



NXP Leverage of NBASE-T Technology



Webinar Speakers



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Agenda



●	NBASE-T Overview	Peter
●	NXP Overview	Toby
●	NXP Leverage of NBASE-T technology	Toby
●	Use Cases	Toby
●	Wrap-up & Discussion	Toby/Peter

NBASE-T Alliance

- NBASE-T Alliance (www.nbaset.org/)
 - Vendor alliance for 2.5G/5G BASE-T
- Who are we?
 - Member companies representing all areas of network infrastructure including components, silicon, systems, cabling, testing equipment
- What are we doing?
 - Educate the market about multiple NBASE-T applications, enable widespread deployment, facilitate interoperability and build the market



Promoters



Contributors



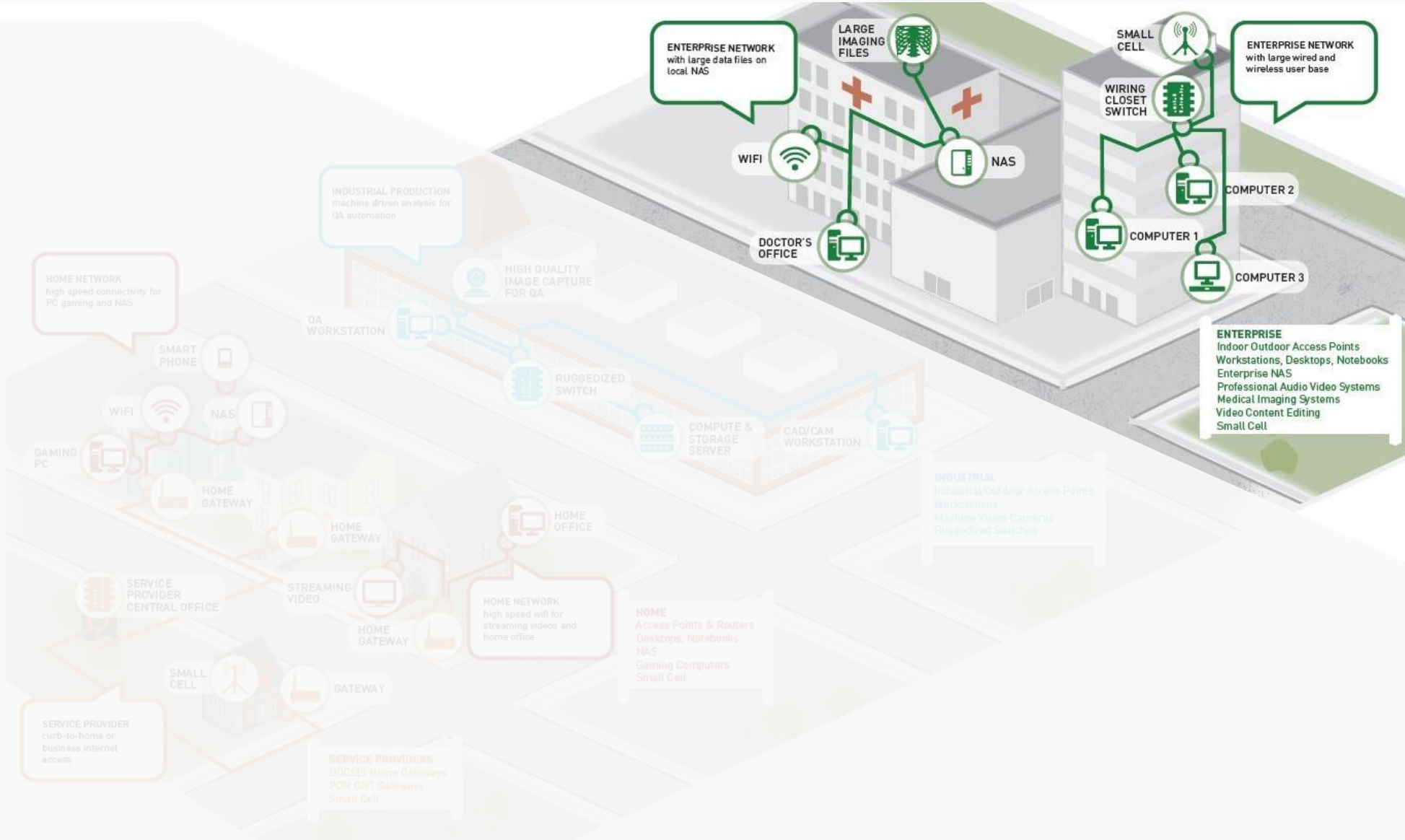
Adopters



Liaisons



NBASE-T Application Areas



Enterprise:

- Switch
- Wireless AP
- Desktop
- Storage
- Small Cell

Industrial:

- Switch
- Wireless AP
- Workstation
- Storage
- Compute
- Machine Vision

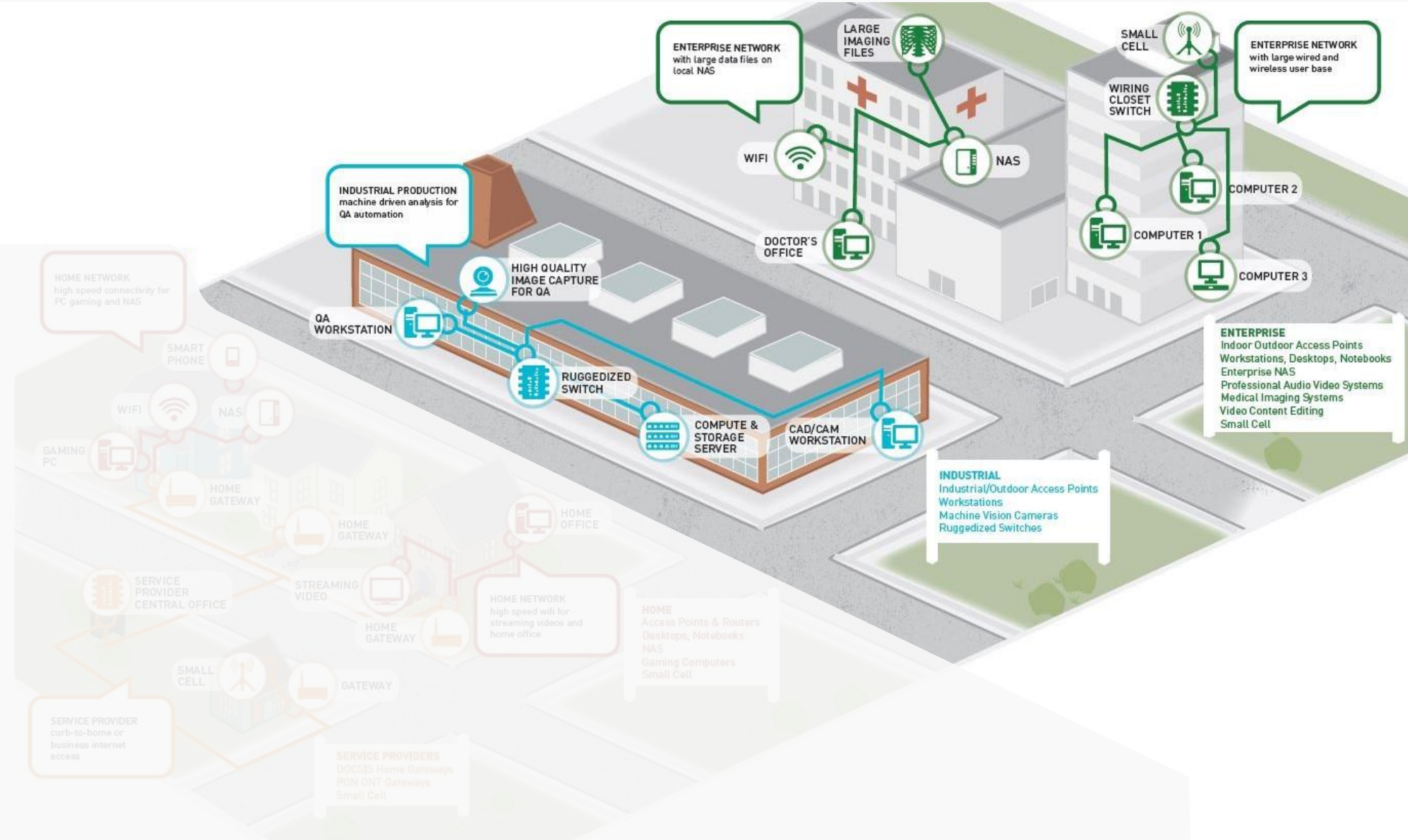
Home:

- Switch
- Wireless AP
- Storage Server
- Home Gateway
- Streaming Media

Service Provider:

- Small Cell
- Home Gateway

NBASE-T Application Areas



