

MEDIATEK

Wired and Wireless Connectivity (Wi-Fi 8, 5G, Satellite, Fiber)

James Chen, Ph.D.

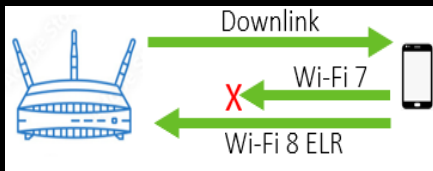
VICE PRESIDENT,
PRODUCT TECHNOLOGY
MARKETING

Comprehensive Support for Wi-Fi 8 Features

No competitor matches this level of support

IMPROVES AI EXPERIENCES

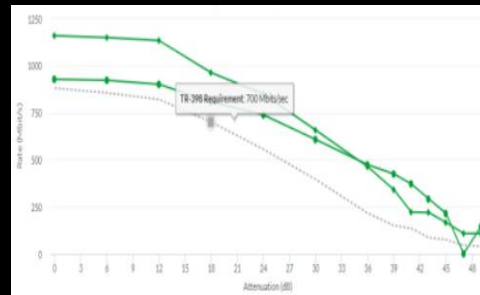
- 1 Enhanced Long Range (ELR) for better uplink range
- 2 Distributed Resource Units (DRU) for better uplink range & speed



2026 CES DEMO

BRINGS HIGHER SPEEDS EVERYWHERE

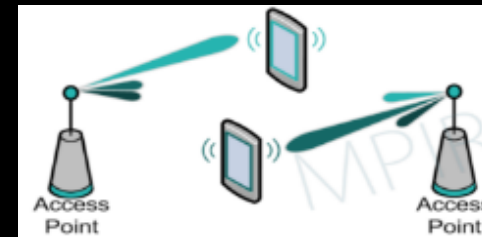
- 3 Unequal Modulation for more speed in different environments
- 4 More MCS Levels for more speed at intermediate distances



DEMOING IN Q2 2026

OFFERS CELLULAR-GRADE PERFORMANCE FOR MESH NETWORKS

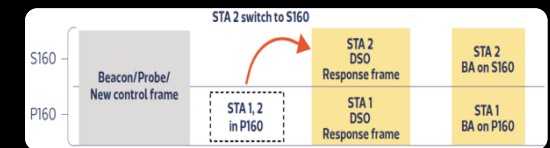
- 5 Multi-AP Coordination just like CoMP introduced in LTE
- 6 Seamless Roaming with instant handovers



DEMOING IN Q3 2026

PROVIDES BETTER ENERGY EFFICIENCY

- 7 Dynamic Sub-Band Operation (DSO) for better efficiency
- Non-Primary Channel Access (NPCA) for improved channel utilization



