

# UPGRADE PATHS

- From 10G to 100G in Data center, Last Mile and DCI



2023



# SIMPLIFYING UPGRADES FROM 10G TO 100G

- Empowering Data Centers, Last Mile, and DCI

Welcome to our presentation on simplifying upgrades from 10G to 100G for data centers, last mile connections, and data center interconnects (DCIs).

At Solid Optics, we are your expert partners who will guide you through the seamless transition while providing the necessary products for this upgrade journey.

As technology advances and network demands grow, upgrading from 10G to 100G has become a critical step in optimizing performance and staying ahead in the digital landscape. We understand the complexities involved in this transition and have tailored solutions to empower your data centers, last mile connections, and DCIs. Our experienced team will provide expert guidance, mapping out the most efficient upgrade path specific to your network requirements. We have a comprehensive range of high-quality 100G transceivers and DAC cables to ensure seamless compatibility and superior performance. By partnering with Solid Optics, you gain access to our extensive knowledge and reliable products. Our aim is to simplify the upgrade process, empowering you to unlock the full potential of 100G connectivity.

Join us on this journey as we outline the upgrade path for data centers, last mile connections, and DCIs, and discover how Solid Optics can streamline your transition from 10G to 100G.

**10G**  
**INFRASTRUCTURE**  
**OVERVIEW**



10 km~80km

