (Now a part of Schneider Electric)	The next year for DigiLink brand is very exciting, as it will be positioned globally due to the acquisition by Schneider Electric. It will have new synergy in data center solutions.
Belden	Will realigning internal sources based on the needs of the market to address and expand the sales and pre-sales requirements. This will benefit the teams to have a focus area and continue to grow on the sales discipline, which has been a key element at Belden.
Molex	Expecting more growth in Category 6A solutions and Intelligent Networking solutions. Will focus on new technology driven products like Molex Intelligent Infrastructure Management, data center solutions, FTTH/ FTTD solutions
3M	3M has invested in manpower in sales, technical and infrastructure in existing manufacturing facility at Pondicherry. Will increasing presence in Metros. Will hire national distributors. In final stages of setting up innovation centers the business grows, intend to invest in resources and R&D locally in India
Dax Networks	To meet the growing demand of the market recently introduced field installable fiber connectors, ADSS cables in fiber, semi-intelligent Copper patch panels, Attenuators and Unarmored copper cables. Will focus more on SME space this year
Commscope	Will hire best partners who are well trained. Will accelerate growth and offer customers some unique solutions to roll out and manage their cabling infrastructure.
Panduit	Will increase headcount to 20 people. To help customers to optimize the physical infrastructure through simplification, agility and operational efficiency. Panduit's Unified Physical Infrastructure (UPI) based solutions form the unique selling point (USP) of the company which gives enterprises the capabilities to connect, manage and automate communications, computing, power, control and security systems.
Hubbel	Will shortly hire channel partners. Have recently partnered with Westcon Group
Leviton	Short-term goal is to draw more customers in India and long-term goal to reiterate its position of being a thought leader. Will increase the headcount. Will lay more focus on high-end solution.
R&M	To tap tier -2 cities which are exhibiting a lot of potential. To increase profitable partnerships in these regions. Will increase training programs in order to increase the number of qualified installers across India.
Sigma Byte	It plans to provide complete low-voltage IT infrastructure solutions to its customer ie, structured cabling, audio visual solution, physical safety & security solution and wireless planning and implementation services. To expand Enterprise AV Solutions offerings in more regions

overall revenue of these divisions is ₹110 crore. Leviton has registered a revenue of ₹31 crore in FY 2011. It forayed into Indian market in 2009. Sigma Byte has registered its revenue at ₹50 crore in FY 2011.

Cabling Vendors

TE Connectivity (Prior, Tyco Electronics) performed better in 2010. Tyco Electronics rebranded as TE Connectivity on

March 25, 2011. In 2010, TE acquired ADC Krone, a leading global provider of connectivity products for wireline, wireless, cable, broadcast and enterprise networks. The addition of ADC expanded Tyco Electronics' network solutions offering and added Distributed Antenna System (DAS) products for the wireless market. The company has enhanced geographical reach through 3 national distributors—Compuage

Infocom, Ingram Micro and Redington India—12 regional distributors and over 140 ND&I (Netconnect Design and Installation Contractors). With the result of ADC acquisition the gap between TE and its closest competitor has increased significantly, consolidating TE's market leading position in India. TE's key projects are IBM, Andhra Pradesh rural electrification project, Vodafone, Etisalat, Aegis, et al.

DigiLink (now a part of Schneider Electric) retains the strength in verticals like government, financial institutions, education and control networking. The other important vertical which continued to patronize the brand are SOHO, Small and Medium Enterprise and channels. Since May 13, 2011 DigiLink's structured cabling business has been transferred to energy conservation MNC, Schneider Electric. With this acquisition, the duo are geared to target IT/ ITeS, BFSI, Telecom and Manufacturing along with Hospitality, Government/ PSU, Institutions and Retail verticals, which have been DigiLink's forte. The next year 2012 is very exciting for DigiLink's brand as it will not only be positioned well in Indian business but also globally. This now gets accompanied by supplementing products such as lighting controls, UPS as well as racks. It now has a new synergy in data center solutions. Its projects in FY 2011 in data centers space include CBI – DC&DR – 2000 sq ft, UBI – DC&DR, Dena Bank – DC&DR and NICSI – DC. The other key projects have been

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R-APDRP (9 states), UID (Maharashtra), E-Court (All India), e-Panchayat, Mumbai International Airport, Maharashtra Gramin Bank, Sarva Shiksha Abhiyan (Nine States), SBI Life and NSEIT.

