

# Optical Network Test Evolution and AI Data Centers

Global trends and the impact to Europe

PROFiber Seminář Síť FTTx v roce 2026 a Mistrovství světa v mikrotrubičkování  
(March 12)

Nicholas Cole  
Data Center Solution Manger

**EXFO**

The EXFO logo is rendered in a bold, white, sans-serif font. The letters 'E', 'X', and 'F' are stylized with horizontal lines passing through them, while 'O' is a solid circle. The background of the entire graphic is a dark blue gradient with a faint, light-colored network of interconnected nodes and lines, resembling a globe or a data network.

The **test,**  
**monitoring**  
& **analytics**  
experts

**30+**

years of  
pioneering  
essential solutions  
and technologies

**No.1**

in optical test  
solutions

**95%+**

of leading cloud  
and network  
service providers

**560+**

pending and  
granted patents  
worldwide

**160+**

inventions  
protected by  
patents

**2000**

staff across the  
world

# CONTENTS

- The global impact of Artificial Intelligence
- Data center infrastructure and optical network testing
- Outlook for Central Europe

AI data center capex in **2026** is expected to reach

**\$650 billion...**

and that is only from 5 companies



**\$200B**

900+ data centers

Market cap \$2.3T  
Global rank **no.5**

Google

**\$185B**

130+ data centers

Market cap \$3.7T  
Global rank **no.3**



**\$135B**

24 data centers

Market cap \$1.6T  
Global rank **no.8**



**\$100B**

400+ data centers

Market cap \$3T  
Global rank **no.4**

ORACLE®

**\$30B**

63 data centers

Market cap \$0.4T  
Global rank **no.25**

# The big winner...



1st Jan 2020

**\$147 billion**

Market Cap



1st Jan 2026

**\$4.5 trillion**

Market Cap  
Global rank no.1

**So what?** How does that impact optical networking?



**\$6B**

thru to 2030

**CORNING**

Fiber optic cabling and  
connectivity



**\$2B**

product investment

**LUMENTUM**

Optical networking  
hardware



**\$2B**

product investment

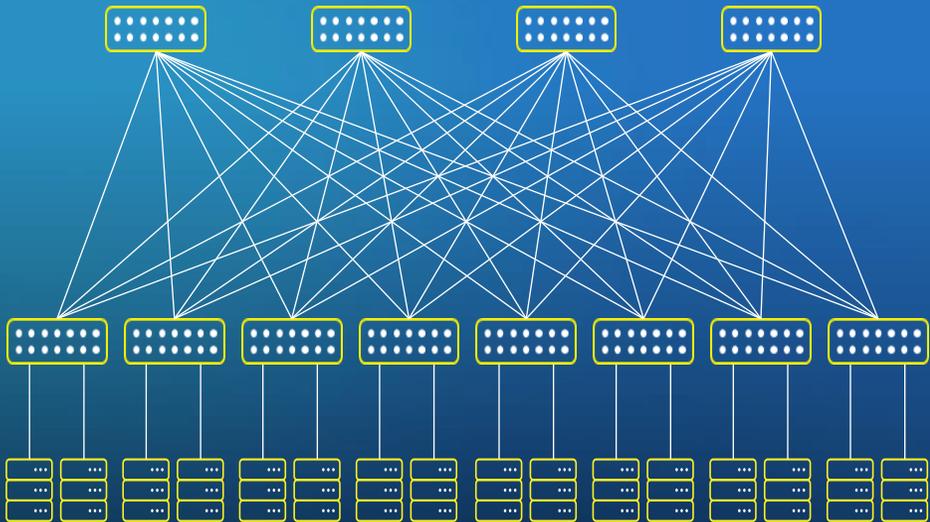
**COHERENT**

Optical networking  
hardware

# INSIDE DATA CENTERS

## AI REVOLUTION BEGINS WITH TRAINING

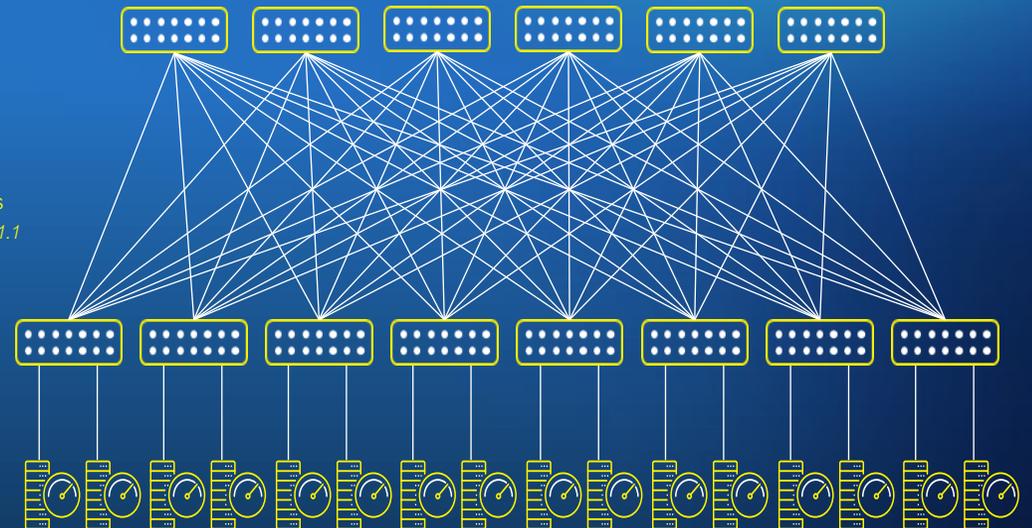
Before 2020



100G  
between switches  
*oversubscription 3:1*

10-25G  
to servers

After 2020



400G+  
between switches  
*No oversubscription 1:1*

400G  
to servers

# CONTENTS

- The global impact of Artificial Intelligence
- Data center infrastructure and optical network testing
- Outlook for Central Europe