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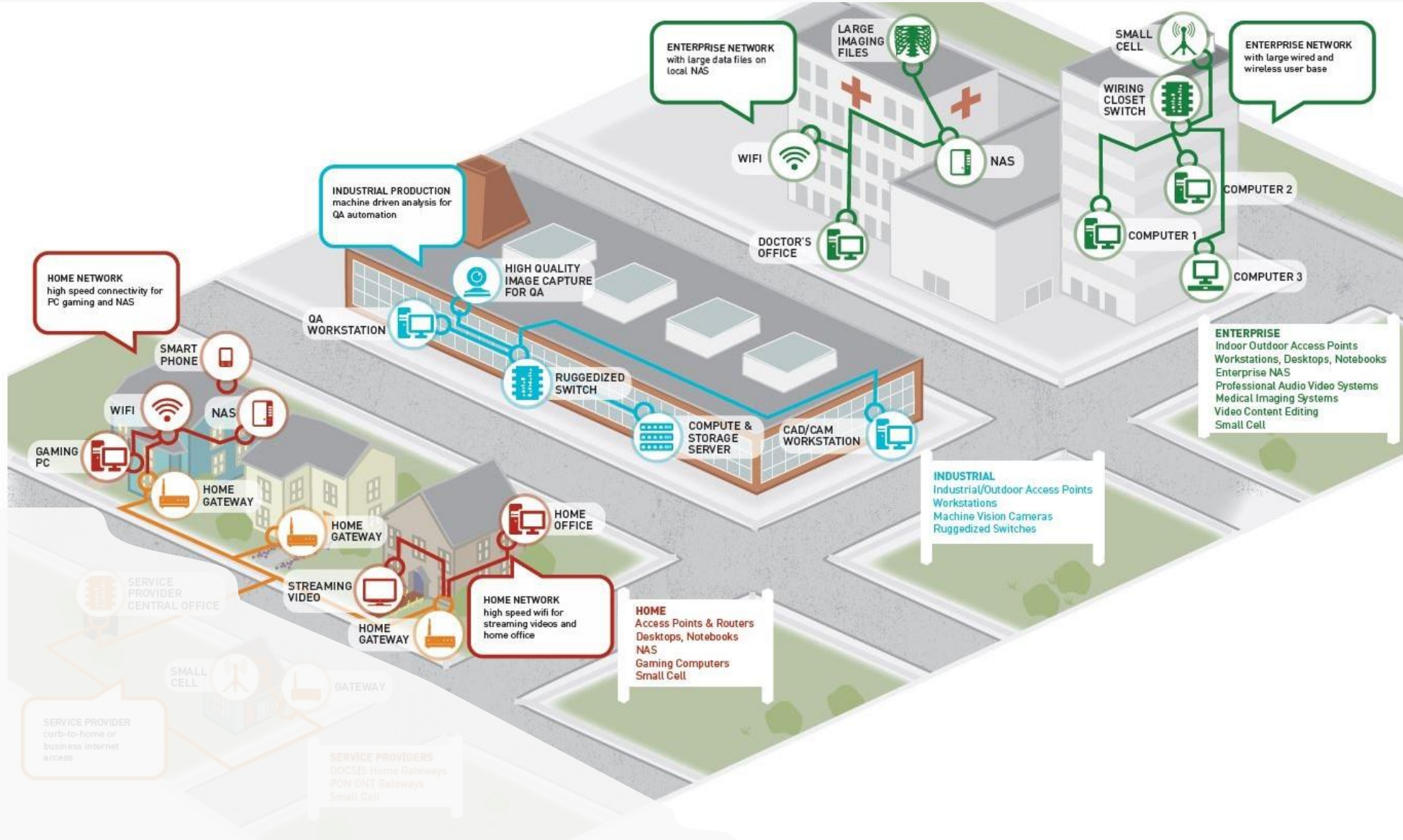
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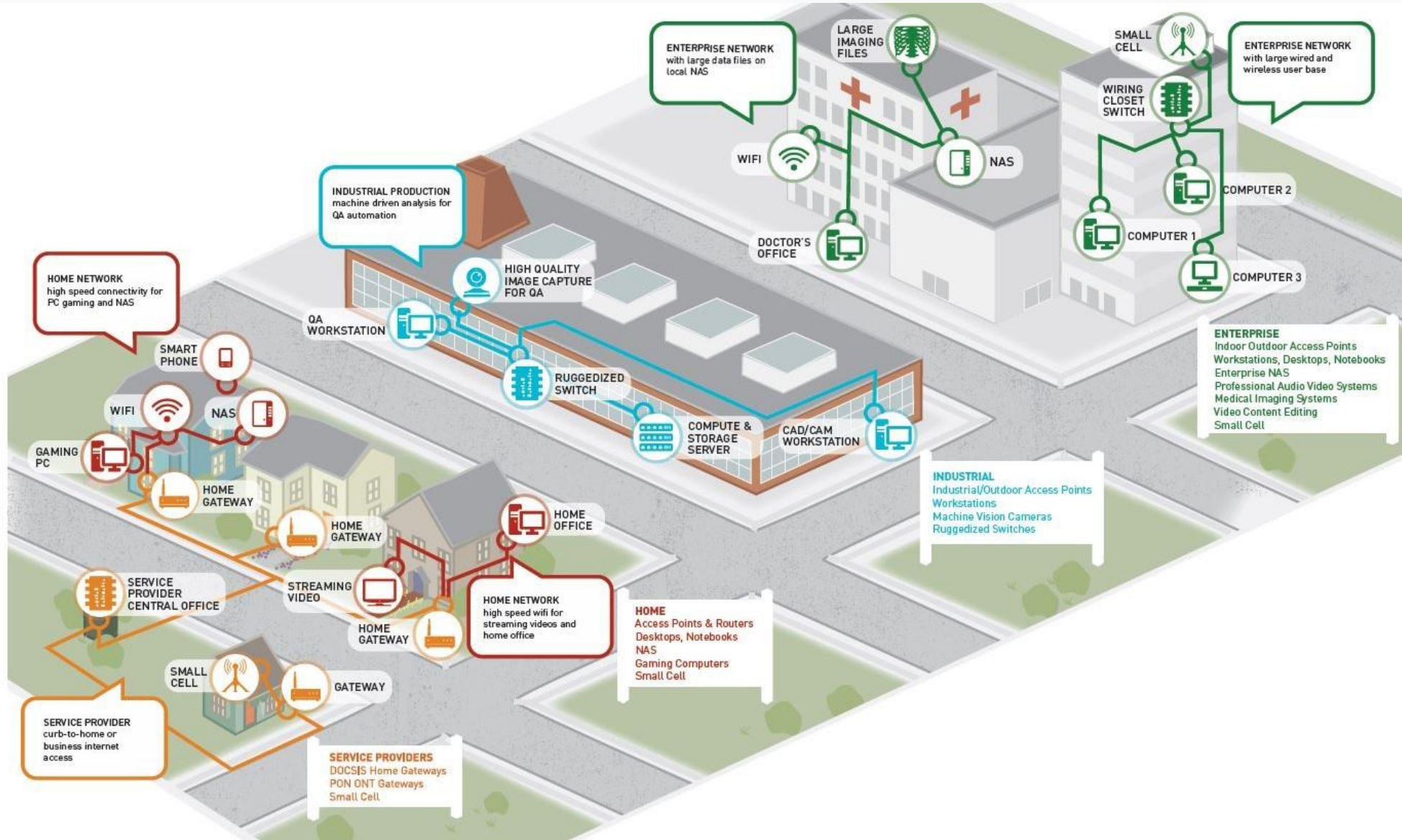
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Companies with NBASE-T Product