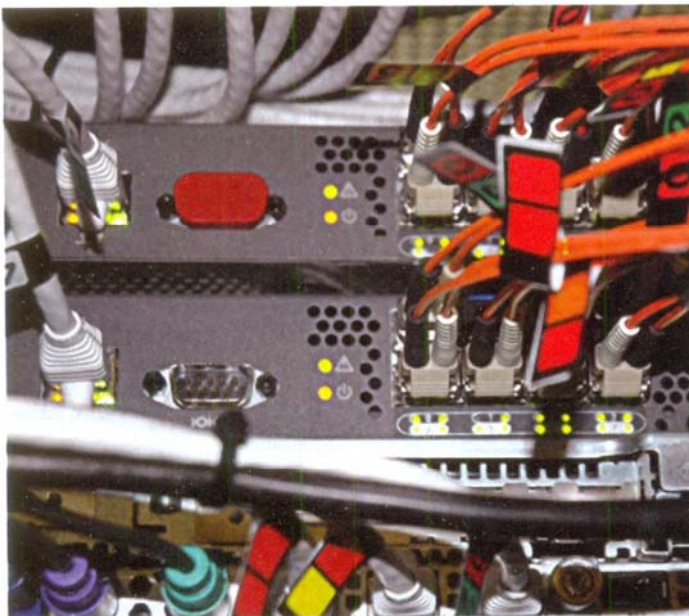
On January 14th, 2011 Carlyle Group completed the acquisition of Commscope Inc. Commscope presently operates under 3 prominent brands— Andrew brand provides carrier wireless solutions, Systemax brand and Uniprise

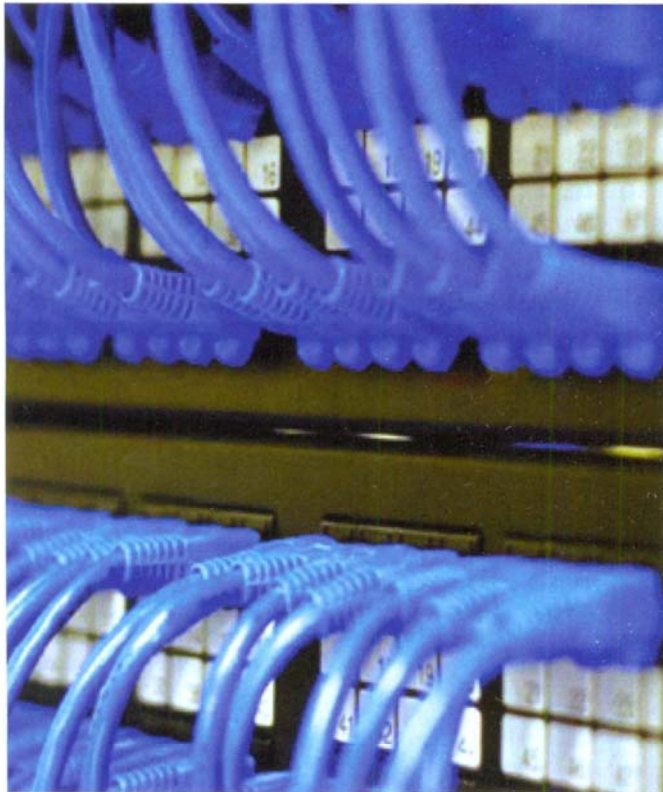
brands offer enterprise solutions. In India, Commscope is scouting for channel partners. It heeds more attention to training in order to ensure that the partners are best trained. It intends to accelerate growth and offer the customers some unique solutions to roll out and manage their cabling infrastructure. CommScope makes a shift to application based systems. It has taken a different approach, it intends to empower users to make changes in planning, deployments and re-deployments.

Molex has made inroads into the intelligent cabling network and has introduced the MIIM 1.7, an intelligent solution for passive cabling. Molex services all the verticals, however it has seen huge growth in manufacturing, government, PSUs, BFSI, industrial, education and telecom. IT/ITeS is still sluggish. Telecom and automotive have been major drivers last year. Molex will concentrate on technology and promote their MIIM 1.7. Molex's key projects include Axis Bank, Lovely Professional University in Ludhiana, India Infoline, Tata Motor Finance, Jackson Engineers, Global Hospital, Mahindra and Mahindra, NIT Agartala amongst others.

A Swiss cabling vendor, R&M has been operating in India since 2008, R&M offers an extensive range of cabling solutions that caters to most sectors. The company has recently launched Single Circuit Management (SCM) fiber optic product range, Optical Distribution Frame (ODF) alongside the SCM system. It believes that there is a huge opportunity for cabling in industrial environments and healthcare segment. IT/ITeS, manufacturing and telecom showed significant growth over last year. Other verticals like BFSI, pharmaceuticals, hospitality and automobiles also contributed to their growth. R&M has also offered specific cabling solutions for new verticals like the energy.

Belden acquired Trapeze and later sold it to Juniper Networks. And at the same period it acquired GarrettCom and Thomas & Betts Communications Products Business, this acquisition strength-





Cabling Approach

Advanced cabling systems are now being demanded in India, newer technologies are also being adopted in the country. There is a huge acceptance of Cat 6A deployments which meet higher bandwidth needs in data centers as well as at work stations. The SMB, residential and commercial complexes are also the key drivers for growth. There has been a shift towards converged networks and fiber. In new townships, enterprise and telcos are getting intertwined to offer the best converged network solutions to the end users. Data center implementations have gathered huge momentum. FTTX/ FTTH is another major driver for structured cabling business in the country. Higher performing connecting devices replaced legacy supplies. A few players are offering choices in products/solutions amongst good, better and best standards based solutions, and allow the customer to decide what they need for networks viz, TE Connectivity, Molex, DigiLink+Schneider Electric, Dax Network.

