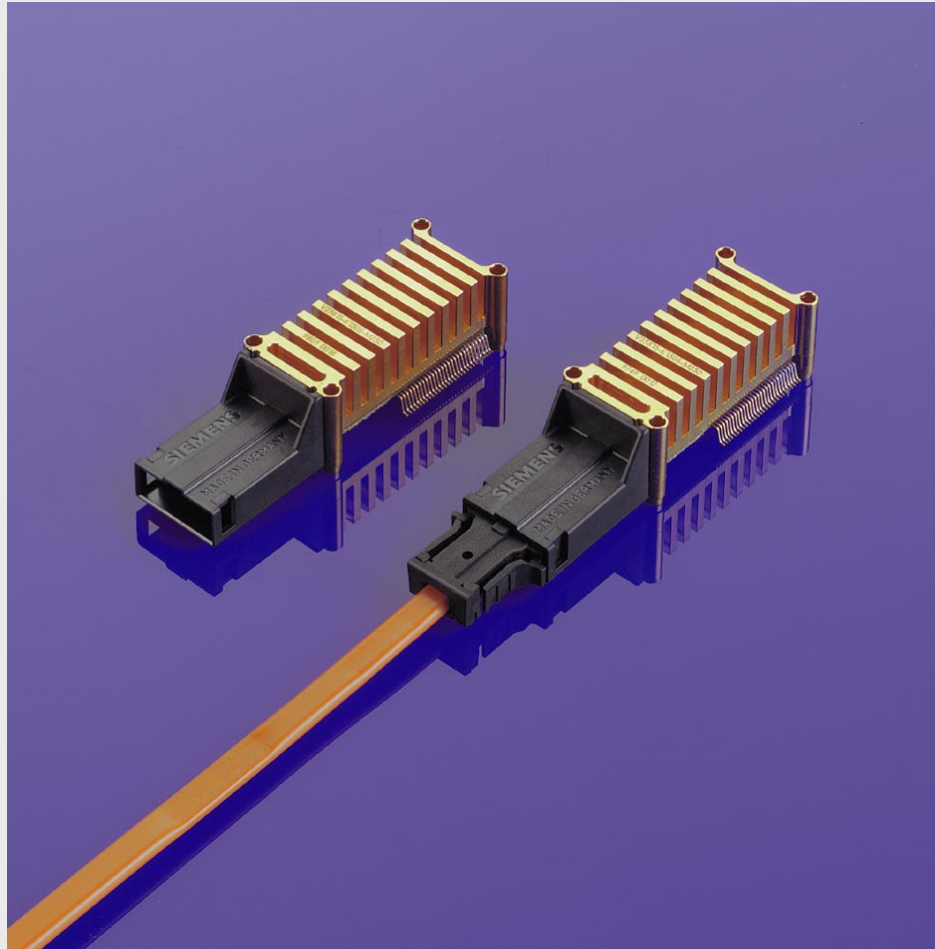


1.25 Gbit/s AC PAROLI®: An Optical Link for GSN Operation

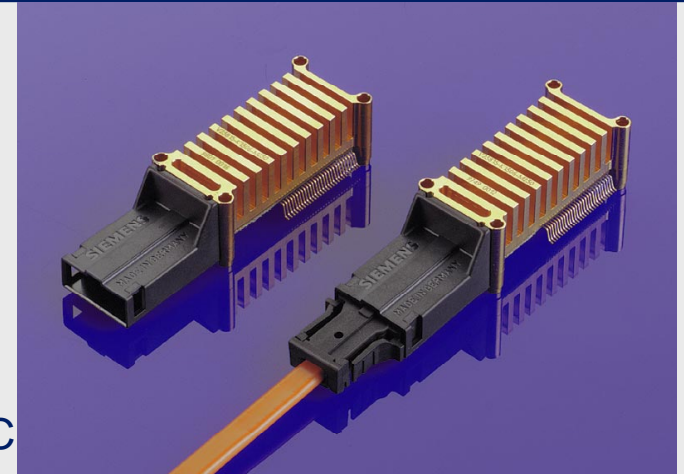


- Design
- AC PAROLI technical features
- GSN compatibility

The perfect optical link!