NBASE-T Alliance Member Companies

Component

Aquantia
Aruba HPE
Bel Magnetic Solutions
Cisco
GLGNet
Intel
KinnexA
Marvell
NXP

System Level Product

Aquantia
Aruba HPE
Cisco
Microsemi
Netgear
Pleora Technologies
Tehuti Networks
Teledyne e2v

Test Equipment

AEM
Aukua Systems
Spirent
Tektronix
Xena Networks

Non-Member Companies

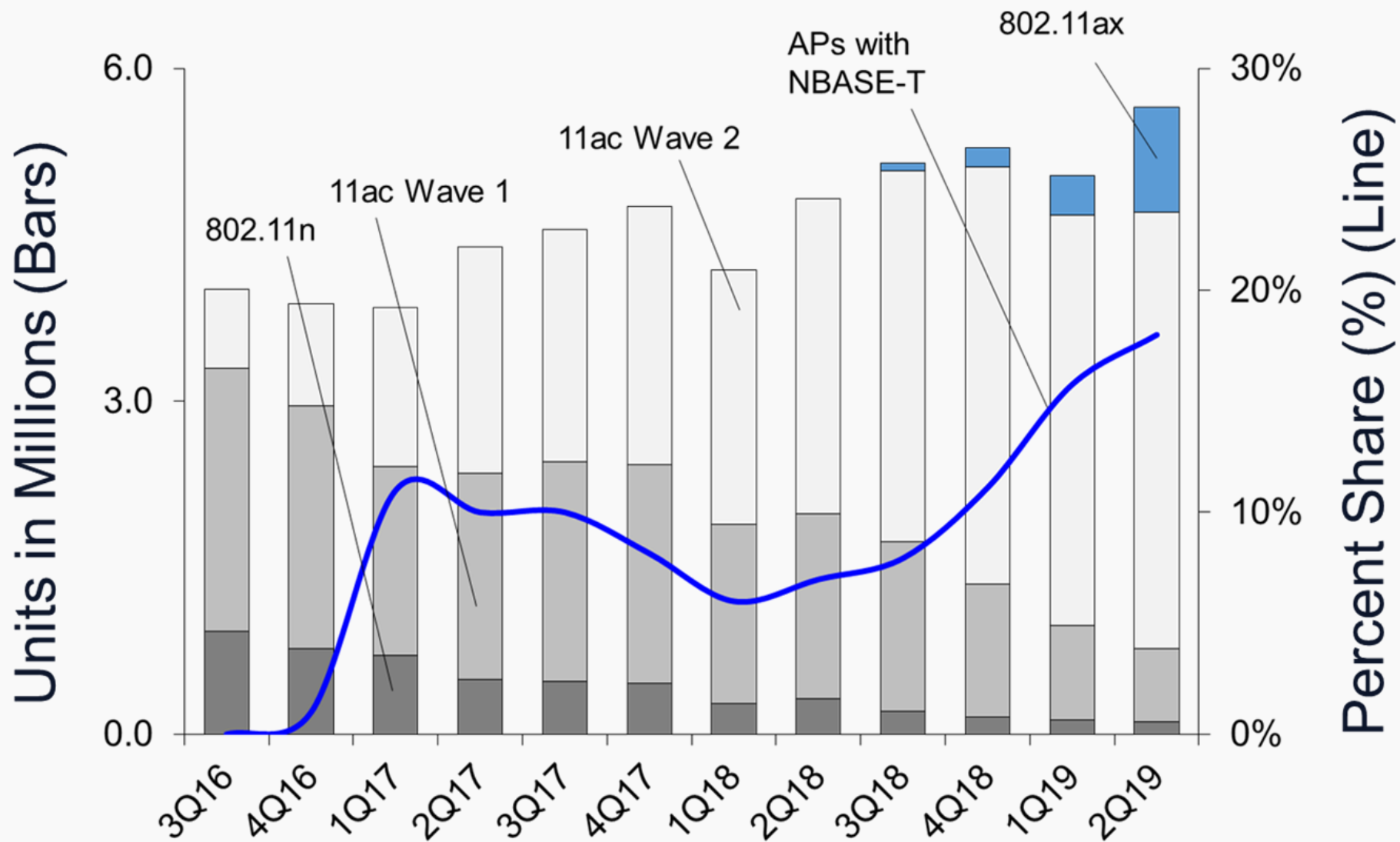
Component

Akitio
Dell
Gigabyte
Promise Technology
QNAP
Sonnet

System Level Product

Accton
Apple
ASRock
ASUS
Brocade
Buffalo
Dell
Dell EMC
Lenovo
MSI
Promise Technology
Sonicwall
StarTech
Supermicro

NBASE-T & Wireless

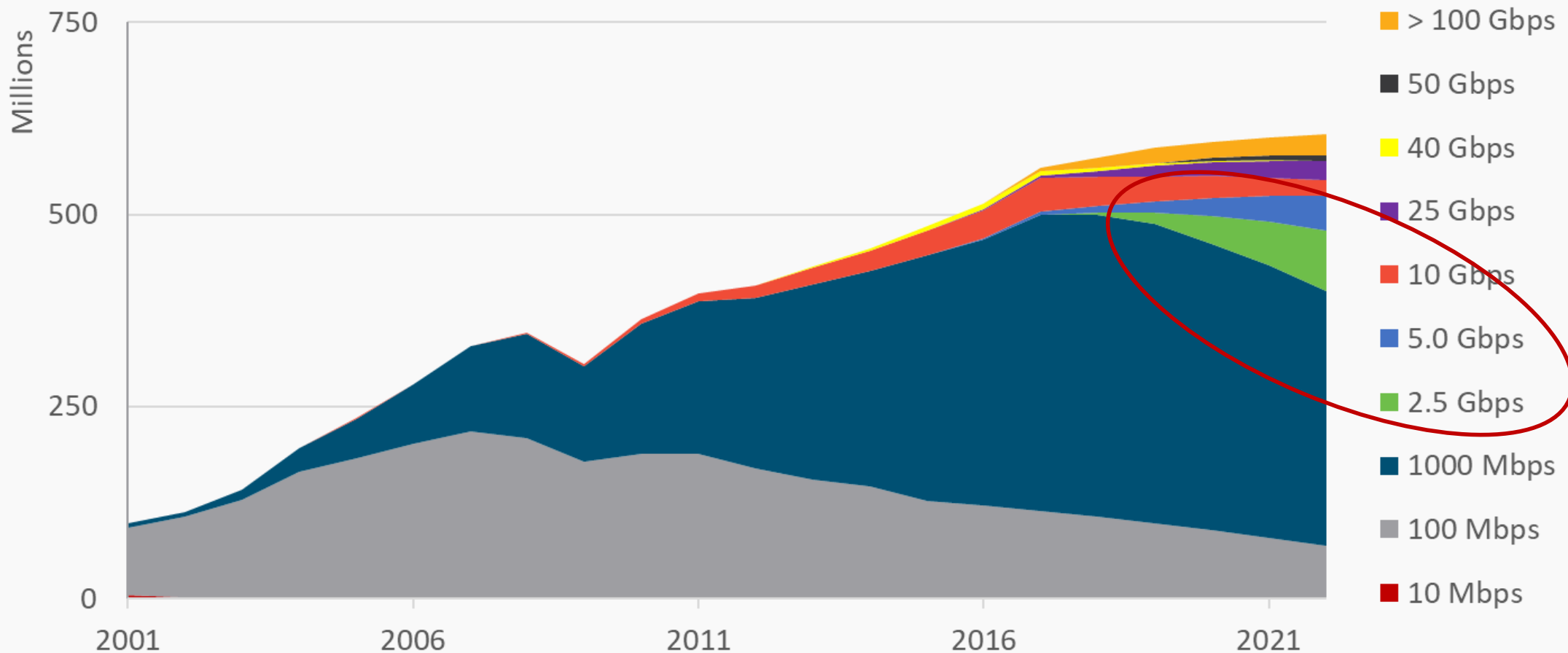


Source: [Dell'Oro Group NBASE-T Webinar November 2018](#)

NBASE-T Momentum



Ethernet Switch Ports
Dell'Oro Group Ethernet Switch 5-year Forecast Jan 2018





Value of NBASE-T Technology

Leverages more than 1.3+ billion Cat5e/Cat6 outlets and more than 70 billion meters of Cat5e/Cat6 cables that make up greater than 90% of the current installed base

Enables network evolution by providing up to 10x faster speed without pulling cables or requiring building construction

Supports high-speed links to next generation WiFi access points and high-data rate client PC and workstation systems



“NBASE-T technology is significantly impacting the market with the biggest transition we’ve seen in campus switching since 2000.”

- Dell’Oro Group



#NBASETQUOTES



NXP Overview

NXP Overview



- ✓ **#1** Automotive
- ✓ **#1** Secure Identification
- ✓ **#1** RF Power Transistors
- ✓ **#2** Communications Processors



SECURE CONNECTIONS
FOR A SMARTER WORLD

- ✓ **31,000** employees
- ✓ **11,000** engineers
- ✓ **9,000** patent families
- ✓ **60+** year history
- ✓ **\$9.4B** annual revenue

