

Qualcomm

Qualcomm  
networking pro  
series

Wi-Fi 7

# Qualcomm<sup>®</sup> Networking Pro Series

#1

Global Wi-Fi  
shipments  
(by volume)<sup>1</sup>

900+

Wi-Fi 6/6E designs wins  
across all product lines<sup>2</sup>

6B+

Wi-Fi products  
shipped since 2015<sup>2</sup>

#1

Enterprise<sup>3</sup>  
& Wi-Fi Mesh<sup>4</sup>

**Global Wi-Fi leader, innovating since 1998**

<sup>1</sup> ABI Research: Mar 21, Wireless Connectivity Technology Segmentation and Addressable Markets

<sup>2</sup> Qualcomm Technologies, Inc. Internal data

<sup>3</sup> IDC WW Quarterly LAN Tracker ([link](#)), <sup>4</sup> The NPD Group, Inc. US Retail Tracking Service, Mar 21 + QTI analysis

Qualcomm  
immersive home  
platform

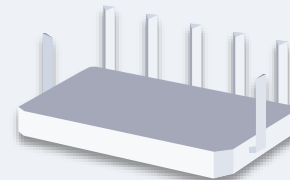
# Two dynamic portfolios for Wi-Fi infrastructure

Qualcomm  
networking  
pro series



Immersive Home Platform

Advanced home applications



Networking Pro Series

Enterprise applications



# Qualcomm Networking Pro Series Leadership

# 275+

design wins to date



Enterprise APs



Mesh system



Carrier gateways



Gaming routers



5G FWA gateways



# Qualcomm Networking Pro Series

Industry Leading Capacity, Most Expansive Platform Portfolio



Maximum  
capacity



Massive multi-user  
scale




Modular platform  
architecture



**Interactive  
video**

**High throughput**



**Cloud based  
gaming**

**Low latency**



**Emerging AR  
applications**

**Deterministic Performance**

# Modern requirements of Wi-Fi

A challenge for today's technology providers

The  
Evolution  
of  
Wi-Fi

Wi-Fi  
4

Wi-Fi  
5

Wi-Fi

6

Wi-Fi

7



# Early Wi-Fi

802.11g | 2013

AVAILABLE SPECTRUM

**80**  
MHz

SYSTEM WIRELESS CHANNELS

**1**  
Radio

SYSTEM WIRELESS CAPACITY

**54**  
Mbps

**20 MHz**

# Wi-Fi 6

802.11ax | 2017

AVAILABLE SPECTRUM

560

MHz

SYSTEM WIRELESS CHANNELS

2-3

Radios

SYSTEM WIRELESS CAPACITY

6.0

Gbps

160 MHz

MAX AVAILABLE CHANNEL

# Wi-Fi 7

802.11be | Today

AVAILABLE SPECTRUM

# 1760

MHz

SYSTEM WIRELESS CHANNELS

# 3-4

Radio

SYSTEM WIRELESS CAPACITY

# 33

Gbps

# 320 MHz

MAX AVAILABLE CHANNEL

# Redefining high performance

Extremely High Throughput | Deterministic Latency

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Wi-Fi 7

Peak system  
PHY rate

**33 Gbps**

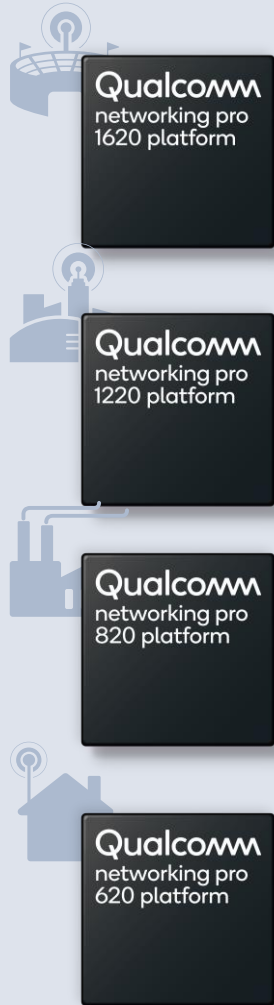
Wireless PHY rate  
per channel









**10+ Gbps**

User capacity per  
channel

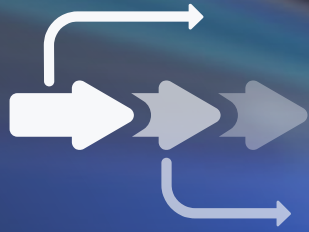
**500+ Users**

# The Most Scalable Portfolio for Wi-Fi 7 Networking



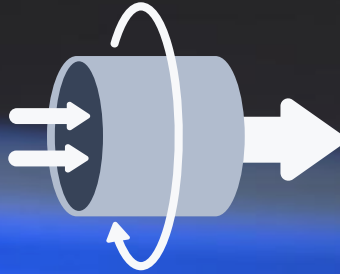
Stream count	Peak PHY rate	Configuration	Band configuration
16-Stream	33 Gbps	 4 + 4 + 4 + 4	 Quad-band
12-Stream	21 Gbps	 4 + 4 + 4	 Tri-band
8-Stream	16 Gbps	 2 + 2 + 2 + 2	 Quad-band
6-Stream	10 Gbps	 2 + 2 + 2	 Tri-band

# Game-changing Wi-Fi 7 Features



## Faster Connections

320MHz channels  
4k QAM



## Multiple Connections

Multi-link operation



## Adaptive Connections

Adaptive Interface Puncturing

# Wi-Fi 7: Faster Connections

160 MHz

5 or 6 GHz

240 MHz

5 or 6 GHz

320 MHz

6 GHz



## Wider Channels

Doubles the max channel to 320MHz:  
Delivers higher speed, lower latency transfers