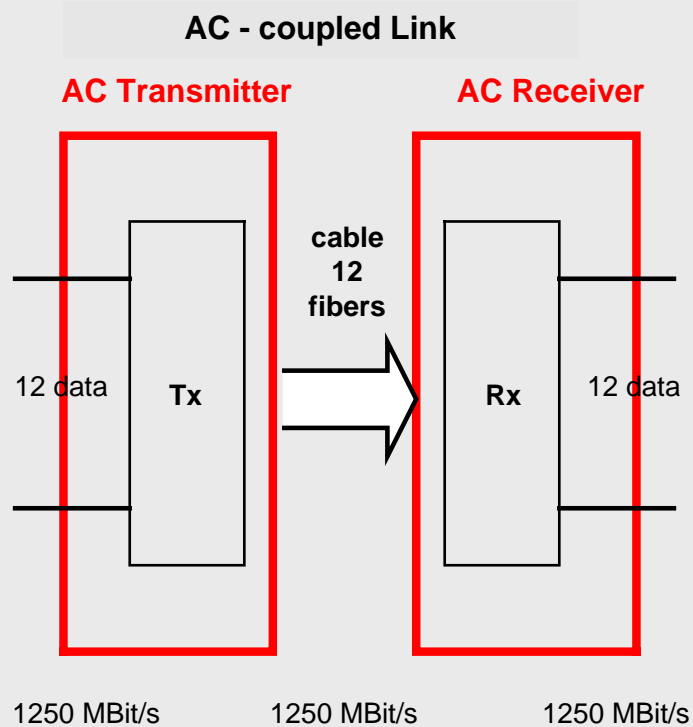
PAROLI® : General Features

- Transmitter and Receiver modules separated
- 12 Optical channels
- Transmitter 840nm VCSEL array
- Receiver 840nm PIN diode array
- Laser safety Class 1 FDA, Class 3A IEC
- Optical data rate max. 1.25Gbit/s
- Total link rate up to 15Gbit/s
- Power supply 3.3 V single power supply
- Package SMD - 72 leads, pitch 0.65mm
- Electrical interface LVDS - Low Voltage Differential Signal
- Optical connection SMC connector - Simplex Module connector
- Fiber 12 fibers, 62.5 μm fiber ribbon cable



The perfect optical link!

AC PAROLI® Link (GSN compatible)