Nx10G  
LR/ER/ZR

≤ 1000 meters

Nx10G/40G  
AOC/SR

≤ 500 meters

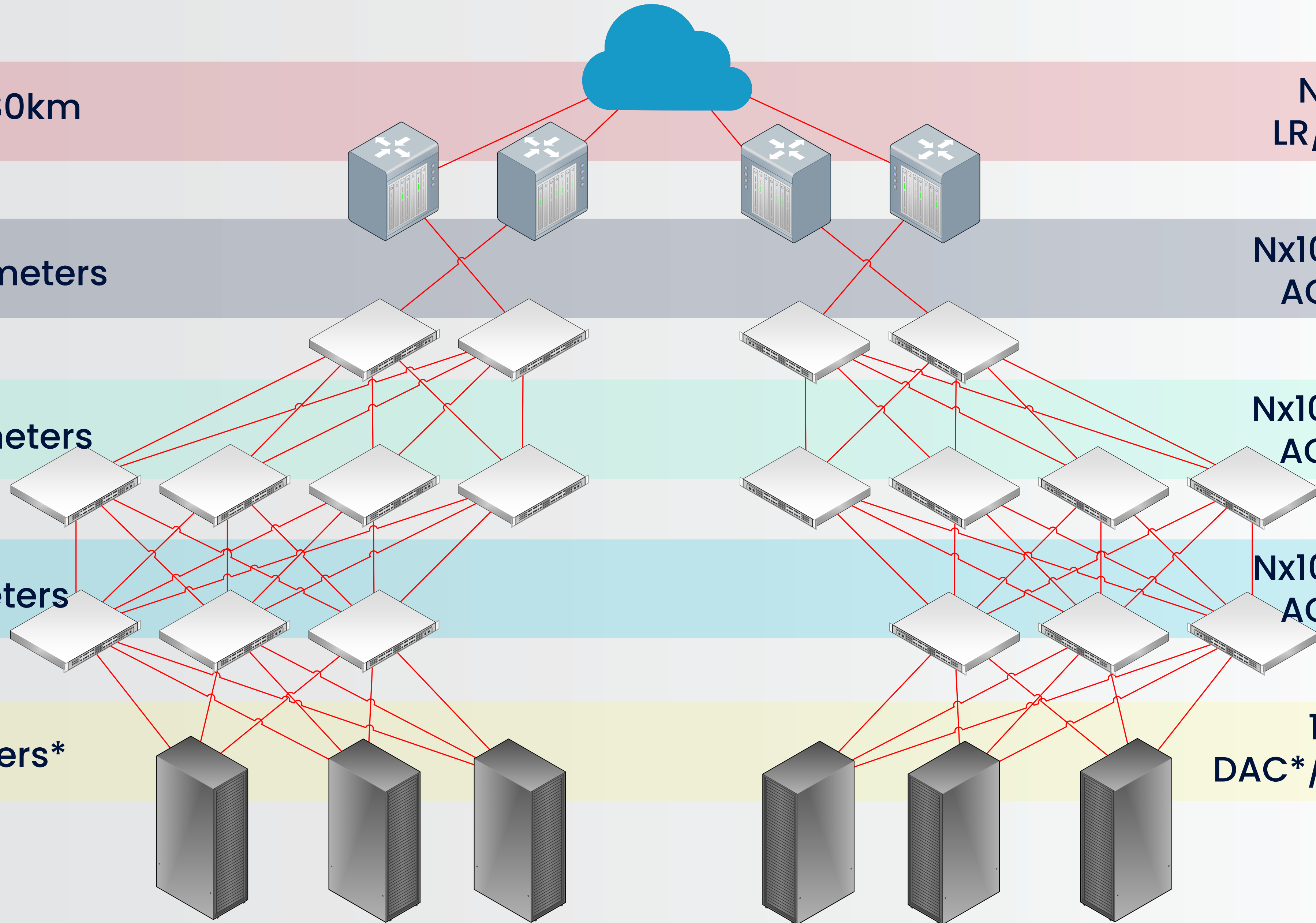
Nx10G/40G  
AOC/SR

≤ 20 meters

Nx10G/40G  
AOC/SR

≤ 5 meters\*

10G  
DAC\*/AOC/SR



**10G >>> 100G**  
**INFRASTRUCTURE**  
**OVERVIEW**



10km~80km

LR4/ER4/ACO/  
DCO/DCI

≤ 1000 meters

FR4  
DR4+

≤ 500 meters

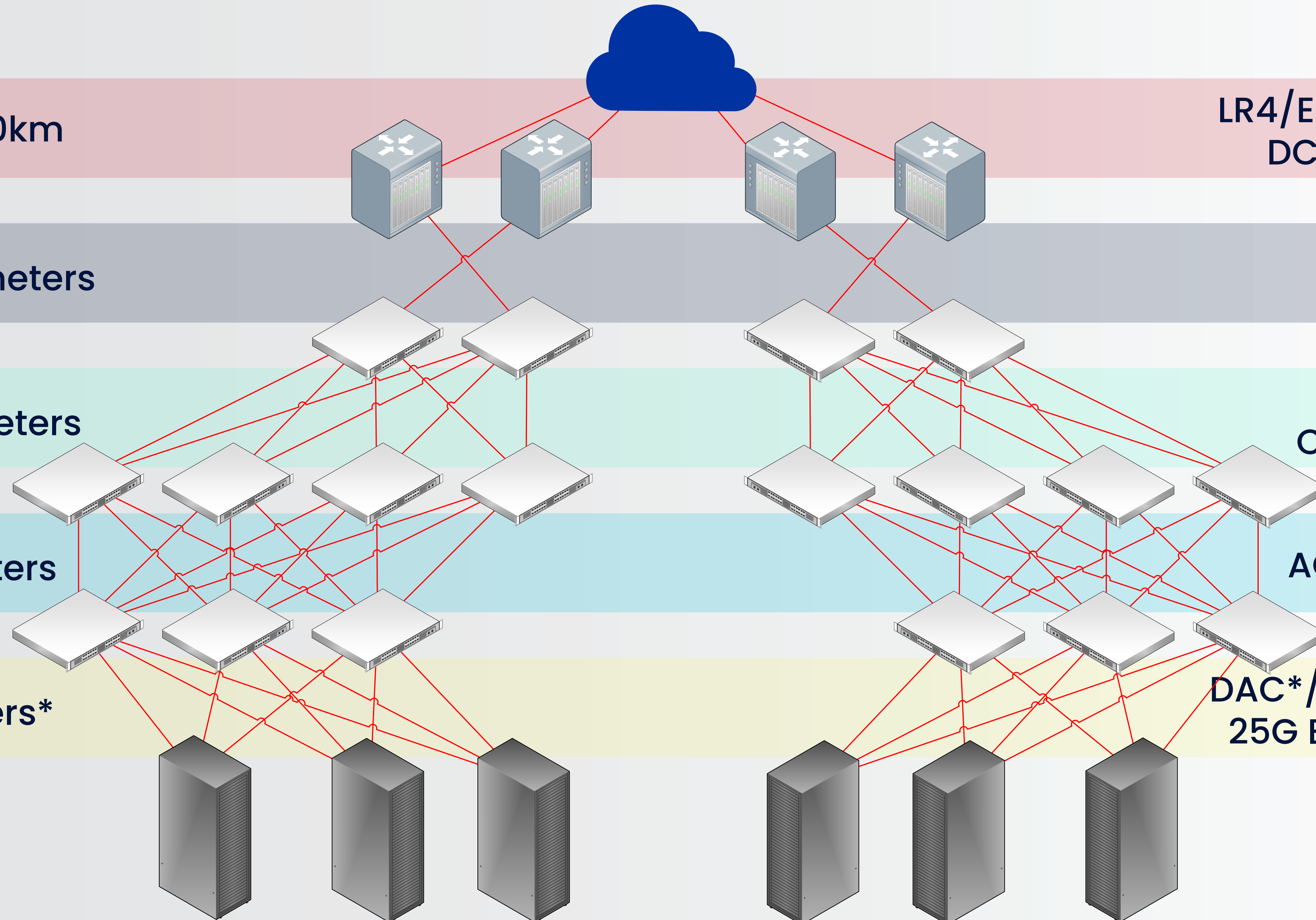
PSM4  
CWDM4

≤ 20 meters

AOC/SR4

≤ 5 meters\*

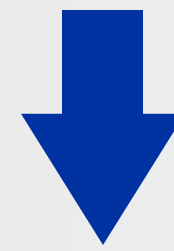
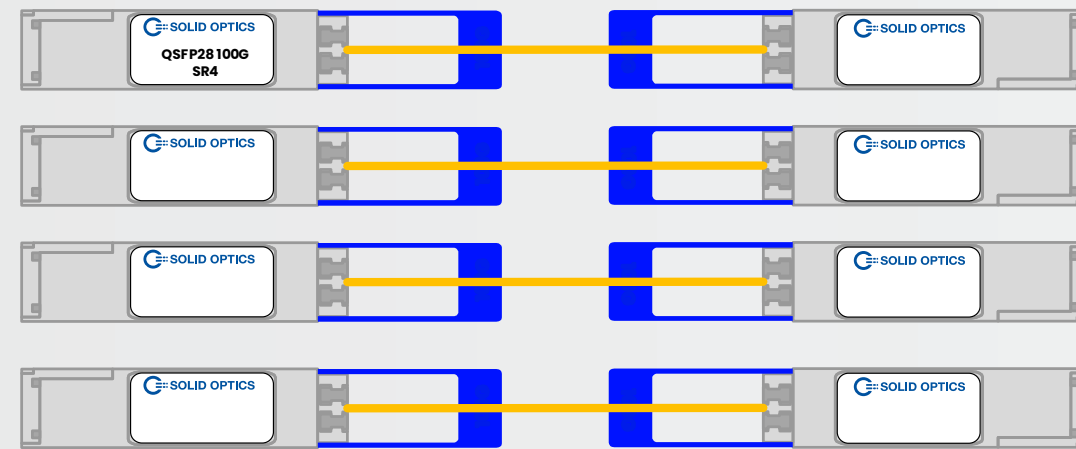
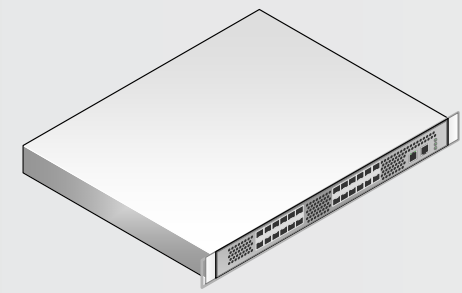
DAC\*/AOC/SR4  
25G Breakout



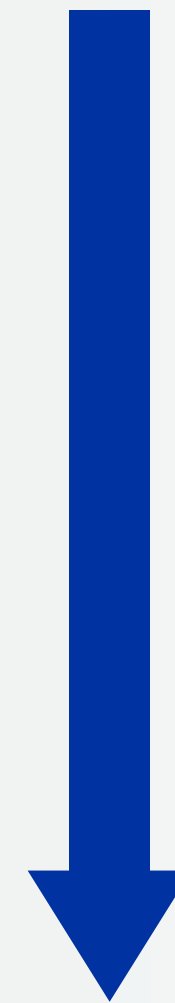
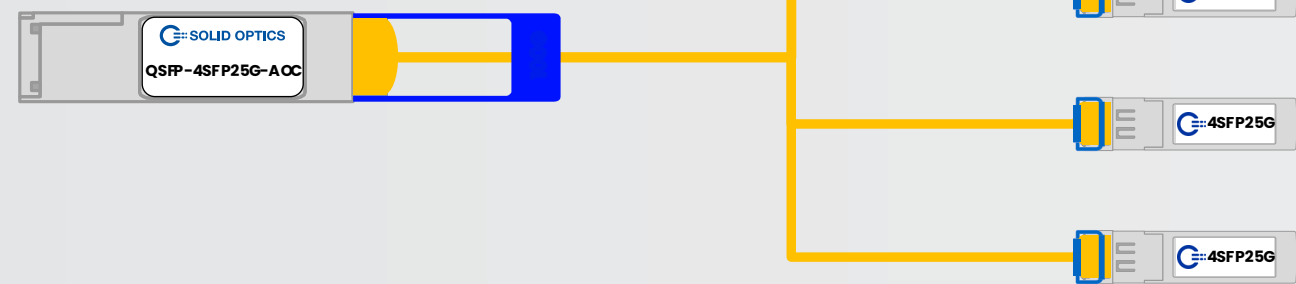
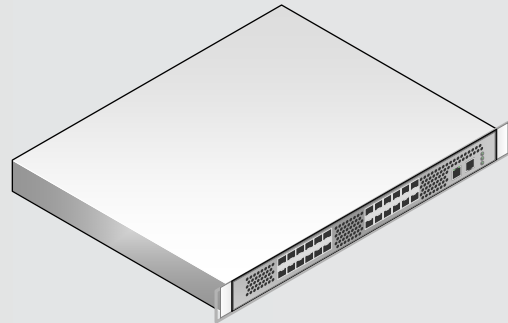
**DATA CENTER  
TOP OF RACK  
10G TO 100G  
UPGRADE PATH**