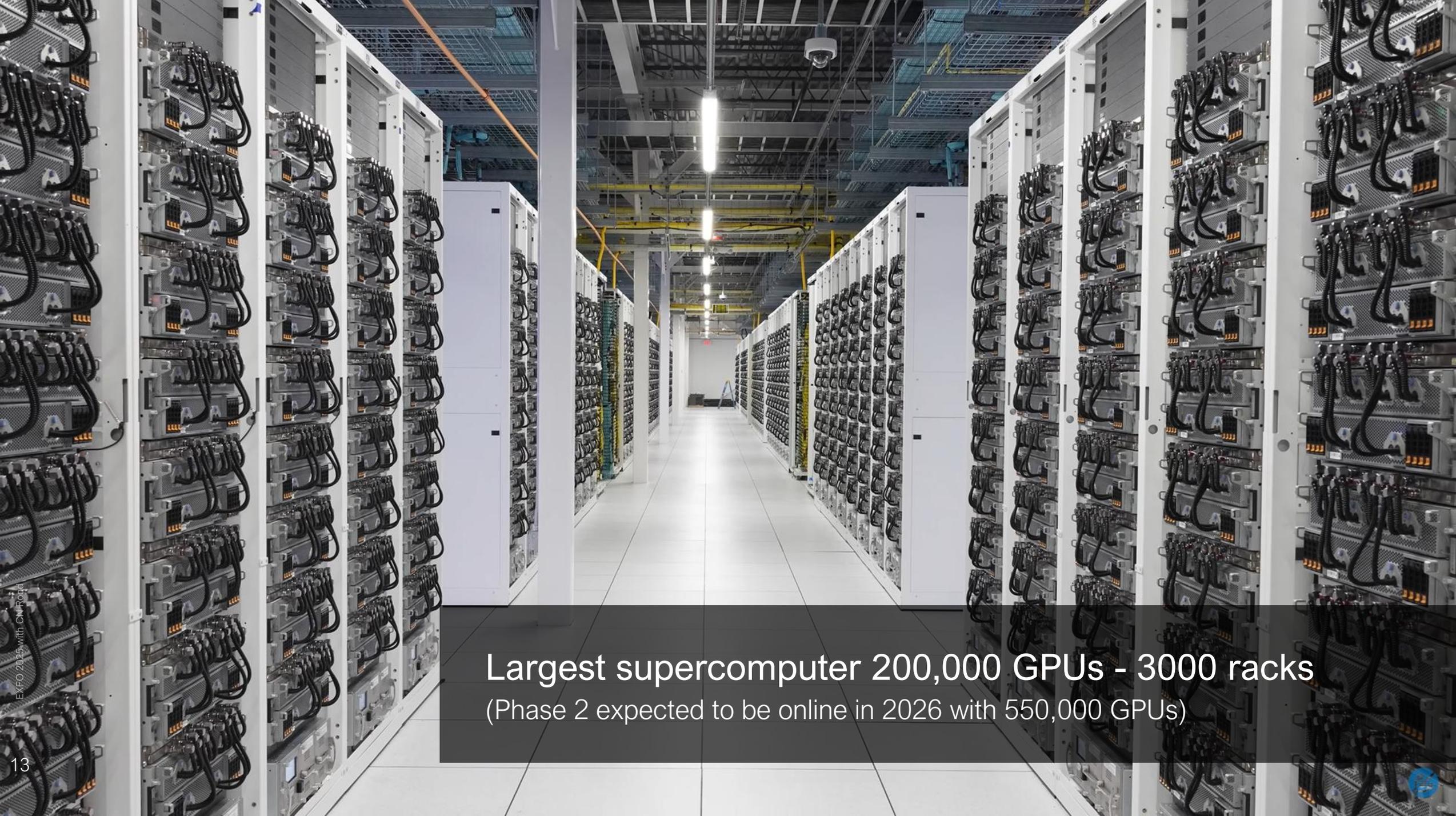


xAI is spending around **\$1 billion per month** on compute, data centers, GPUs, hiring, and model training infrastructure.