2026 CES DEMO

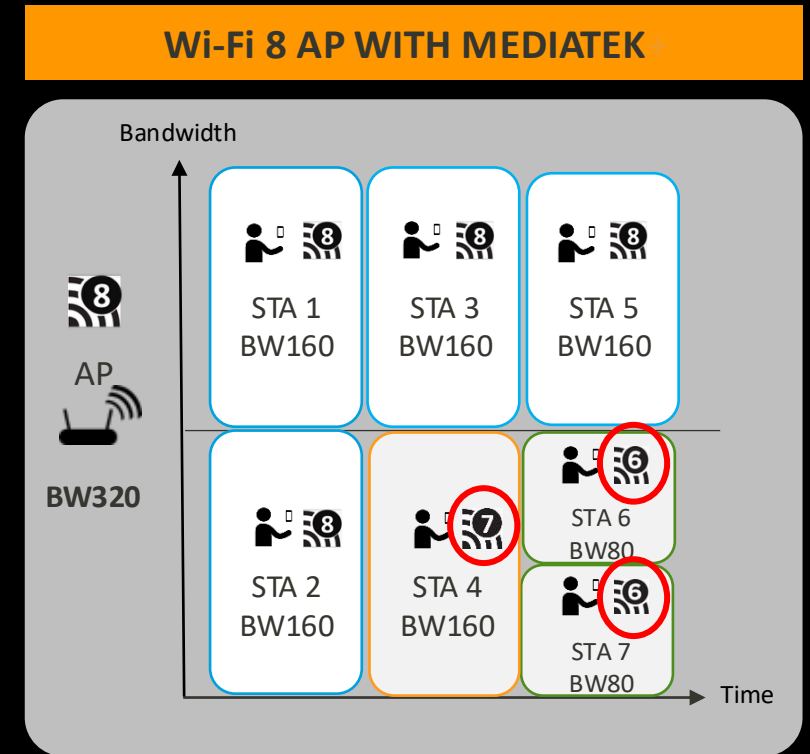
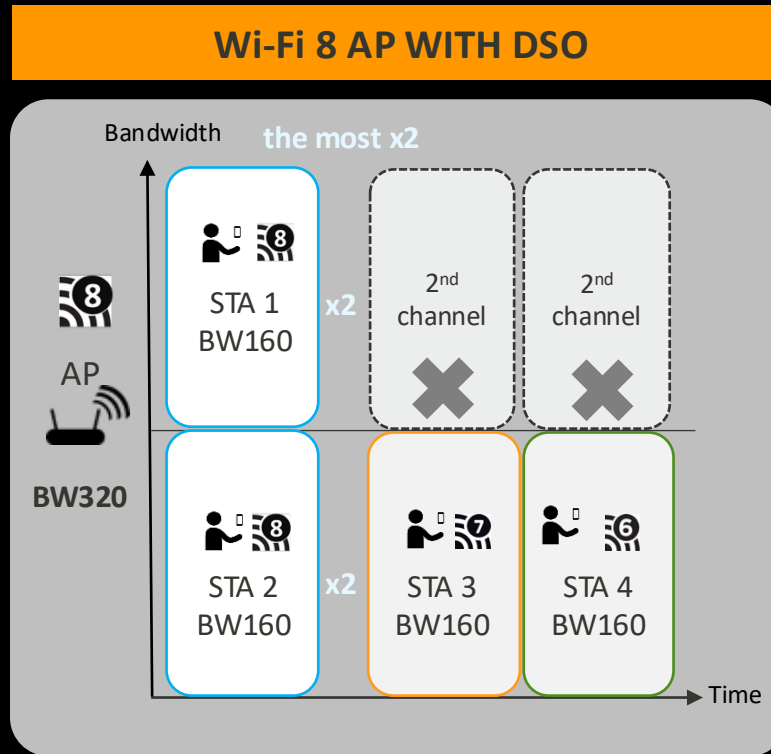
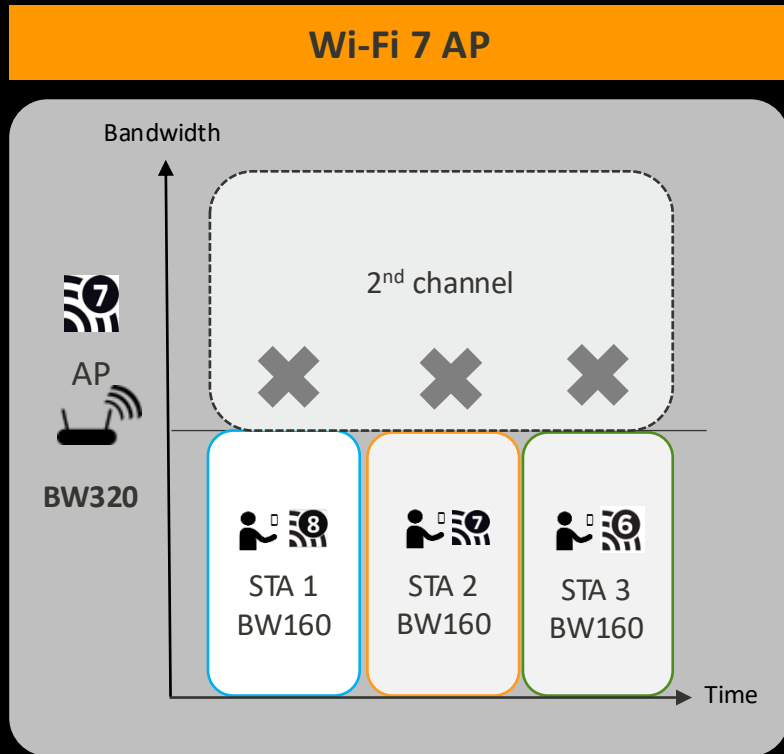
Wi-Fi 8 Conundrum: When Can Subscribers Enjoy Benefits?