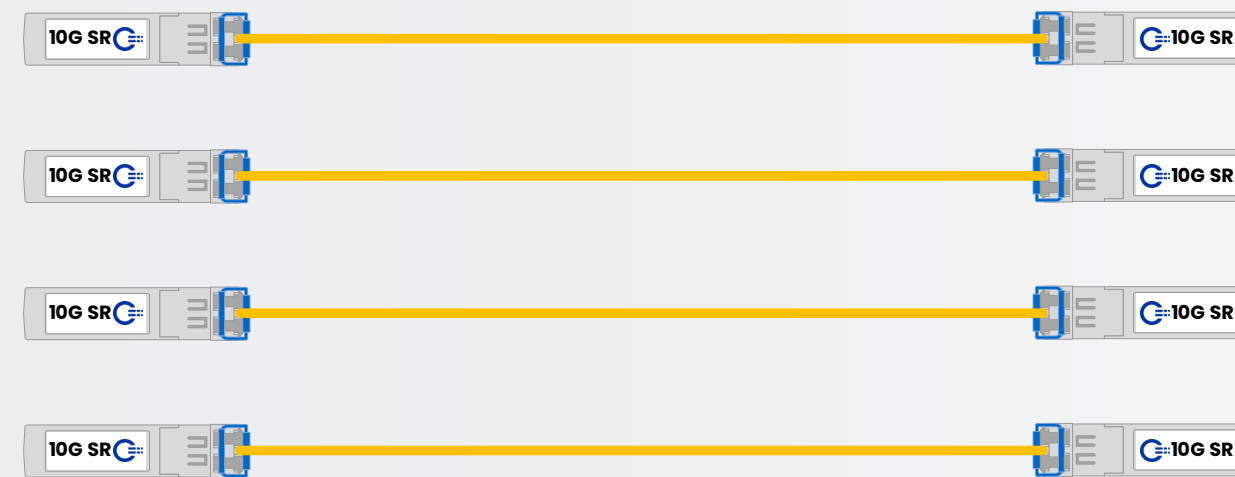
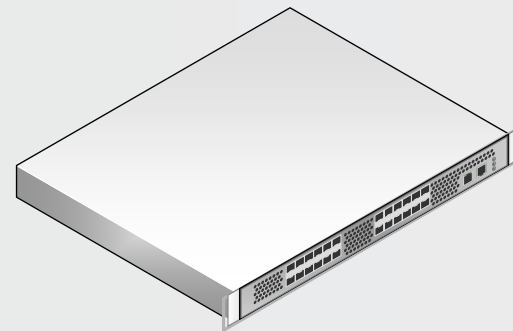
**DATA CENTER TOP OF RACK  
10G TO 100G UPGRADE PATH**