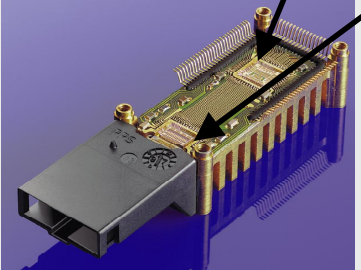
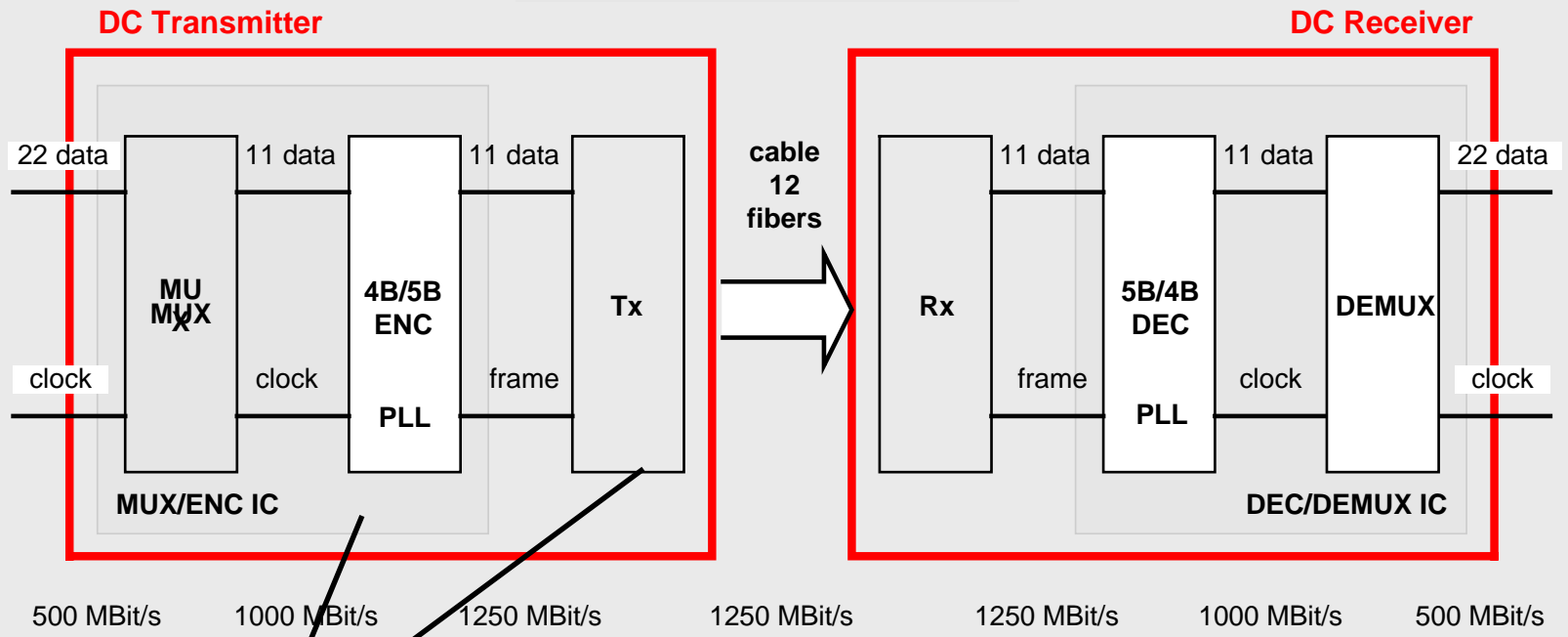
- ⇒ 12 electrical input channels
- ⇒ Asynchronous Data Transmission
- ⇒ Data Rate: 250 - 1250 Mbit/s per channel

The perfect optical link!

DC PAROLI® Link (SCI compatible)

DC - coupled Link

AC - coupled Link

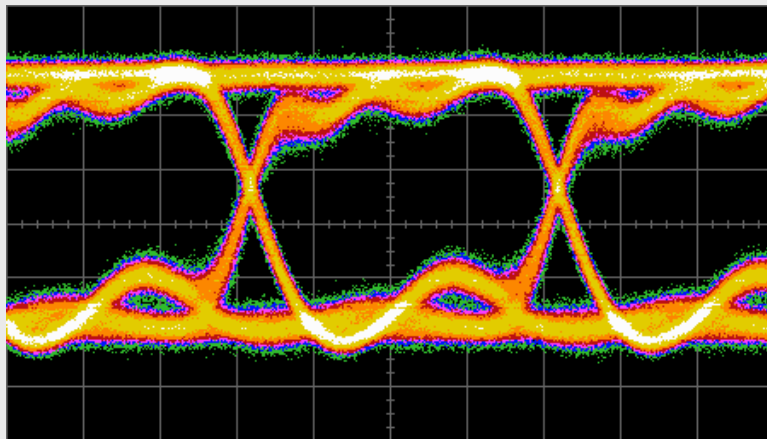


- ⇒ 22 electrical input channels + clock
- ⇒ Synchronous Data Transmission
- ⇒ Data Rate: 0 (DC) - 500 Mbit/s per channel
- ⇒ SCI compatible

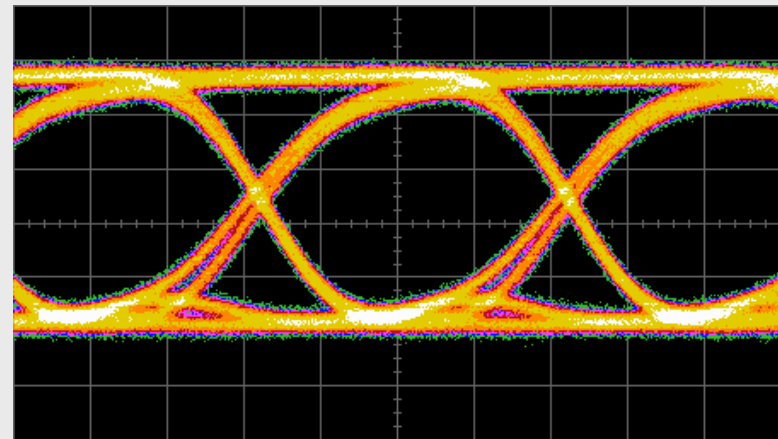
The perfect optical link!