Wi-Fi 8 APs and clients need 3+ years to reach 40% of all new shipments

END-USER BENEFITS	ONE WI-FI 8 AP + ONE WI-FI 8 CLIENT	ADDITIONAL WI-FI 8 AP	ADDITIONAL WI-FI 8 CLIENT
Improved AI Performance (ELR and DRU)	YES	NO	NO
Higher Speeds in More Locations (Unequal modulation, more MCS)	YES	NO	NO
Cellular-Quality Mesh (Multi-AP and Seamless Roaming)	YES	YES	NO
Improved Energy Efficiency (DSO, NPCA)	YES	NO	YES

MediaTek Brings Wi-Fi 8 Benefits to Non-Wi-Fi 8 Clients

Reducing the three-year delay to mass Wi-Fi 8 adoption



MediaTek's Leadership in 5G FWA

Three generations of product and market leadership



MEDIATEK T750 7nm

- 3GPP Release 15 (selected R16)
- Quad A55 (22KDMIPS)
- Sub 6GHz 2CC CA (>4Gbps)
- 2.5Gbps LAN interfaces
- Wi-Fi 6 Host (up to AX3600)



MEDIATEK T830 4nm

- 3GPP Release 16 (selected R17)
- Power Class 1.5
- Sub 6GHz 4CC CA (>7Gbps)
- 3Tx for > 40% UL throughput
- 8Rx to boost CPE Cell-Edge DL Tput by 2x
- 5G L4S Low Latency
- 10Gbps LAN interfaces
- Wi-Fi 7 Host (up to BE19000)

NEW: 5G FWA SOLUTION FOR 2026-2027



MEDIATEK T930 4nm

- 3GPP Release 18/19
- R18 8Rx 3CC
- R19 HPUE
- R19 3TX ULTX Switching
- Sub 6GHz 6CC CA
- Wi-Fi 8 options



