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The Indian structured cabling market is among the biggest beneficiaries of the country's digitalisation drive. CRN India speaks to leading vendors and partners to get deeper insights of the market

## STRUCTURED CABLING: THE BACKBONE OF IT INFRASTRUCTURE

states, "Although copper cable is currently more popular and much more predominant in structured cabling systems and networks, fibre is quickly gaining momentum. Fiber-optic cable is favoured for applications that need high bandwidth, long distances, and complete immunity to electrical interference. Fibre is ideal for high data-rate systems such as Gigabit Ethernet, FDDI, multimedia, ATM, SONET, fibre channel, or any other network that require the transfer of large, bandwidth-consuming data files, particularly over long distances. Cat7 is the only cabling standard in copper that supports high-speed data transfers. But there is one limitation in Cat 7 over fibre. With fibre, you can connect two end-points within a distance of 45 km, but while using copper you can go only up to 100 metres. So, if you are planning to build a MAN, then there is no option other than going for fibre."

Overall, telecom, IT, ITeS, and government sectors are expected to be the major contributors to the growth of structured cabling business during the next 12 months. "The underlying IT of enterprises is also changing and so are the IT delivery models. There has been a growing focus on concepts like cloud computing, IP-based networks, virtualisation, and software-defined networking. All this is driving the need to have more intelligent and responsive network infrastructure and structured cabling solutions would be expected to keep pace," says Rao.

"We now see that applications and computing devices are demanding greater performance. I think we are on the edge of a frontier for copper and a transition to fibre, which is really exciting. More and more wireless technologies are demanding higher performance in the underlying backhaul network, in many cases demanding more power. We are excited about delivery of power over Ethernet (PoE), the high-quality controls and the high bandwidth that those technologies require. I think it does demand a lot more in the sophistication of modern wiring technologies for supporting the move to wireless," says Gupta.



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NISHANT GUPTA,  
MD, RADIANT INFO SOLUTION

### New avenues

In terms of technology, the Indian cabling market trends are at par with the global market and may, in some cases, even surpass international trends. More and more ITeS installations, knowledge centres, BPOs with a high number of MACs, and their need for tracking IT in real time, huge deployment of intelligent cabling or physical layer management (PLM), are leading to a sizeable growth in the adoption of this technology. Although it is still small in terms of the number of deployments, intelligent cabling is finding wider acceptance.

On the government front, the National Optical Fiber Network (NOFN) initiative, for which Bharat Broadband Nigam (BBNL), has been assigned to connect 2,50,000 village panchayats with high-speed broadband, could lead a range of direct as well as indirect business for the structured cabling players. The upcoming roll-out of new 5G network will also contribute to the

growth, as will the commissioning of new data centre projects.

"Intelligent cabling is an attractive proposition for us, as it promises to reduce the cost of network ownership by solving issues like unplanned downtime, inefficient manual moves, adds and changes, redundant ports, inaccurate records, etc. It increases network management efficiency and network security considerably. Today, both fibre and copper have major advances in bandwidth capability to support the next generation of LANs at 10G," informs Gupta.

"As floodgates of data are expected to open on various fronts, a new set of challenges and opportunities are bound to emerge. 2019 may be the year for structured cabling players to strategise for the growth ahead," points out Nautiyal.

### Fibre is the future

Fibre optic is the dominant type of cable for connecting separate buildings on campuses and connecting floor distributors to building distributors. Because of its high cost on the LAN equipment side, it has been limited to the backbone. If we compare the cost of a fibre port on the active equipment and that of gigabit copper port on the active equipment, fibre is almost six times higher. Although, a large section of integrators agree to this viewpoint that structured cabling will continue to contribute 10-15 per cent y-o-y growth, the emergence of wireless technologies into the mainstream may bring some negative impact on the cabling industry.

Structured cabling and connectivity vendors see wireless as a logical adjunct to the wired network, and many have expanded their product offerings with end-to-end wireless systems. A significant market trend in India is that providers of wiring infrastructure have expanded their offerings as widespread wireless LAN deployment appears inevitable. Many are starting out with distributed wireless systems that are likely to evolve as technology continues to evolve.

"On one hand, the market seems to be shrinking, particularly for copper SCS due to technological revolutions



like cloud, data centre, hyper data centre and 5G revolution, etc; at the same time, the industry is offering offset for growth. Fibre is going to be the big future of this industry," opines Rao.

However, the path to fibre for SIs is not a cakewalk. Optical fibre is more expensive to install, and requires a greater understanding than copper wiring, but it can pay for itself by creating opportunities to cut other costs, ensuring better connections, and future-proofing the structured cabling system.

"Accommodating new convergent technologies is an everyday challenge for SIs and network cabling companies. Whether you have an analog system or a top-of-the-line optical fibre network, it's important to understand the science behind the technology," highlights Collur, one of the veterans in structured cabling business.

"Larger enterprises are investing and adapting fibre solutions due to new-age and bandwidth-hungry applications. These specialised links across main switches and specialised servers or SANs cannot be sufficed by copper solutions. We have enough competition with vendors selling cable

connectors and jacks. When we speak about intelligence solutions and data centre efficiency, we hold the edge," Gupta emphasises.

### Skills for handling next-gen networks

It is becoming a widely known fact in the ICT cabling industry that an end-to-end infrastructure solution is the right way forward. However historically, many still focus only on cable performance when making infrastructure decisions. Clients and their solution providers today are more interested in the category of cabling that's going to be put in place. However, the importance of installation practices and implementation of the right test procedures as significant contributors to the end-to-end infrastructure performance still finds few takers.

The proper installation and integration of ICT cabling infrastructure is required, more to support the ever demanding needs of the enterprise cabling infrastructure of today and beyond. Hence, it becomes a more daunting task than ever before and more, so due to the work culture of giving adherence to standards and industry

best practices taking a back seat.

"It is not only the challenge of the complexity of infrastructure, but the paucity of quality installers that ensures the implementation of industry best practices. The need, therefore, is to have quality ICT designers, managers and installers who understand and practice, rather than just keep doing the traditional way. The ICT industry, therefore, needs programs that aim to address these challenges and equip professionals with the right tools in terms of knowledge about the ICT cabling technology," suggests Desai.

There is a new way of thinking for smaller players to emerge. It's no longer about boxes, but about ports and software. Players are looking more and more at providing customised end-to-end cabling solutions. With 10G over UTP, PoE and intelligent cabling technologies gaining acceptance, cabling installations are becoming more skill-based. Following the right installation practices and adherence to standards is important when it comes to new applications that require higher data rate transfers. In order to stay ahead in the race, the industry has given priority to staff retention and training.