AC PAROLI®: Eye Diagrams

- Pattern: PRBS 2⁷-1
- 1.25 Gbit/s, Optical Tx Output



without filter



with GBE filter

Time base: 200 ps/div

The perfect optical link!

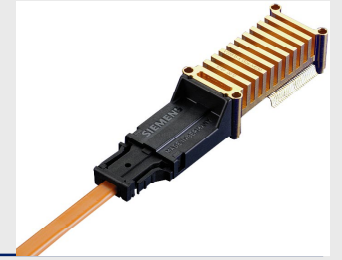
GSN (HIPPI-6400-OPT) Compatibility of the AC PAROLI®

Parameter	HIPPI	PAROLI®	
• Wavelength	850 nm	850 nm	😊
• Channels/Fibers	12	12	😊
• Fiber Core Diameter	62.5 µm	62.5 µm	😊
• Bit Rate	1.0 Gbit/s	1.25 Gbit/s	😊
• Electrical Interface	differential Signals	LVDS*	😐
• Link Budget	6 dB	7 dB	😊
• Operating Distance	200 m	300 m	😊
• Laser Safety	IEC Cl. 3a	FDA Cl.1, IEC Cl. 3a	😊
• Channel to Channel Skew	500 ps	75 ps	😊
• Recommended Connector	MPO/MTP	SMC	😐

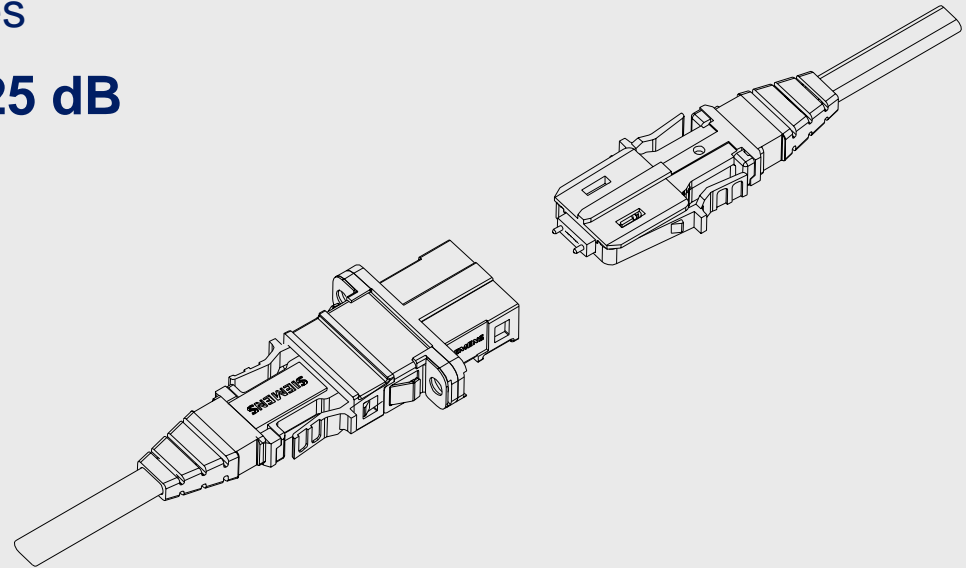
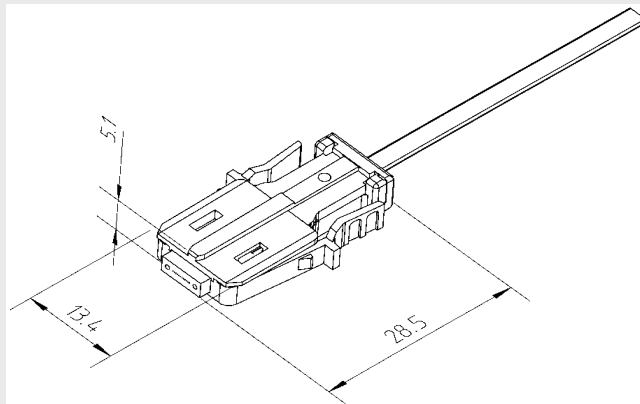
* SuMAC™ output swing easily adjustable to Tx input stage by inserting a resistor in the connecting line.