Advantages of MediaTek T930

Breakthroughs in QoS, throughput, latency, and spectrum efficiency



Breakthrough in QoS

40% faster DL, 40% faster UL
20x shorter Latency



Spectrum efficiency

40%+ Spectrum Efficiency
40%+ Cell Coverage



Wi-Fi Connection

Wi-Fi 8 upgrade
4T5R: 30%+ Coverage

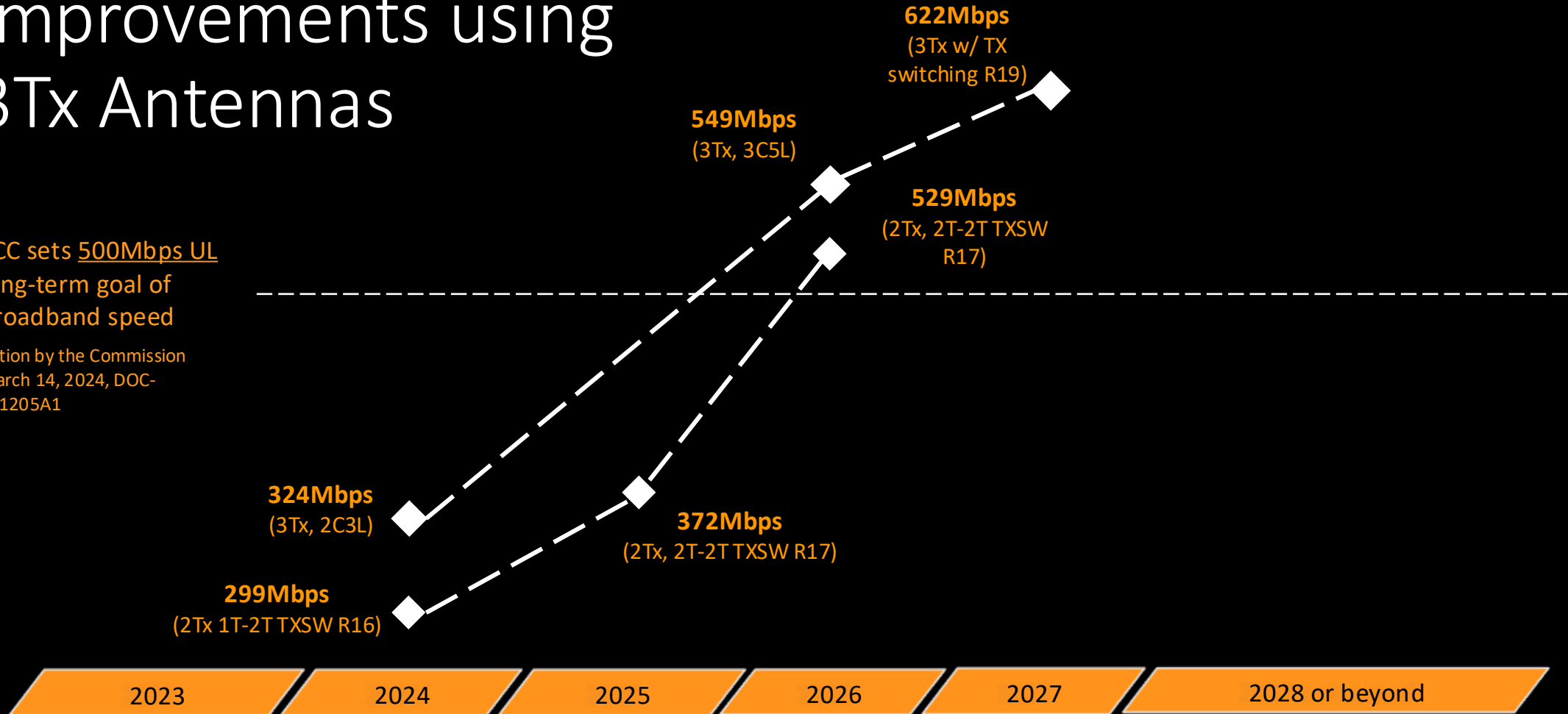
- TDD PC1 and FDD PC1.5
 - 3TX ULTX switching-19 and 3TX 5-layer
 - 8Rx 3CC
 - Transmit Antenna Selection (TAS)
 - 6CC 400MHz
 - L4S
- Achieves higher UL MIMO coverage
 - Boosts uplink throughput
 - Improves spectrum efficiency 40% compared to the competition
 - Ensures optimal uplink performance
 - Improves AL peak throughput up to near 10 Gbps, 40% faster
 - Reduces latency under all conditions without throughput degradation

5G CPE Uplink Speed Improvements using 3Tx Antennas

Better Performance for AI Applications

FCC sets 500Mbps UL long-term goal of broadband speed

Action by the Commission
March 14, 2024, DOC-401205A1



What's Ahead: 50 Gb/s Fiber

Collaborating with partners to test next-generation broadband solutions

Airoha (MediaTek subsidiary) participated in Broadband Forum's Plugfest (October 2025), testing:

- 25GS-PON Optical Network Unit (ONU)
 - High-Speed PON (HSP) capabilities for 50G PON
- 25G and 50G PON will support high-bandwidth, low-latency applications such as 8K video streaming and cloud computing.
 - Interoperability testing is essential to enable scalable, flexible future PON deployments.

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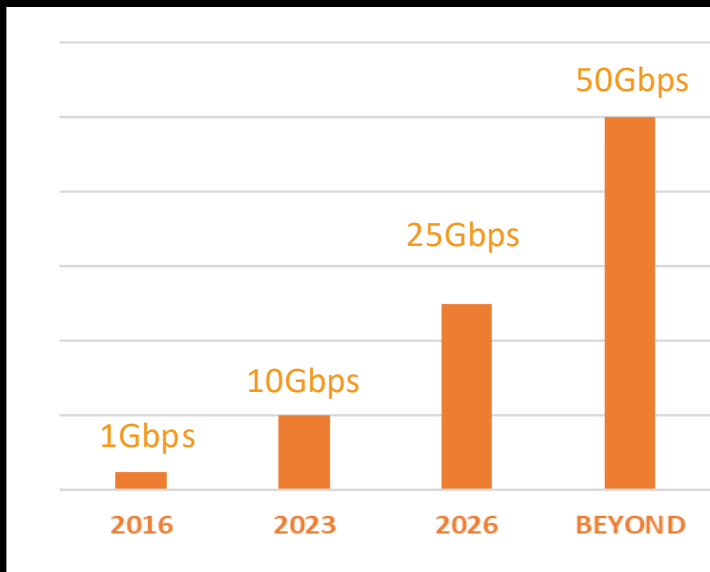