HIGHER DENSITY AND SPEED PROVIDED BY 100G TO 4X25G AOC OR DAC



HIGHEST SPEED PROVIDED BY 100G SR4, AOC OR DAC

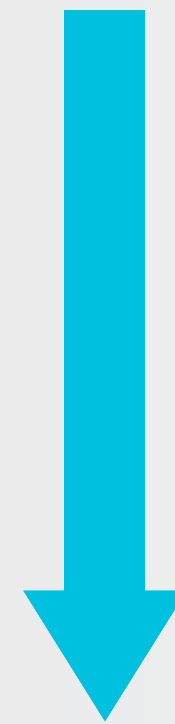
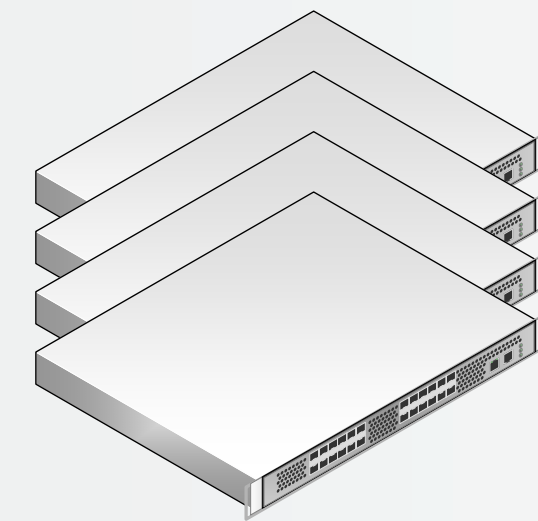
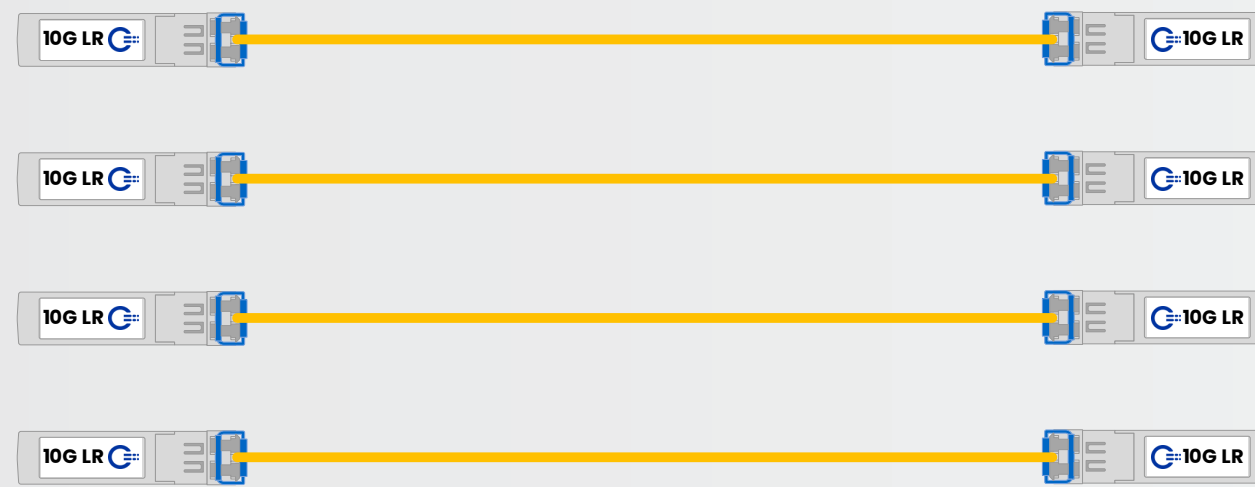
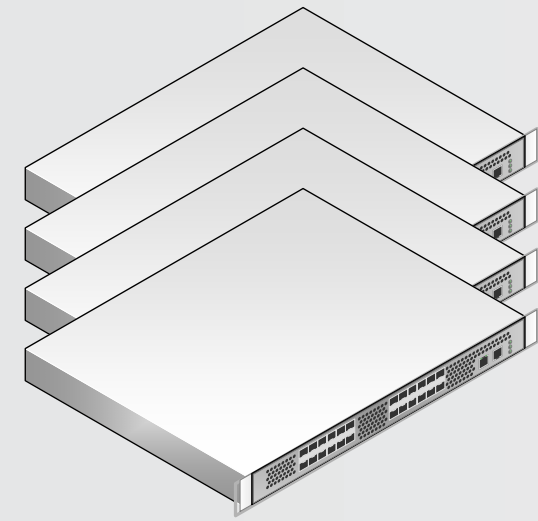




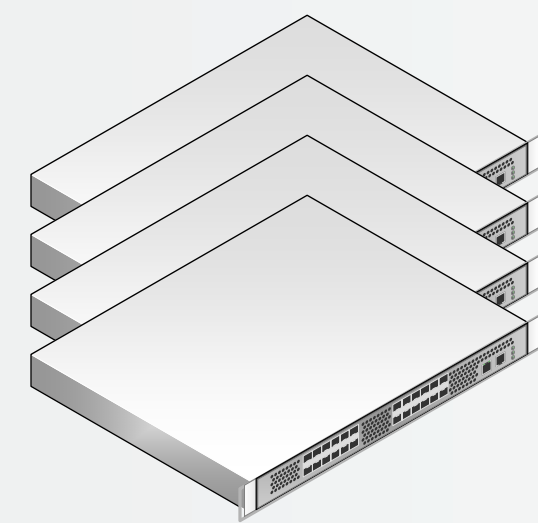
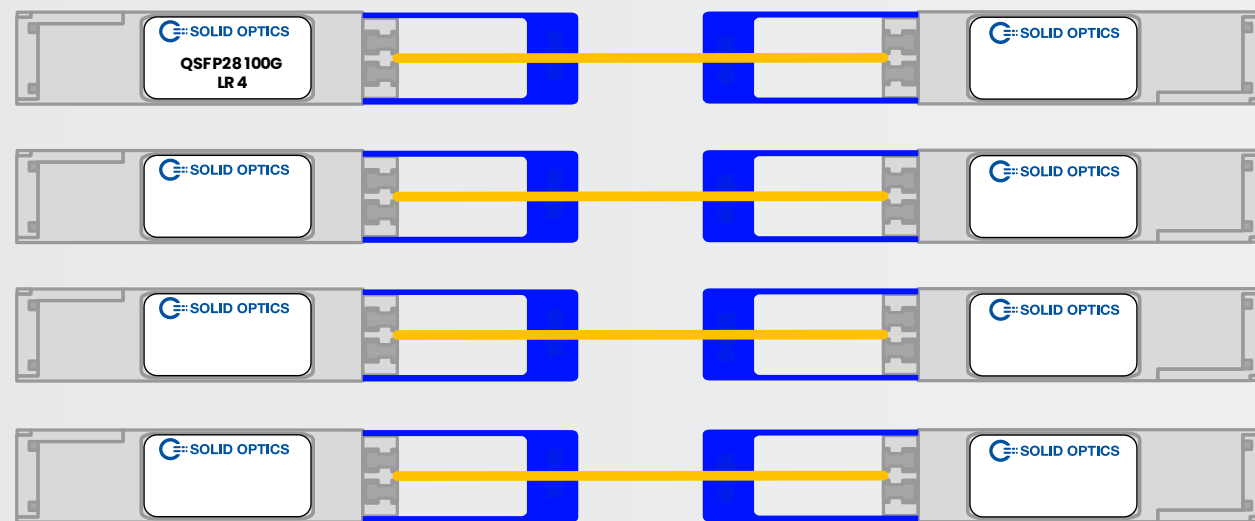
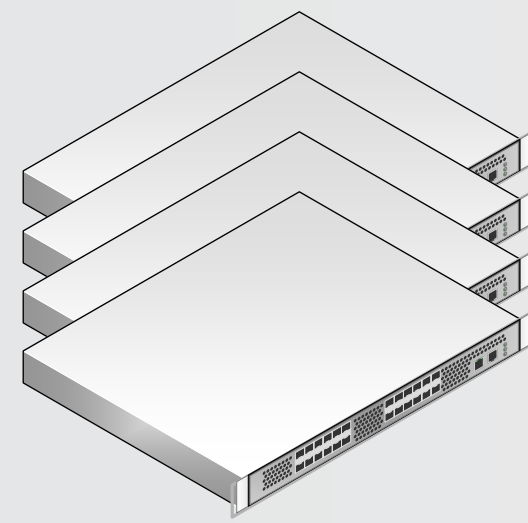
**LAST MILE  
10G TO 100G  
UPGRADE PATH**