<https://www.nxp.com/docs/en/supporting-information/NXPCORPORATE.pdf>

Secure Connections for the Smarter World

Everything **Smart**

Everything **Connected**

Everything **Secure**



Processing

40B+ devices with intelligence shipped in 2020



Connectivity

1B+ additional consumers online, 30B+ connected devices

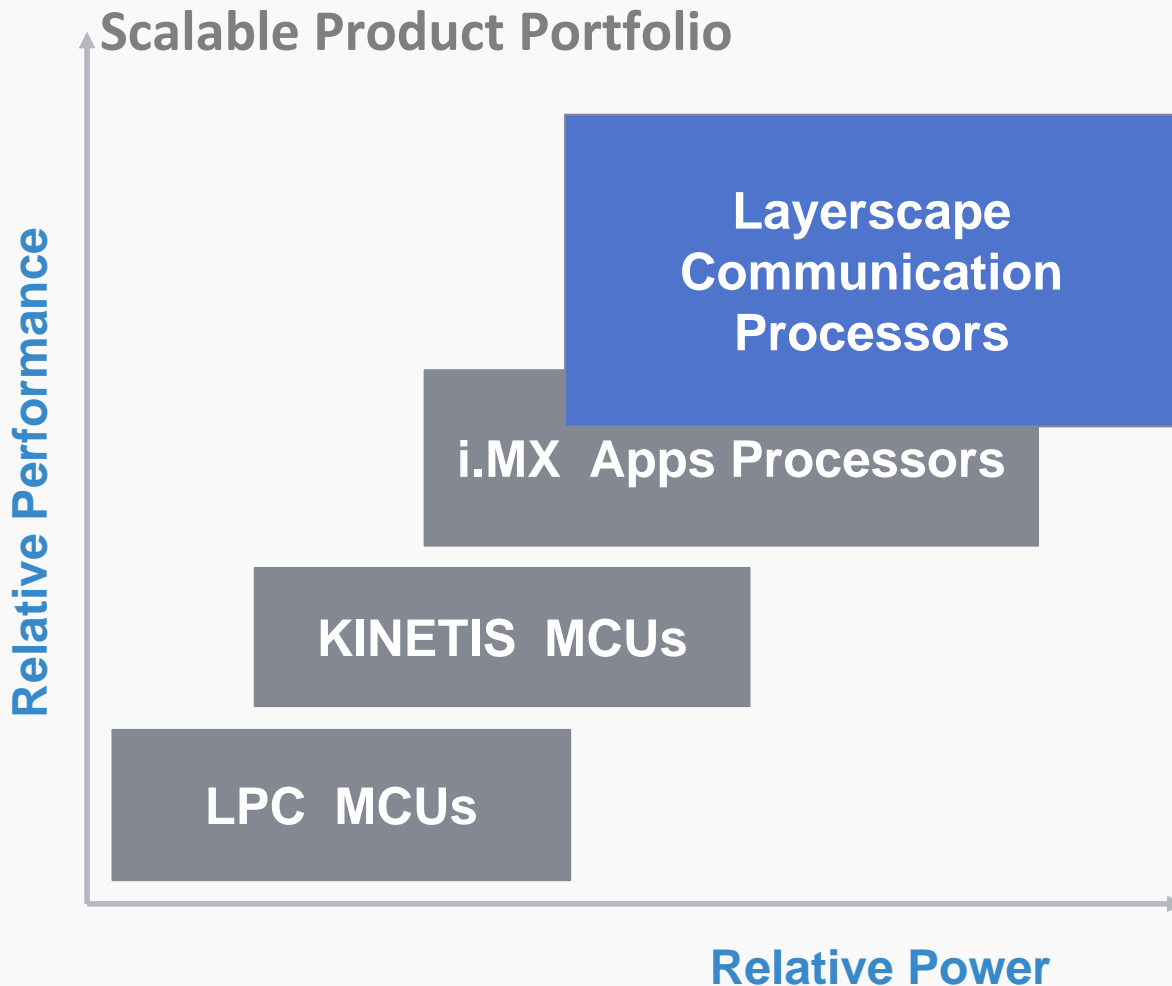


Security

Potential economy savings up to half a trillion dollars

Automotive | Industrial | Connected Devices | Internet of Things

NXP ARM Portfolio – Industry Leading Embedded Portfolio



Deep System & Application Knowledge

Portfolio

- Broadest range of embedded processing from lowest power 32-bit MCUs to high performance multi-core 32/64-bit application & communications processors
- Differentiated software ecosystem
- Delivering turnkey solutions (SW + Si)
- Commercial support & Services

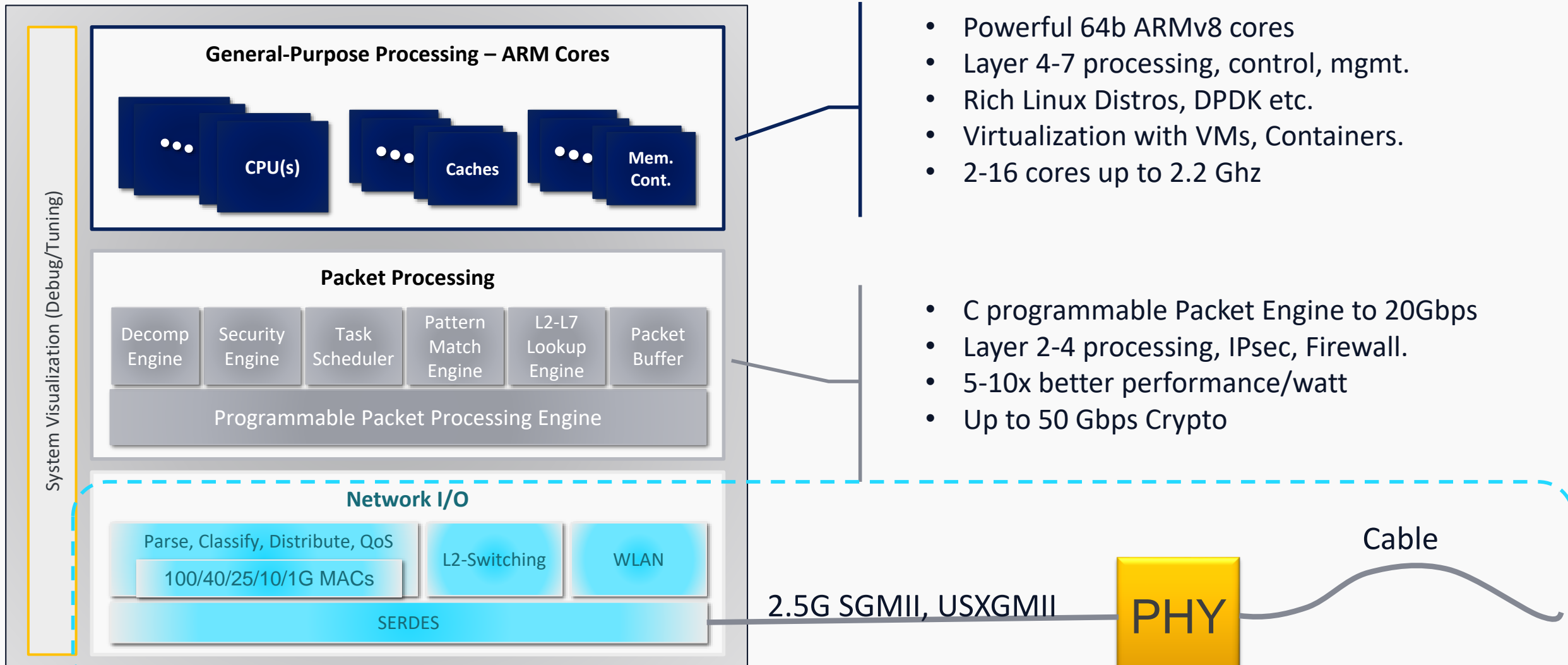
Customers and Markets

- Highly diversified customer base
- Global multi-market focus
- Strong presence in emerging applications