Record vendor turnout powers high-speed fiber device compatibility

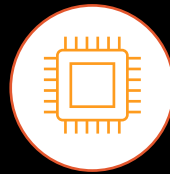
Higher-Speed PON devices from Airoha Technology, Calix, Nokia, and Sagemcom and 25GS-PON and XGS-PON systems from Evolution Digital, Hitron Technologies Inc., and MT2 were successfully tested at the latest Broadband Forum Plugfest at the University of New Hampshire Interoperability Labs (UNH-IOL) last month.

The Fastest Growing Fiber Platform Solution Provider

UP TO 50GBPS FIBER SPEEDS

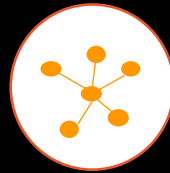


TRIPLE COMPUTE TECHNOLOGY



CPU

- Multi-core Arm CPUs
- Secure boot, TrustZone
- Low power



Network Processor

- Frees up CPU
- Up to 16-cores/30K DMIPs
- Routing offload
- 10Gbps line rate security



HW Accelerators

- 100Gbps packet speeds

SUSTAINING INVESTMENTS



Embedded AI NPU

- 3 TOPs
- Supported by MediaTek Agentic AI SDK (NeuroPilot)



Open OS for Broadband Operators

- Prpl
- RDK
- OpenWrt



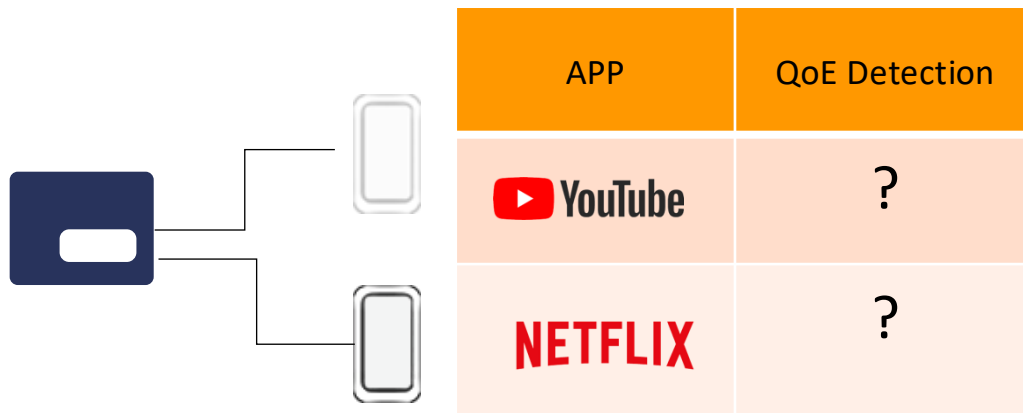
Support

- Custom APIs
- Local presence

AI Video QoE Prediction Benefits

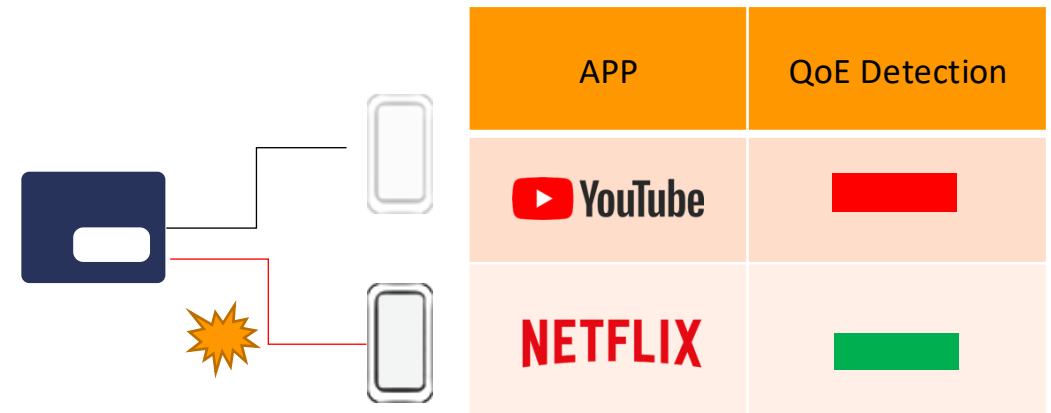
WITHOUT AI VIDEO QoE

Problem: Not being able to precisely identify the device suffering from video quality issues