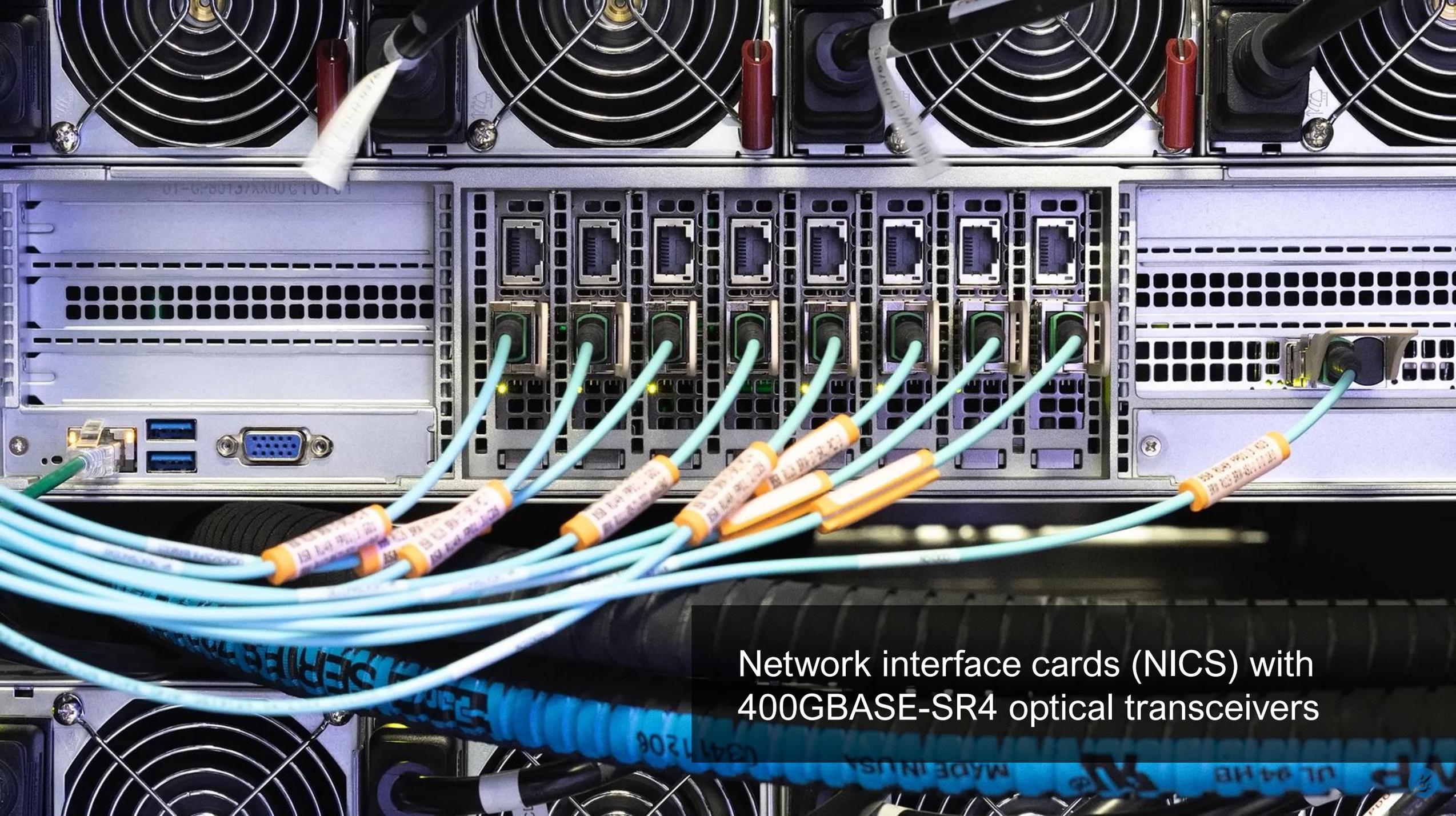


xAI Data Center Memphis, Tennessee, USA



Largest supercomputer 200,000 GPUs - 3000 racks  
(Phase 2 expected to be online in 2026 with 550,000 GPUs)