LAST MILE 10G TO 100G UPGRADE PATH



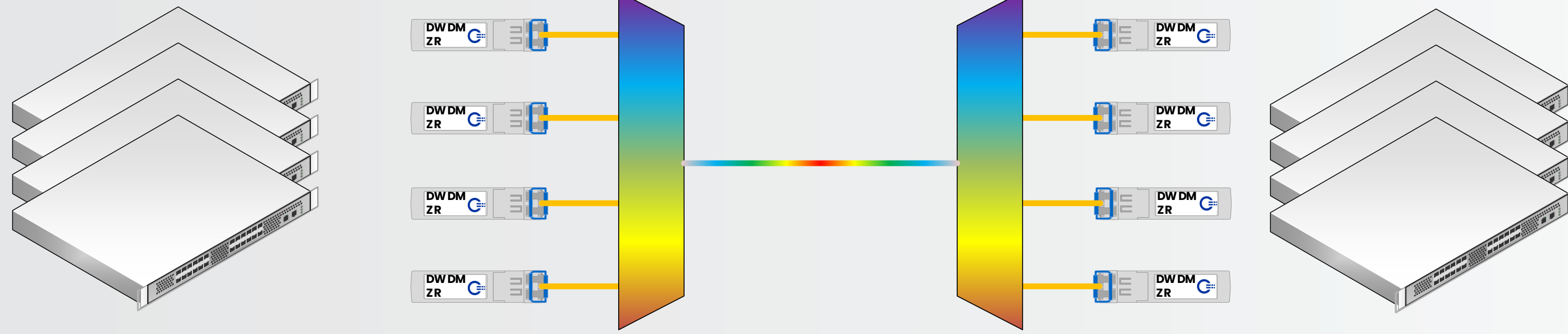
HIGHEST SPEED PROVIDED BY 100G FR1,DR1,LR1,LR4 AND LR1 BIDI