WITH AI VIDEO QoE

- ① QoE visibility (video/gaming) on edge gateway
- ② Enhanced efficiency of root cause analysis
- ③ Efficient diagnostic on the device topology
- ④ Pro-actively trouble shooting before service call



FLYING OVER ROMA (4K L X)

www.youtube.com

YouTube™ Sign in

Video ID / sCPN 0m7H6_ZI11M / XN8Q_YX0F_CSZR_2JR9_9ZJ0
 Viewport / Frames 601x338 / 0 dropped of 2998
 Current / Optimal Res 1920x1080@30 / 1920x1080@30
 Volume / Normalized 100% / DRC (content loudness -8.5dB)
 Codecs vp09.00.51.08.01.01.01.00 (248) / opus (251)
 Color bt709 / bt709
 Connection Speed 7 Kbps
 Network Activity 0 KB
 Buffer Health 0.01 s
 Date Wed Oct 08 2025 16:50:25 GMT+0800 (Taiwan Standard Time)

lokevin

NETWORK 8.8 Mbps PEAK 9 Mbps DISK USAGE 22.4 Mbps

Downloading data 80.2 MB / 9.2 GB

Installing files 1%

Estimated 02:23:47 remaining

Auto-updates enabled

AIROHA AI BASED Traffic classifier

http://localhost:5000

MEDIATEK | AIROHA AI Traffic Classifier

prpl

User Traffic

YouTube

STEAM® 94.42%

twitch

Microsoft Teams

VPN®

Traffic History

Time Stamp	Category	Confidence	Rewind	Action
16:50:23	Steam	94.42 %		AI QoE OFF
16:50:02	Steam	98.99 %		AI QoE OFF
16:49:59	Steam	97.99 %		AI QoE OFF
16:49:55	Twitch	99.9 %		
16:49:22	Youtube	97.9 %		
16:49:10	Steam	97.51 %		AI QoE OFF
16:49:01	Steam	97.68 %		AI QoE OFF
16:48:42	Steam	97.56 %		AI QoE OFF
16:48:42	Steam	99.68 %		AI QoE OFF
16:48:39	Steam	98.31 %		AI QoE OFF
16:48:12	Youtube	99.95 %		
16:48:12	Youtube	99.91 %		

啟用 Windows
移至 [設定] 以啟用 Windows

在 這裡 輸入 文字 來 搜尋

33°C Windy

下午 04:50 2025/10/8

Webex | 01:06:09 | 正在發言: Reid...

FLYING OVER ROMA (4K L X)

www.youtube.com

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Video ID / sCPN 0m7H6_ZI11M / XN8Q_YX0F_CSZR_23R9_9Z30
 Viewport / Frames 601x338 / 0 dropped of 3324
 Current / Optimal Res 1920x1080@30 / 1920x1080@30
 Volume / Normalized 100% / DRC (content loudness -8.5dB)
 Codecs vp09.00.51.08.01.01.01.00 (248) / opus (251)
 Color bt709 / bt709
 Connection Speed 1396 Kbps
 Network Activity 67 KB/s
 Buffer Health 16.29 s
 Date Wed Oct 08 2025 16:50:59 GMT+0800 (Taiwan Standard Time)