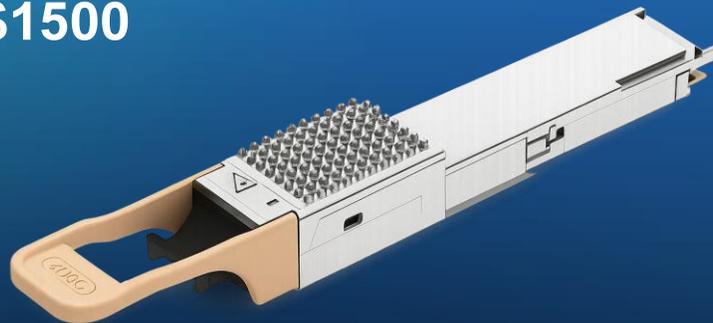


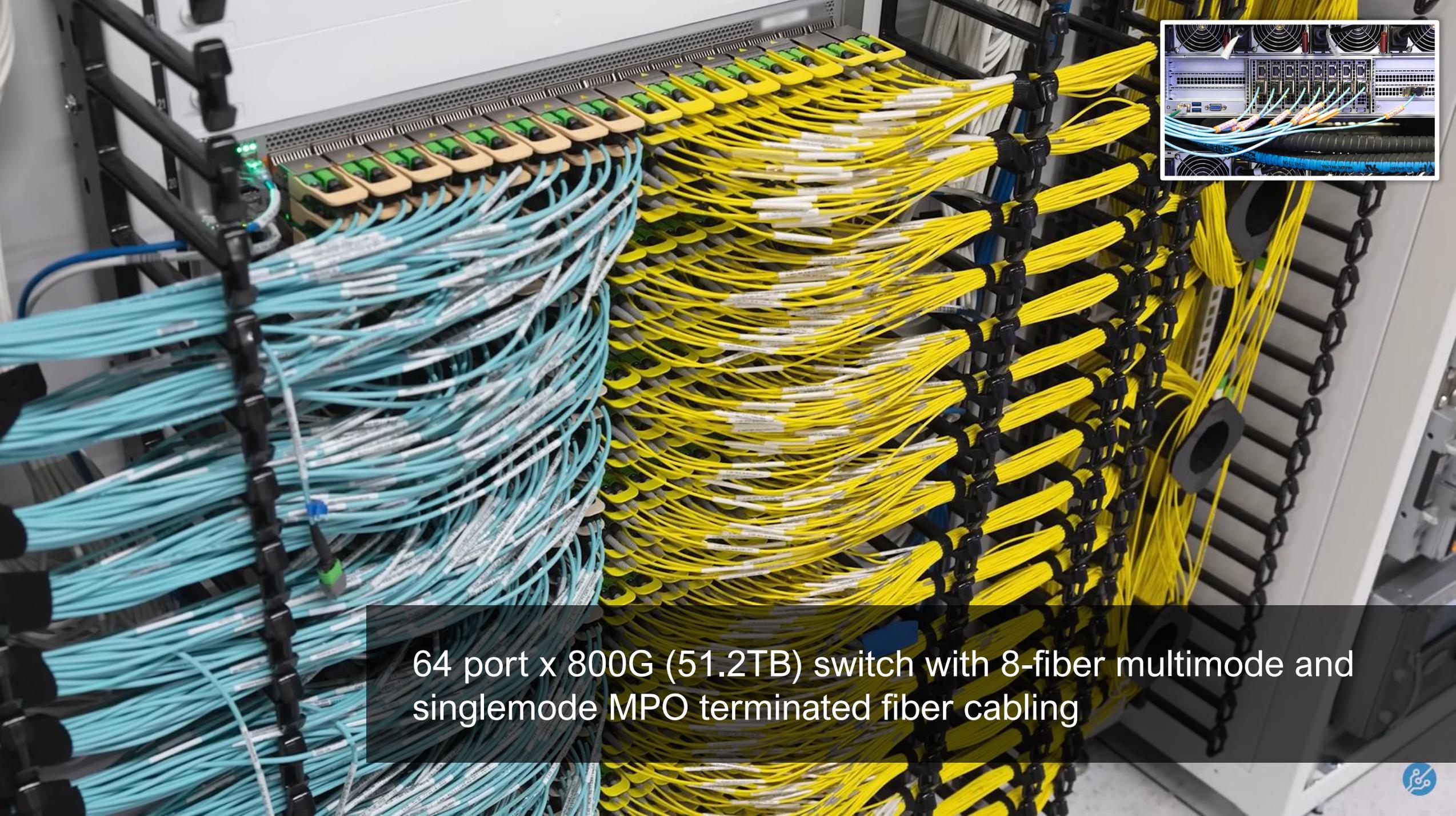
Network interface cards (NICs) with 400GBASE-SR4 optical transceivers

# 1G-800G NETWORK TESTER

EXFO FTBx-88480

- 400,000,000,000 bits/s
- QSFP form factor
- 100G per optical lane (8 lanes)
- MPO-8 APC connector
- **Cost \$1500**



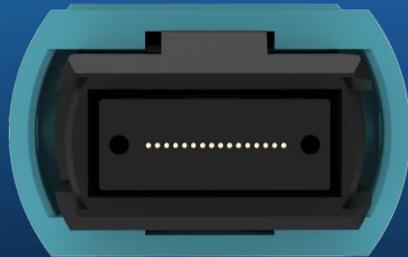


64 port x 800G (51.2TB) switch with 8-fiber multimode and singlemode MPO terminated fiber cabling

# FIBER INSPECTION SCOPE

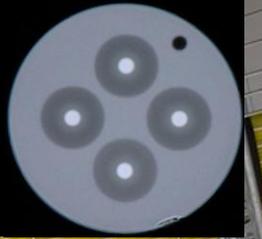
EXFO FIP-500

- Multi-fiber push on (MPO)
- 8 fibers per connector
- Pin system for alignment
- Terminated on cables with 1000s of fibers
- **Cost \$1000s**



# Multicore fiber

Future solution?