NXP Leverage of NBASE-T Technology

Layerscape intersection with NBASE-T

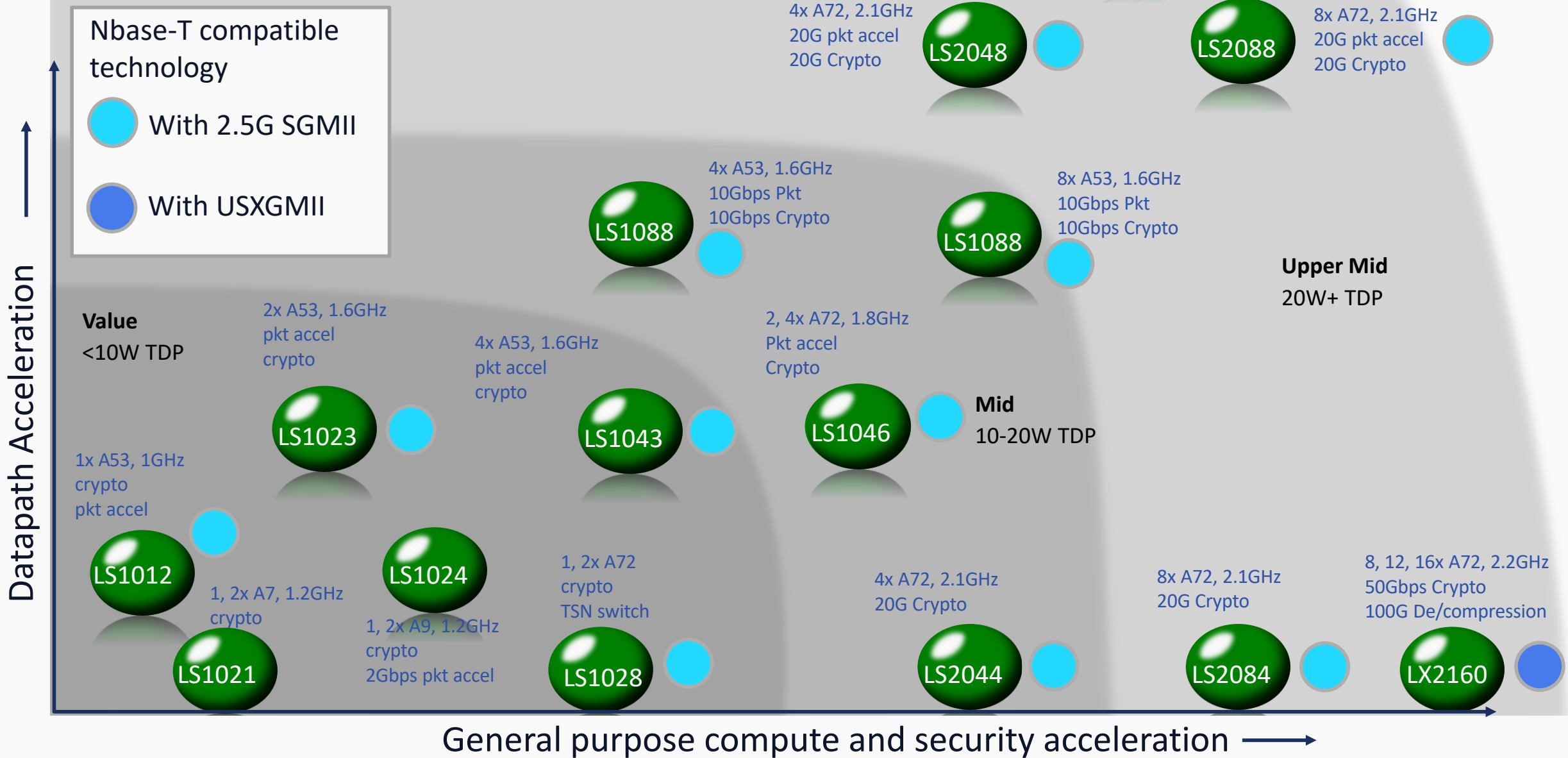


- Powerful 64b ARMv8 cores
- Layer 4-7 processing, control, mgmt.
- Rich Linux Distros, DPDK etc.
- Virtualization with VMs, Containers.
- 2-16 cores up to 2.2 Ghz

- C programmable Packet Engine to 20Gbps
- Layer 2-4 processing, IPsec, Firewall.
- 5-10x better performance/watt
- Up to 50 Gbps Crypto

System Visualization (Debug/Tuning)