5:41:02 / 11:54:55

lokevin

NETWORK 7.5 Mbps PEAK 14.9 Mbps DISK USAGE 11.2 Mbps

Downloading data 118.9 MB / 9.2 GB

Installing files 1%

Estimated 03:55:57 remaining

Auto-updates enabled

AIROHA AI BASED Traffic classifier

http://localhost:5000

MEDIATEK | AIROHA AI Traffic Classifier

prpl

User Traffic

YouTube

STEAM® 91.97%

twitch

Microsoft Teams

VPN®

Traffic History

Time Stamp	Category	Confidence	Rewind	Action
16:50:59	Steam	91.97 %	✘	AI QoE ON
16:50:47	Steam	98.91 %	✘	AI QoE ON
16:50:41	Steam	98.91 %	✘	AI QoE ON
16:50:41	Steam	92.5 %	✘	AI QoE ON
16:50:41	Steam	99.73 %	✘	AI QoE ON
16:50:41	Steam	99.89 %	✘	AI QoE ON
16:50:38	Steam	91.76 %	✘	AI QoE ON
16:50:37	Steam	99.22 %	✘	AI QoE ON
16:50:36	Steam	99.75 %	✘	AI QoE ON
16:50:26	Youtube	99.99 %	✘	
16:50:26	Steam	90.42 %	✘	AI QoE ON
16:50:23	Steam	94.42 %	✘	AI QoE ON
16:50:02	Steam	98.99 %	✘	AI QoE ON
16:49:59	Steam	97.99 %	✘	AI QoE ON
16:49:55	Twitch	99.9 %	✘	AI QoE ON

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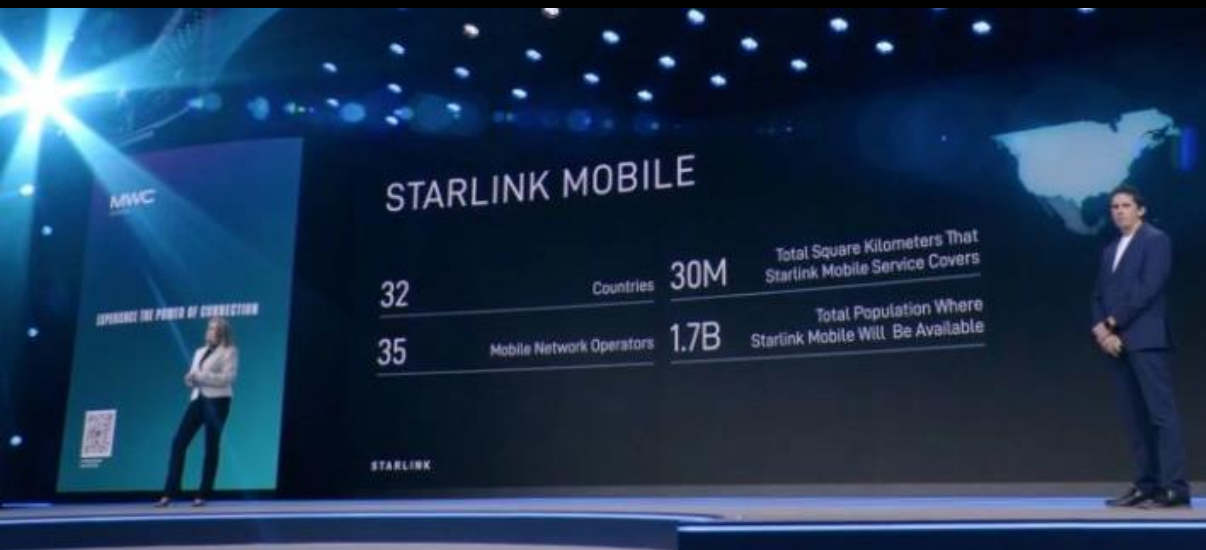
33°C Windy

下午 04:50 2025/10/8

Webex | 01:05:49 | 正在發言: Reid...

Collaboration with Starlink Mobile

Direct to Cell technology solves cellular coverage gaps → Unleashes NR-NTN broadband satellite services



Michael Nicolls
@michaelnicollsx · [Follow](#)