High density pre-terminated trunk cabling with 1000s of fibers per cable connect leaf and spine switches



# PXM/LXM-P12

EXFO PXM/LXM





Co-packaged optics possible solution to power consumption as switches manage growing traffic demands



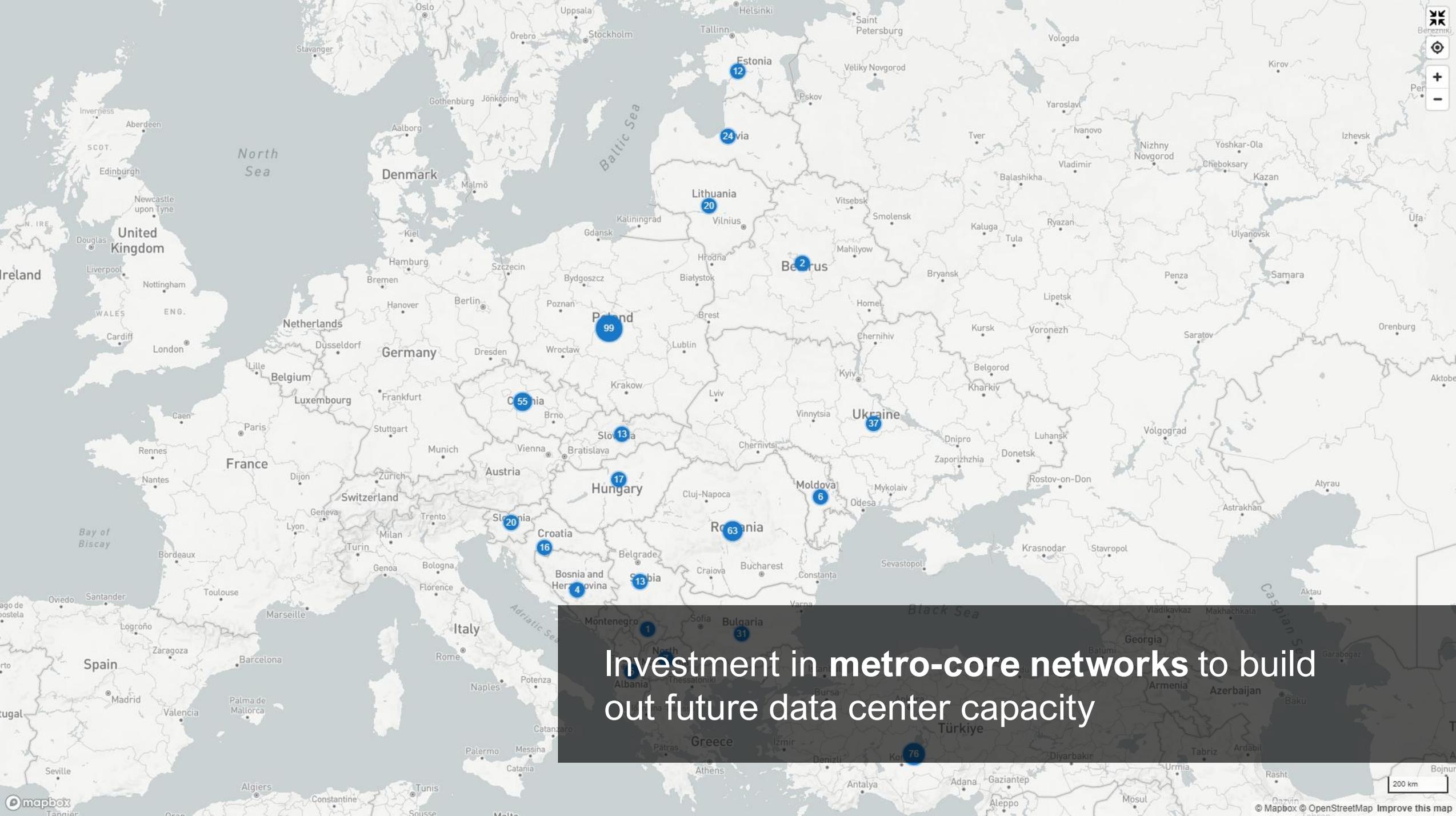
Coreweave (Bulk Infra) in Vennesla Norway