The perfect optical link!

SMC Connectors (MT Ferrule Based)

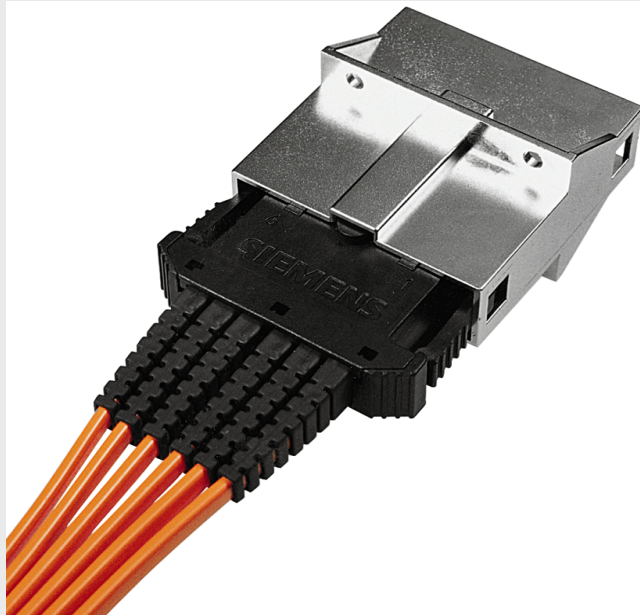


- **Extra flat**
 - About 30% smaller than MTP or MPX
- **Reliable double side latches**
 - Minimized push pull forces
- **Insertion loss: typical 0.25 dB**
- **Low cost design**



The perfect optical link!

MMC Connector / Adapters / Trunk Cables

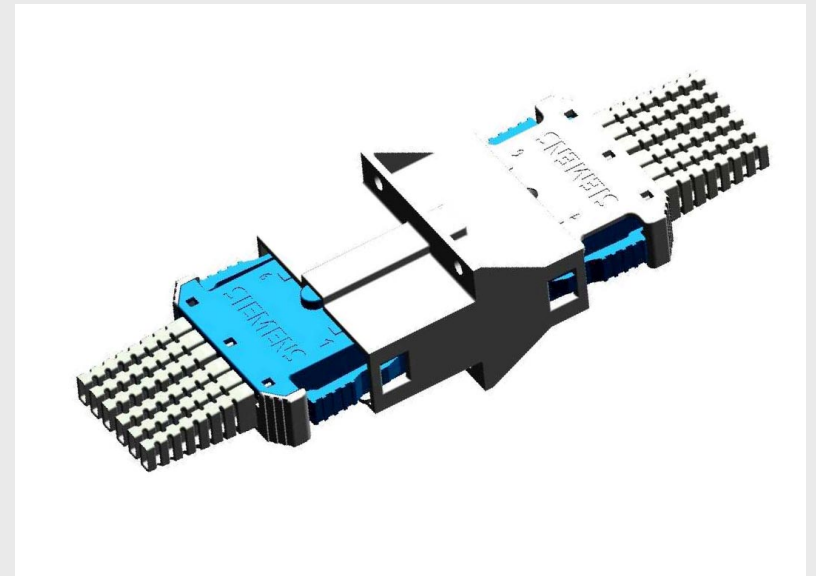


- **Trunk Cables**

- 48 ~ 288 fiber trunks available
- Different skew categories
- Riser, plenum, or LZ0H
- Length up to 70m
(other lengths by request)