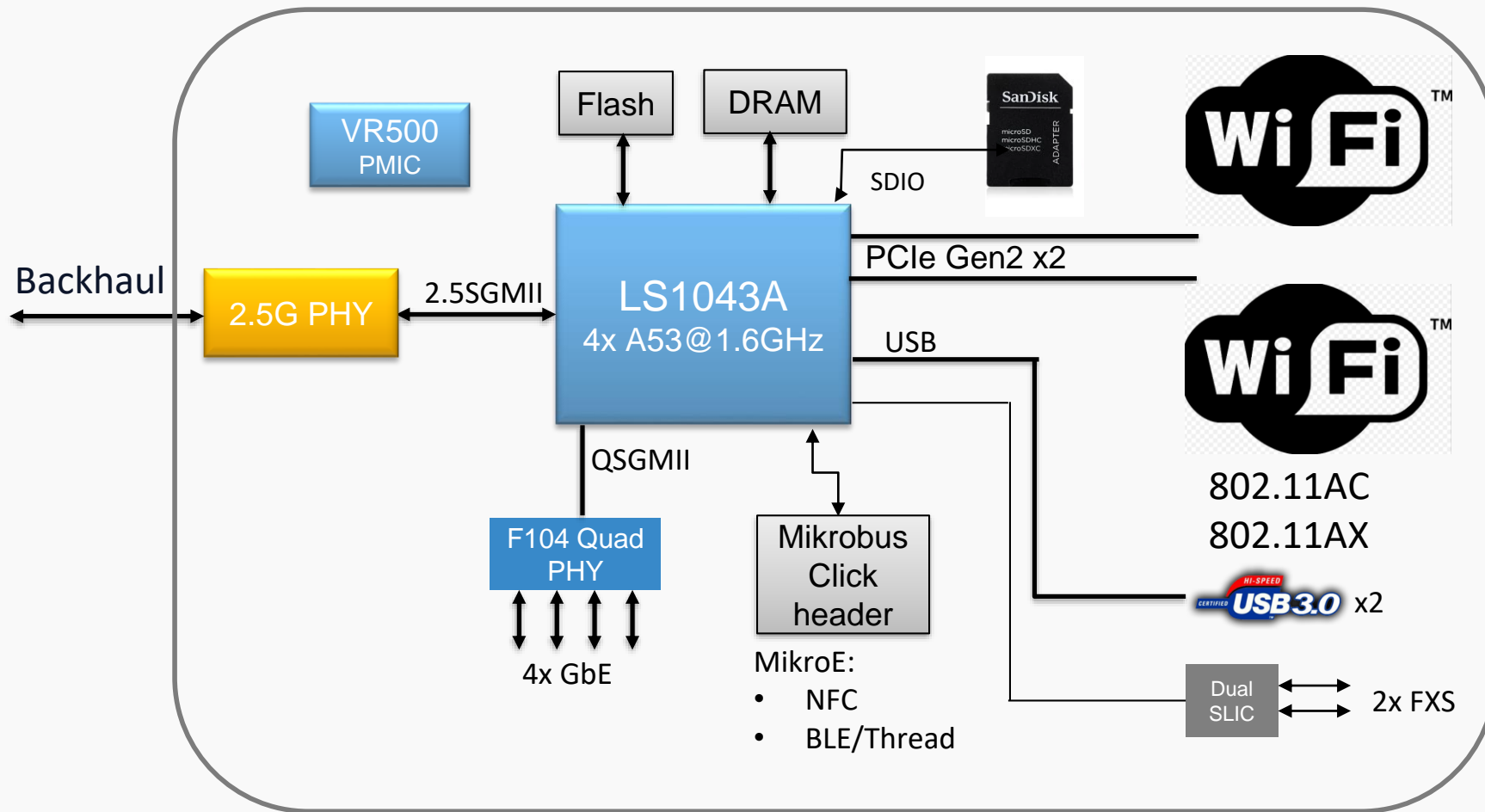
Layerscape Arm Product Portfolio



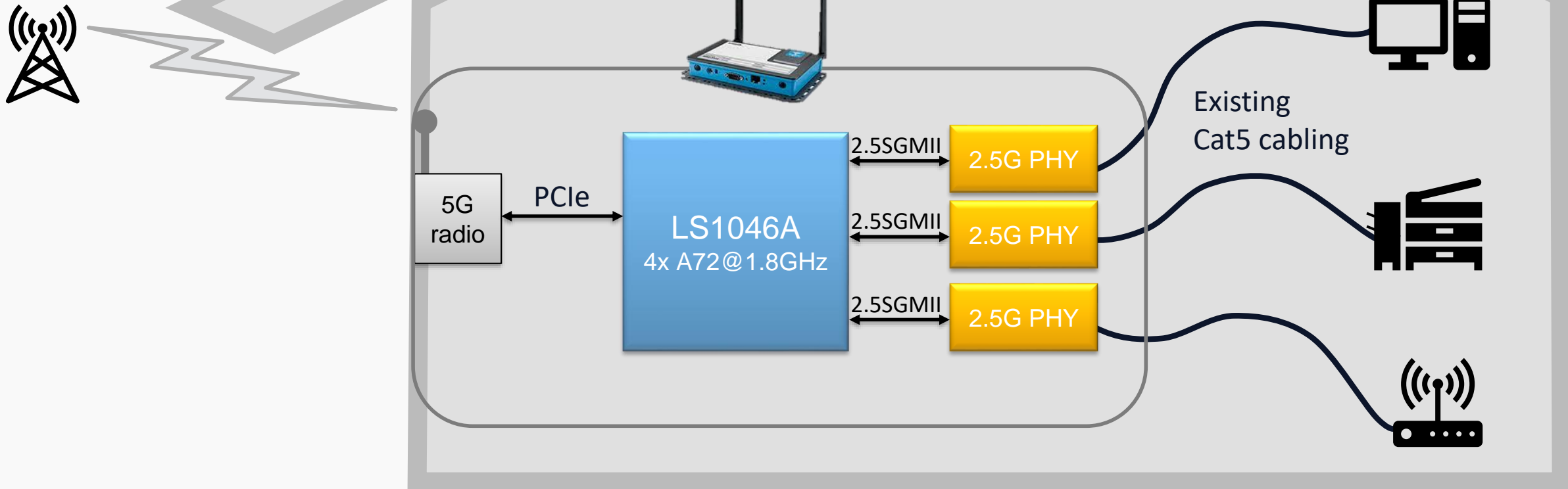


NXP NBASE-T Use Cases

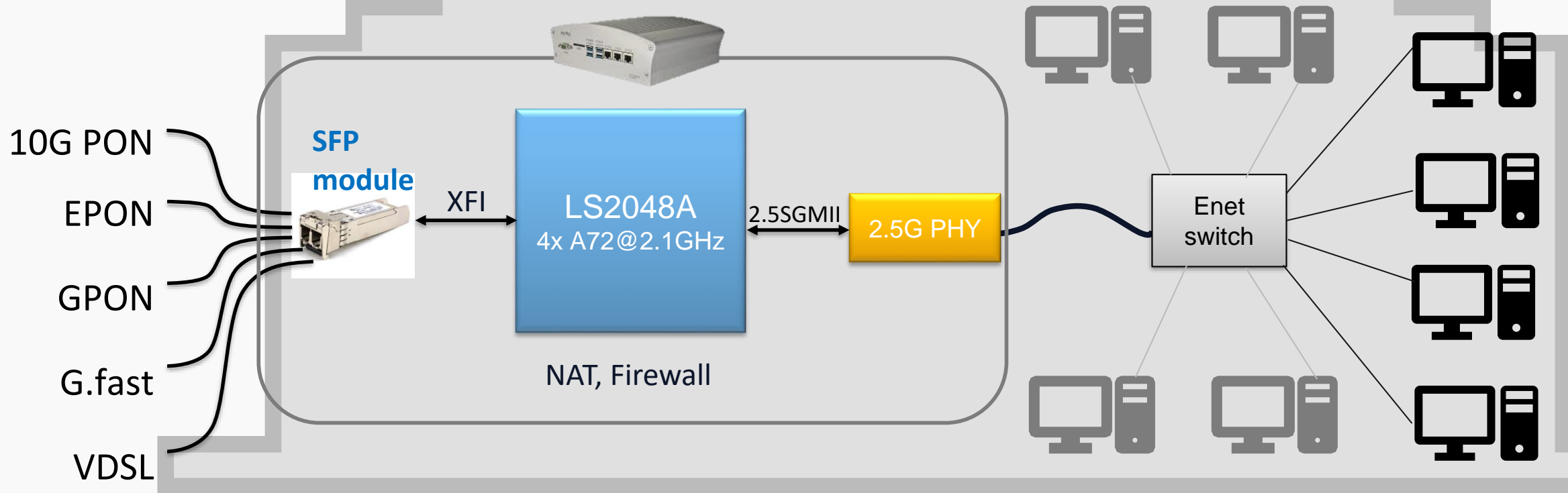
Access Point Use Case



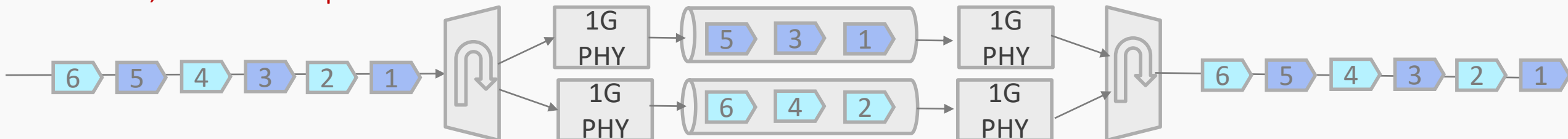
5G CPE Use Case



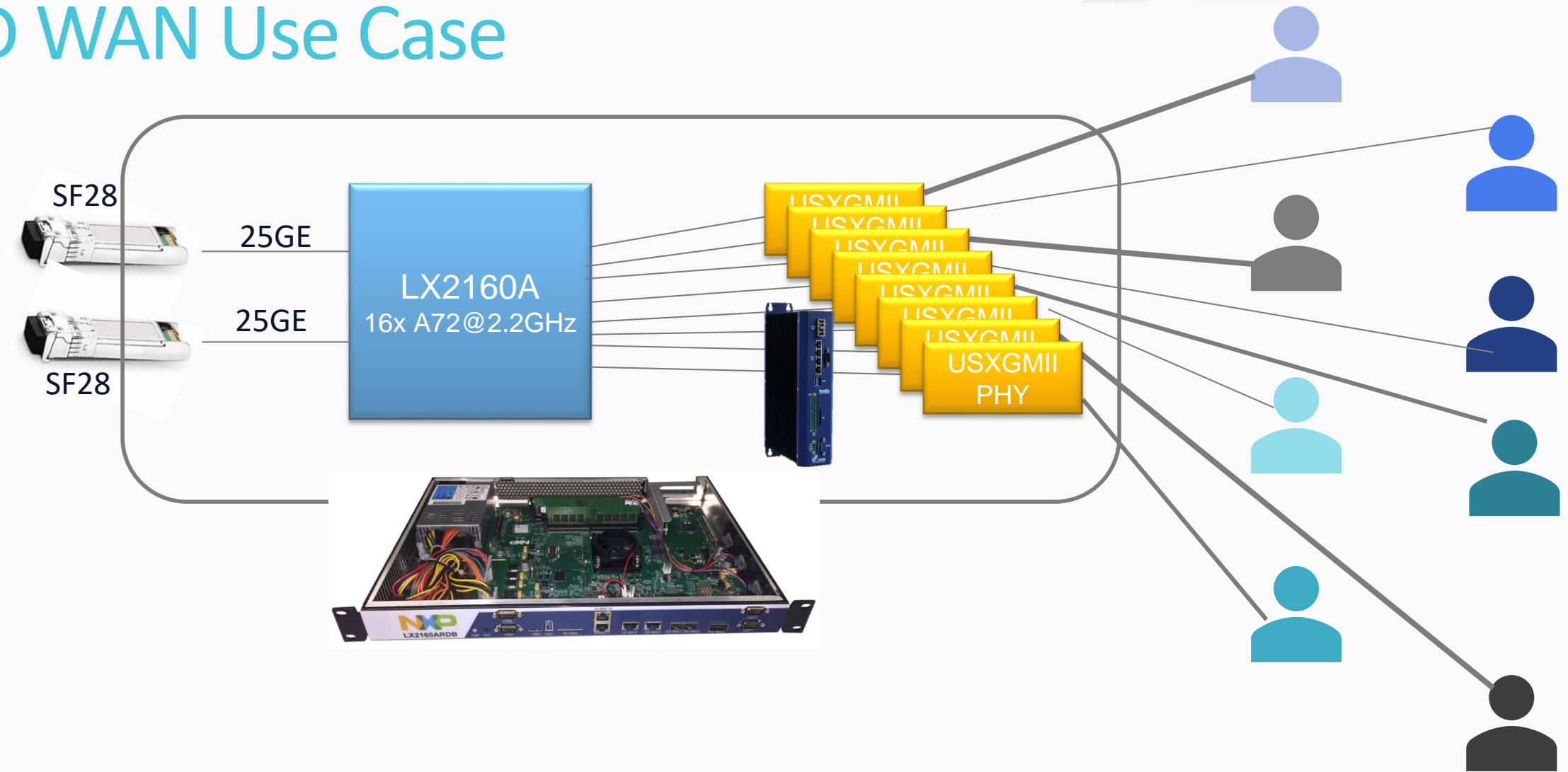
SMB Use Case: easier future proofing



Alternative, difficult to implement solution:



SD WAN Use Case

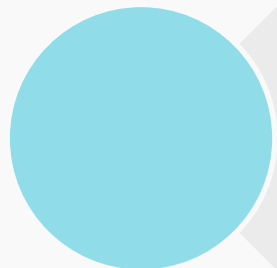




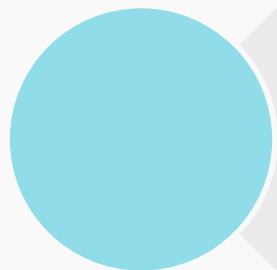
Wrap-up & Discussion



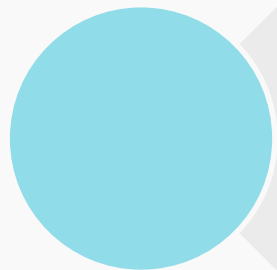
Wrap-up & Discussion



NXP leveraging NBASE-T across many marks



2.5G Ethernet easy to use



USXGMII for easier bandwidth control



Thank you!

Visit www.nbase-t.org & www.nxp.com
for more information