## New Nvidia GB300 NVL72 Rack design

# CONTENTS

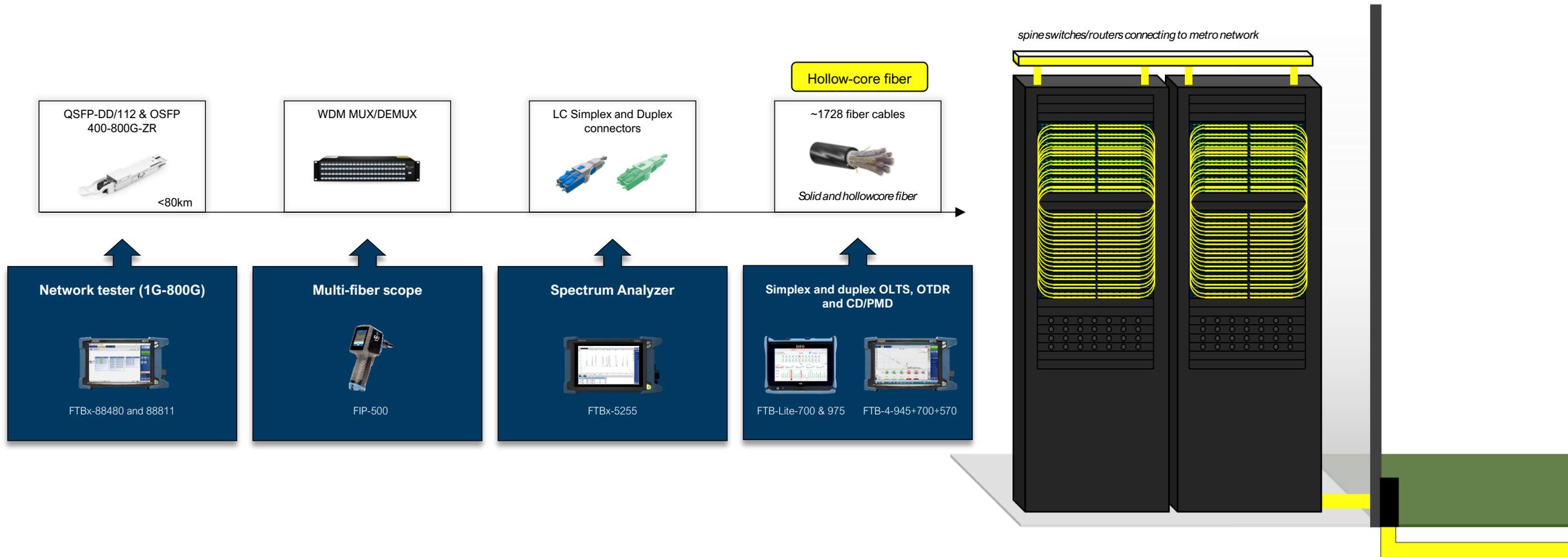
- The global impact of Artificial Intelligence
- Data center infrastructure and optical network testing
- Outlook for Central Europe



Investment in metro-core networks to build out future data center capacity

# NETWORK UPGRADES

NEW PRODUCT SOLUTIONS AND FEATURES FROM EXFO



# KEY TAKEAWAYS

- AI investment to reach more than \$650 Billion in 2026
- Global impact on optical networking industry
- New innovation and product solutions
- Europe follow with network upgrades

Thank you!

EXFO