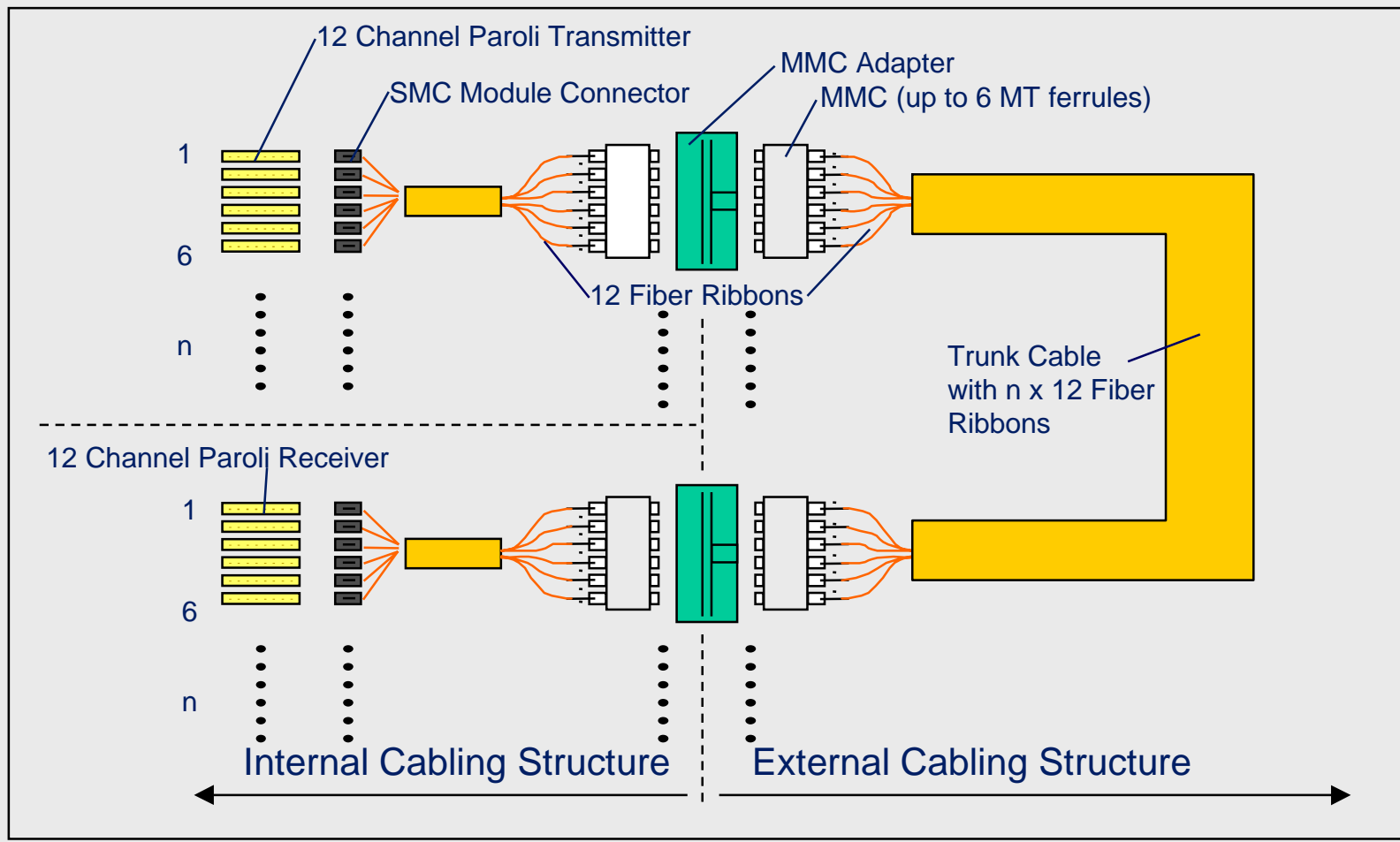
- **Connectors / Adapters**

- MT Ferrule based
- Up to 72 Channels (6x12 fibers)



The perfect optical link!

Typical Cabling Structure



The perfect optical link!