Data centers in India are booming. There has been a growing need to deploy faster and secure cabling systems in data centers as the backbone and even horizontal cabling. The boom in data centers has also led to increased deployment of high-end systems. Another trend has been of the technology buyer to shift towards addressing their large scale and vast location applications with use of Intelligent Physical Layer Management Solution (IPLMS). Increasing security requirements for sophisticated networks crave for intelligent networks which can locate and identify physical intrusion. Collaboration via unified communications and video is also driving the cabling market to handle bandwidth hungry application.

Customers are demanding intelligent cabling solutions because traditional network management tools offer limited value because information through these is collected manually. The manual process is time consuming,

ens Belden's position as an end-to-end solution provider within the broadband/CAT 5, security, and audio/video markets. The company intends to re-align internal sources based on the needs of the market to address and expand the sales and pre-sales requirements. This will benefit the teams to have a focus area and grow on the sales discipline, which has been a key element at Belden. Last year, it focused on verticals including healthcare, IT/ITES, financial services, hospitality and infrastructure along with some corporates.

Dax Networks key projects include Directorate of Technical Education, SREI Infrastructure, Rajasthan Schools, Salem Steel Plant, Maharashtra LAN, Manapuram, BSNL GPON installation on

fiber, Kalyan Jewellery, Sai Info Systems etc. To meet the growing demand of the market, Dax Networks has launched field installable fiber connectors and ADSS cables in fiber category, semi-intelligent copper patch panels, attenuators and unarmored copper cables.

There is a huge acceptance of Cat 6A deployments which meet higher bandwidth needs in data centers as well as at work stations

sometimes inaccurate and can prove to be costly in terms of actual money, man hours and network downtime. In intelligent cabling solutions, the automatic log reports alarms and alerts generated by the system in case of changes and/or disruptions in the network, allows network managers to detect and trouble shoot problems much faster. It naturally follows that the more work-streams and processes that are aligned to Intelligent Cabling System, the more savings can be realized thus creating better RoI.

Concerns

Due to the expansion in the networking needs across verticals, the structured cabling market is also expanding at a faster pace. Yet it has to deal with a few hurdles—firstly, the market has a huge dearth of skilled labor in India. India has failed to meet the demand of enough skilled engineers to install, trouble-shoot, design and warrant the networks. A few passive cabling vendors are offering globally accredited training sessions in recent years. Secondly, volatile pricing of copper which impacts business more regularly now

As demand for speed and bandwidth increases there is an increasingly parallel topology or even mesh topology will evolve

than before. Frequent price revisions for copper based products, across vendors, are almost a norm now. Fluctuations in copper price pose a challenge for the customer to plan their budgets. These have doubled over the past 1 year and gone to their peak values. Lastly, cabling industry in India does not have any set guidelines. It follows TIA/EIA 568B and other ISO standards. Structured cabling market is extremely fragmented and competitive. It will push prices down. Cable price is derived from competition, copper rated at MCX, LME and exchange rate fluctuations. Industry is also facing problems in shipment.

R&D

Structured cabling market in India is out and out an import-oriented business. Major chunk of these vendors have both manufacturing as well as research and development units outside India. Structured cabling market's spend on R&D activities in India is relatively low. Just a handful of cabling vendors have R&D activities happening out of India. Very few companies have a manufacturing unit in India viz, DigiLink, Dax networks. India has a long way to go to be considered as a R&D hub in cabling market.

Future Prospects

In structured cabling market, we saw some significant acquisitions namely, Tyco Electronics-ADC Krone and Schneider Electric-DigiLink. Though a few players have strengthened their positions and they will influence the market, yet consolidation of the market is far away. The market is now at an interesting phase; the competition will get bigger in India as new players have come in viz, 3M, Belden, Leviton. Besides, each of the structured cabling vendors have different solutions. Players operating since the past 5 years have quite come to terms with the dynamics of the Indian market and are introducing various strategies to cash on RoI such as R&M, Molex, Hubbel, Commscope, TE Connectivity, etc. They have targeted newer verticals and tier-2 and 3 cities. Until recently the key verticals for structured cabling segments remained IT/IteS, data centers, BFSI, telecom, automotive and infrastructural but presently there is a huge uptake and more opportunities are opening up in various other verticals including Government, Manufacturing, Residential, Retail, Hospitality, Educational, SOHO, SMB, and Oil and gas sector. The rate of adoption of new technologies will continue to increase. As demand for speed and bandwidth increases there is an increasingly parallel topology or even mesh topology will evolve.

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