## 4K QAM

Advanced modulation:  
impactful performance improvements

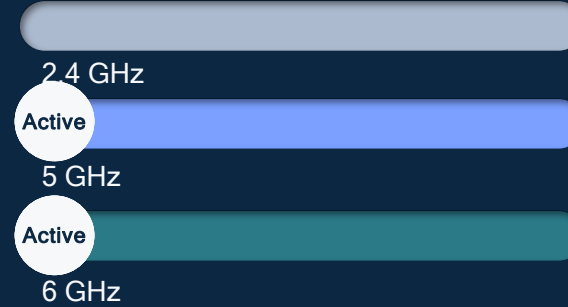
Multiple Connections  
with

# Wi-Fi 7 Multi-Link

Wi-Fi 7 enables for the first time

## Multi-Link

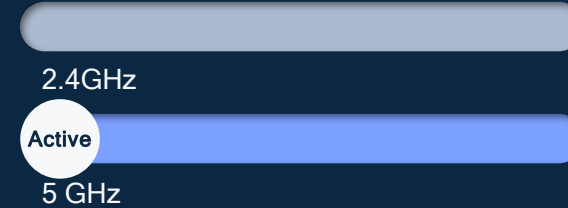
running alternating or simultaneous



Dual-band and tri-band enables

## a choice of links

between devices



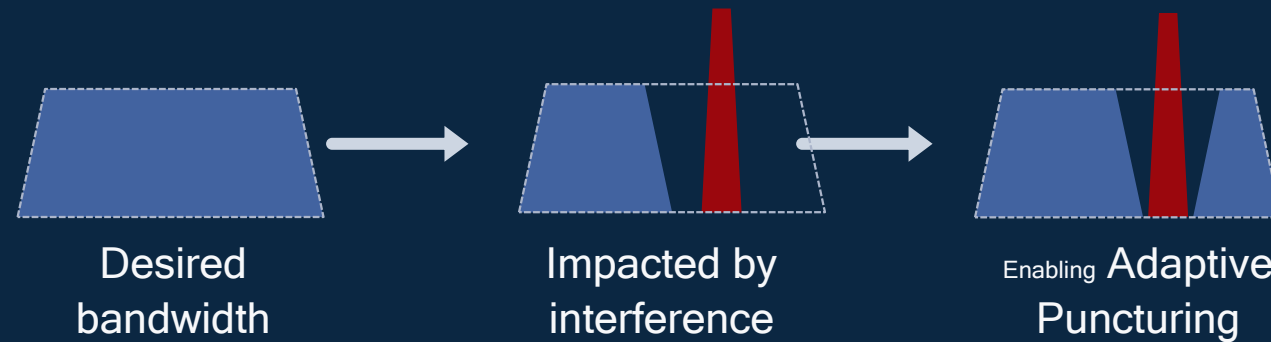
From the beginning of Wi-Fi

## one link

between router and client



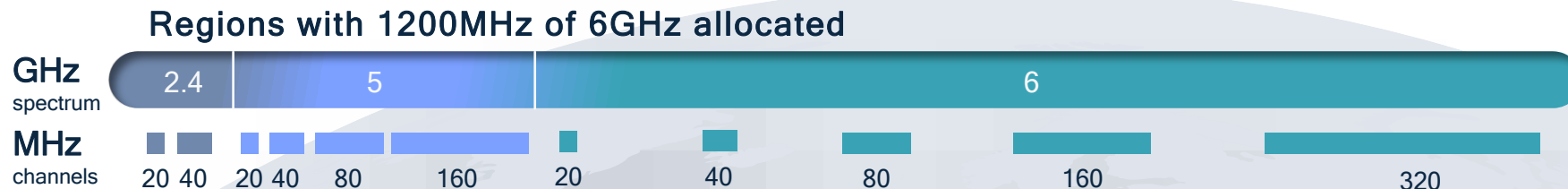
# Wi-Fi 7: Adaptive Connections



## Adaptive Interference Puncturing

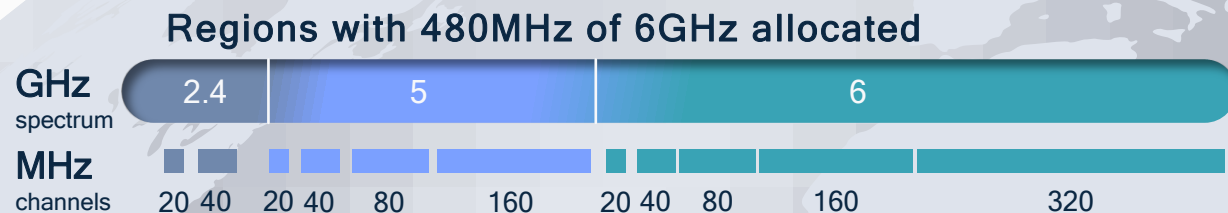
Maximizes channel bandwidth in the presence of interference