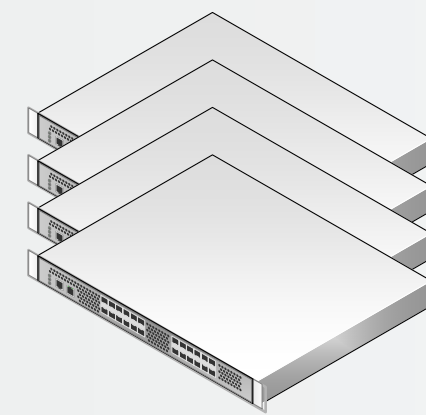
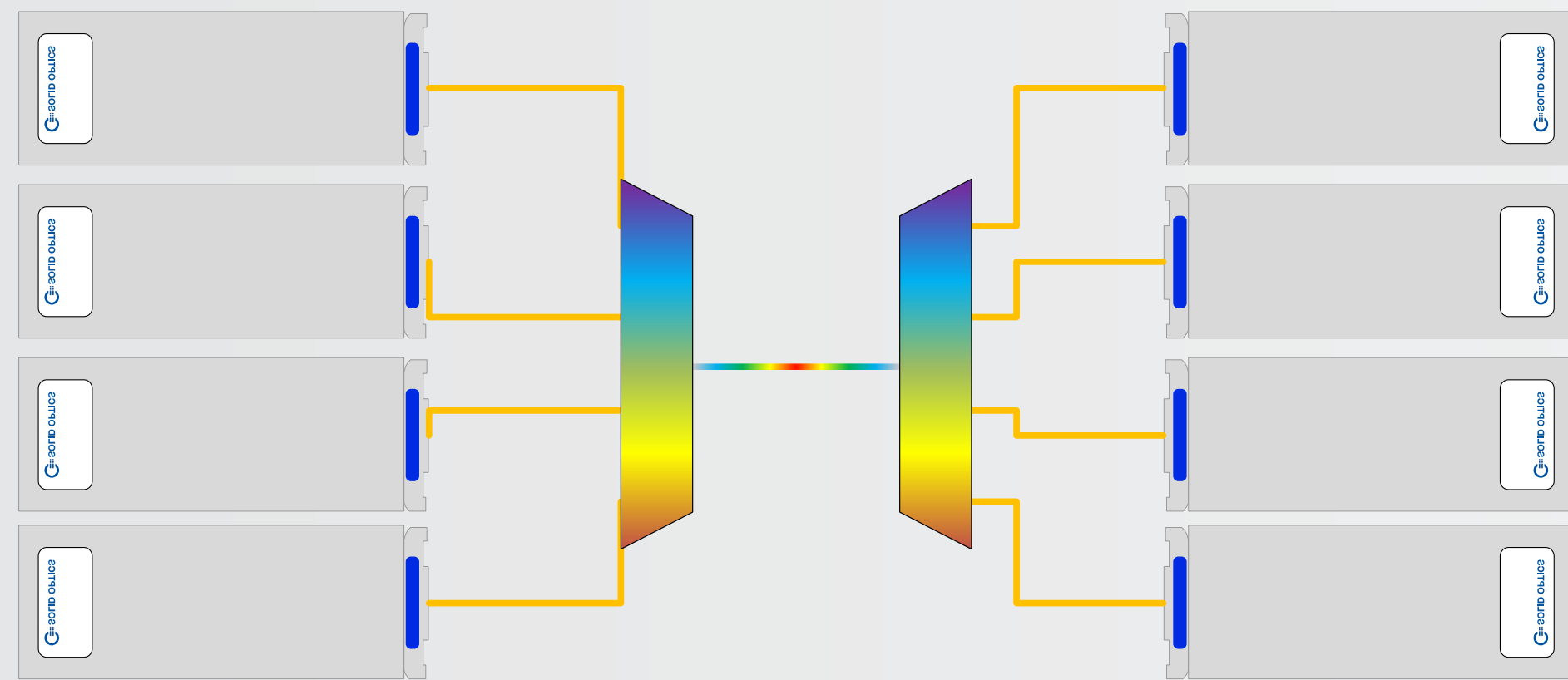
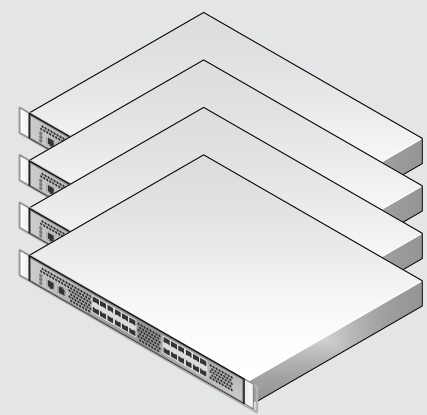
**DATA CENTER  
INTERCONNECT (DCI)  
10G TO 100G  
UPGRADE PATH**



