

AROONA STAR

10 Gb/s transmissions and more over a multi-mode infrastructure, without having to replace the fibers

Increases the range of a 10+ Gb/s link on conventional multimode fiber up to 10 km [6.2 mi] without deployment of new optical fiber



The majority of fibers deployed in local networks are standard multi-mode optical fibers (OMx, 62.5/125 μm or 50/125 μm). These fibers are limited in bandwidth. Depending on the topology and lengths of the cables deployed in the network architectures, the transmitted bit rates are limited to 1 Gb/s or even 100 Mb/s.

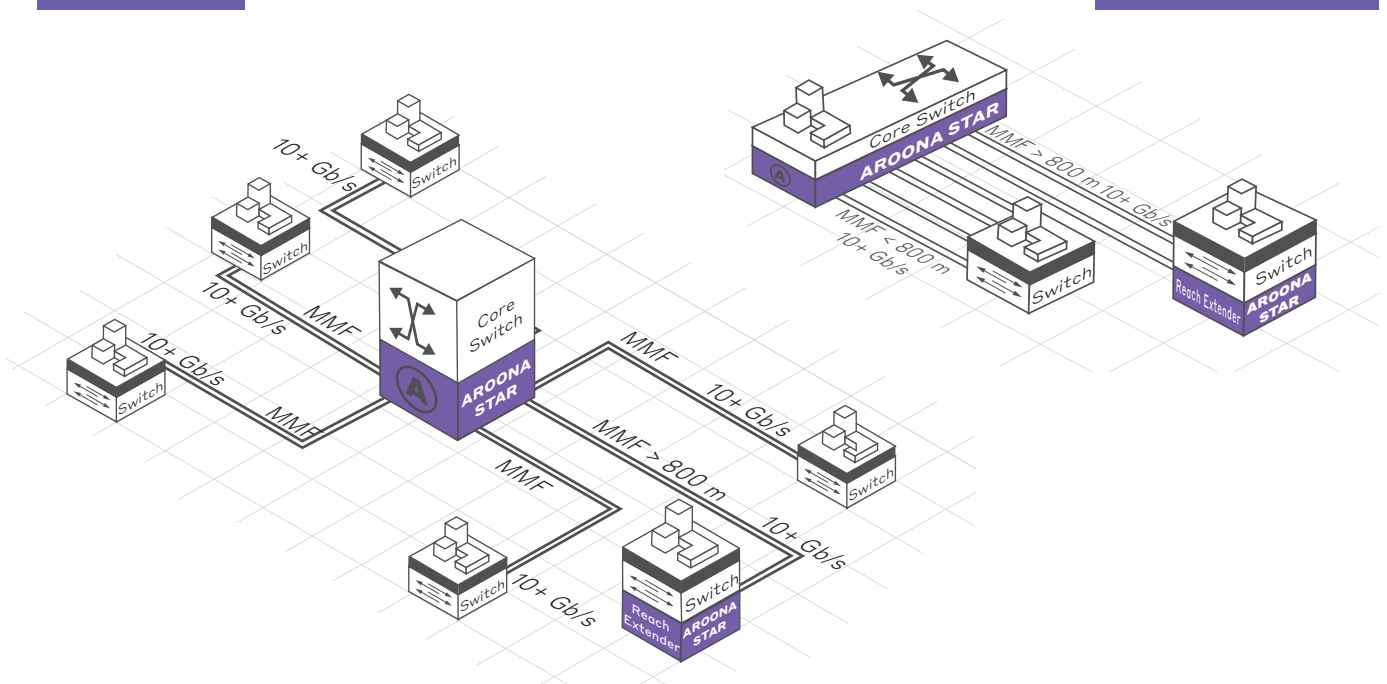
By eliminating modal dispersion, **AROONA-STAR** circumvents this limitation without replacing the existing fibers. This innovation provides a flexible and affordable solution that reduces the investment in upgrading the cabling infrastructure. Regardless of the network topology, the **AROONA-STAR** box can transport 10 Gb/s or more over 12 multi-mode fibers and thereby support evolutions in network traffic, without long, complex and expensive new deployment.

For links <800 m [0.5 mi], the **AROONA-STAR** box is installed at just one end of the fiber links. At remote sites, **only the multi-mode patch cords should be changed by standard single-mode patch cords.**

For links >800 m [0.5 mi], a **REACH EXTENDER** box is required at the remote site at the other end of the fiber links **in order to ensure modal adaptation** and thereby increased bandwidth of long multi-mode fibers.

Star topology

Point to point topology



Passive system and independent of the communication protocol used, it works with either 1,310 or 1,550 nm single-mode commercial transceivers. **AROONA-STAR** is also compatible with WDM technologies, enabling a gradual and flexible increase

of the network capacity towards very high speeds in addition to ensuring the durability of the cabling infrastructure.

Technical specifications

PARAMETER	AROONA-STAR AND REACH EXTENDER
Operating wavelength	O-band (1310 nm) - C-band (1550 nm)
Reach	< 800 m (standard)
	< 10 km (with Reach Extender installed at the remote site))
Number of fibers	Exists in 2/4/8/12
System capacity	10 + Gb/s per channel - Compatible with WDM Independent data rate over each channel
Insertion loss STAR or Reach Extender	3 dB (typical : 2 dB)
Communication protocol	Transparent to standard protocols (Ethernet, Fiber Channel, etc)
Compatible transceivers	Any type of duplex or bidirectional single-mode transceiver in O-band or C-band

Physical characteristics

PARAMETER	VALUE
Fiber type	62.5/125 µm (OM1) or 50/125 µm (OM2 / OM3 / OM4 / OM5)
Input / Output	Duplex LC/UPC connector in front side Unconnectorized MMF fiber in back side
Operating temperature	-5°C to +45°C (EN 300 019-1-3 Class 3.2)
Housing size	Rack 19» 1U H: 43 mm x W: 480 mm x D: 250 mm High density packaging available for 2-fibers version (to be installed in existing patch panel): H: 5 mm x W: 100 mm x D: 12 mm