# Ideal configurations for every region



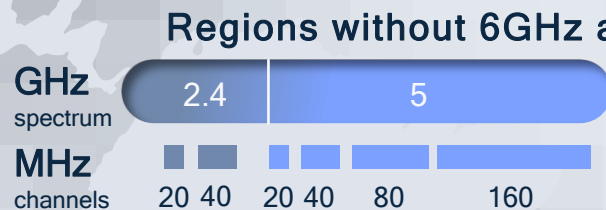
**Quad-Band** 33 Gbps

320 MHz (2.4GHz)  
320 MHz (5GHz)  
240 MHz (6GHz)  
40 MHz (2.4GHz) 4x4 channels



**Quad-Band** 27 Gbps

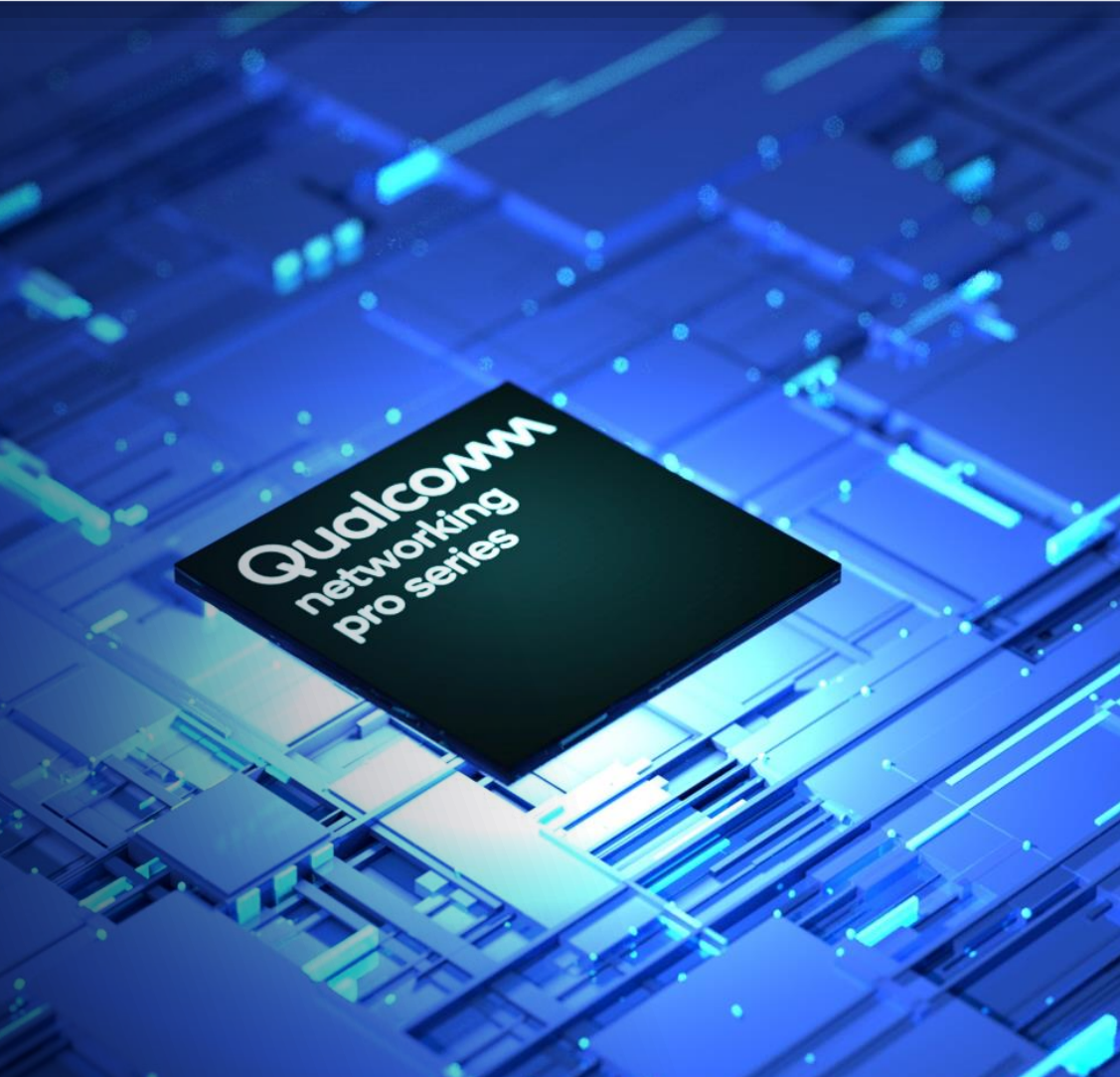
320 MHz (2.4GHz)  
240 MHz (5GHz)  
160 MHz (6GHz)  
40 MHz (2.4GHz) 4x4 channels



**Tri-Band** 10 Gbps

160 MHz (5GHz)  
80 MHz (5GHz)  
40 MHz (2.4GHz) 4x4 channels

# Wi-Fi 7 increases customer options



## Massive portfolio breadth



**BE33000**

Quad Band *4+4+4+4*



**BE21000**

Tri Band *4+4+4*



**BE16000**

Quad Band *2+2+2+2*



**BE10000**

Tri Band *2+2+2*



**AX5400**

Dual Band *2+4*



**AX3000**

Dual Band *2+2*

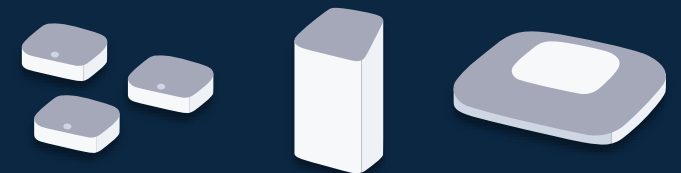
# Complete Wi-Fi 7 Ecosystem



Announced: Feb 2022



Announced: May 2022



Wi-Fi 7  
high-performance  
toolkit

Networking  
Pro Series platforms  
approach

Bringing  
Wi-Fi 7  
to  
Networking  
Pro Series  
platforms



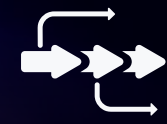
320 MHz



Wider Channels



Multi-link



Adaptive  
Channels



Maximum  
Capacity



Massive  
Multi-user



Scalable Product  
Platform

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Wi-Fi 7

Sampling  
now

# Thank you

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