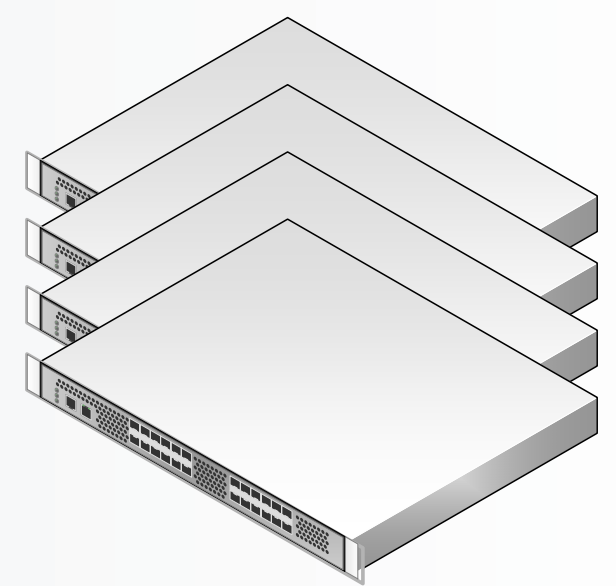
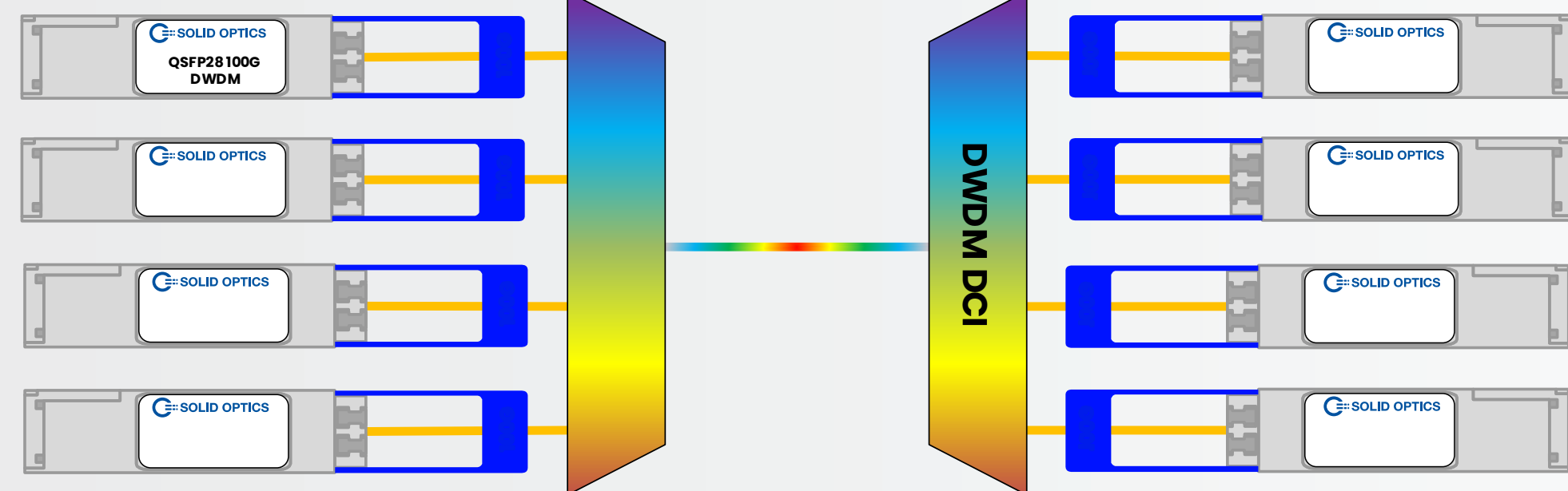
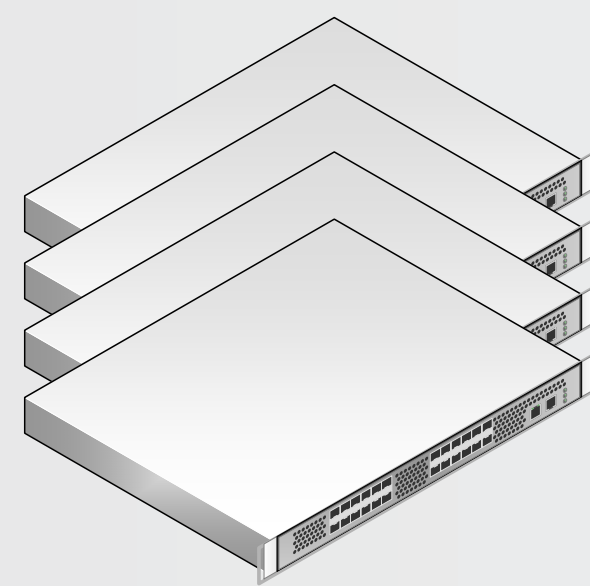
**DATA CENTER INTERCONNECT (DCI)  
10G TO 100G UPGRADE PATH**



100/200G DWDM CFP2 DCO



100G OWDM, DWDM SINGLE AND DUAL LAMBDA





# COMPARING 100G WDM SOLUTIONS:

Features of DWDM CFP2 DCO, OWDM, and DWDM Single/Dual Lambda

## 100/200G DWDM CFP2 DCO

- Requires specific network hardware to run
- Requires EDFAs (Erbium-Doped Fiber Amplifiers)
- High power consumption
- Range up to 2000Km (depends on the version)
- Offers fixed and tunable wavelengths versions

## 100G OWDM

- Works on standard network hardware
- Totally passive (no EDFAs or Dispersion Compensator needed)
- Normal power consumption
- Range up to 20Km (with MUX)
- Fixed wavelengths only

## 100G DWDM Single and Dual Lambda

- Works on standard network hardware
- Requires EDFAs and dispersion compensator
- Normal power consumption
- Range up to 120Km
- Fixed wavelengths only



The hub of your optical network integration.