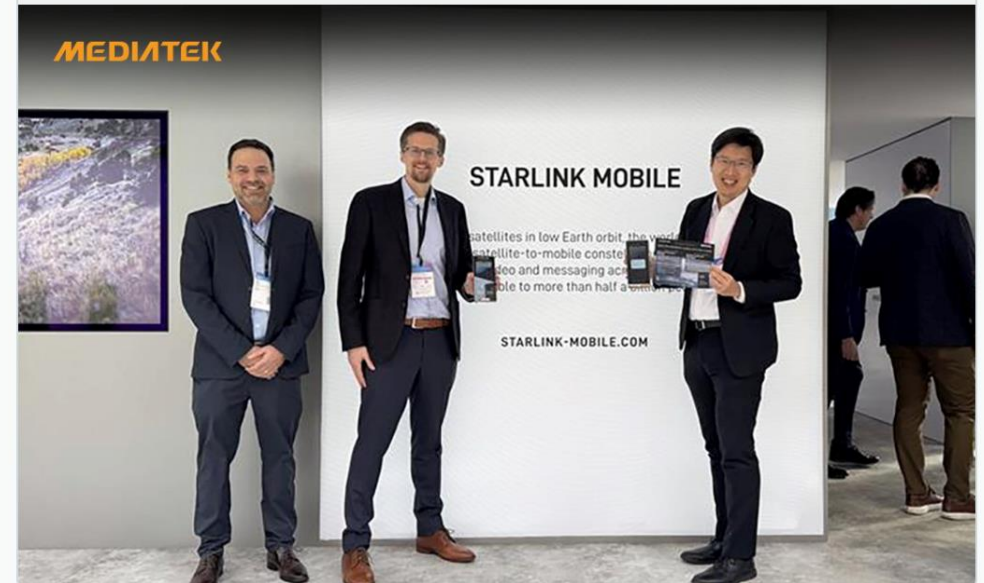


Testing of wireless emergency alerts with [@Starlink](#) Mobile began this week in Europe over S-band satellite spectrum in partnership with [@MediaTek](#). This has been a hugely impactful capability of Starlink Mobile during emergency situations.

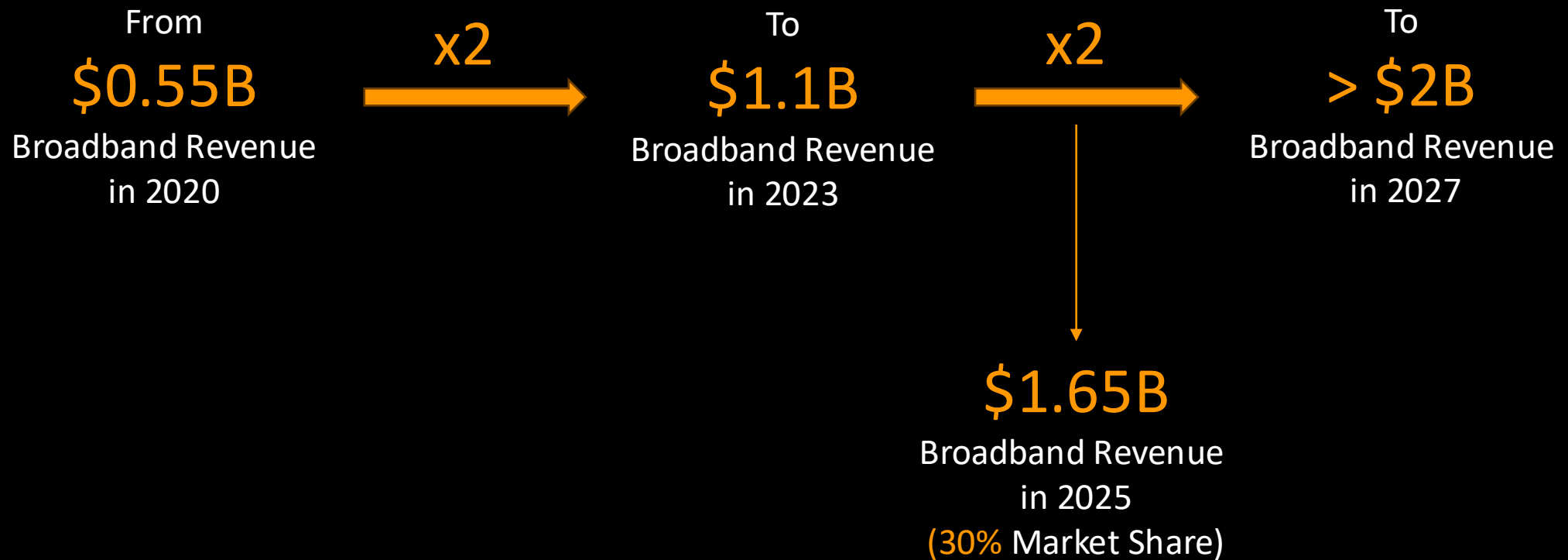


MediaTek India @MediaTekIndia

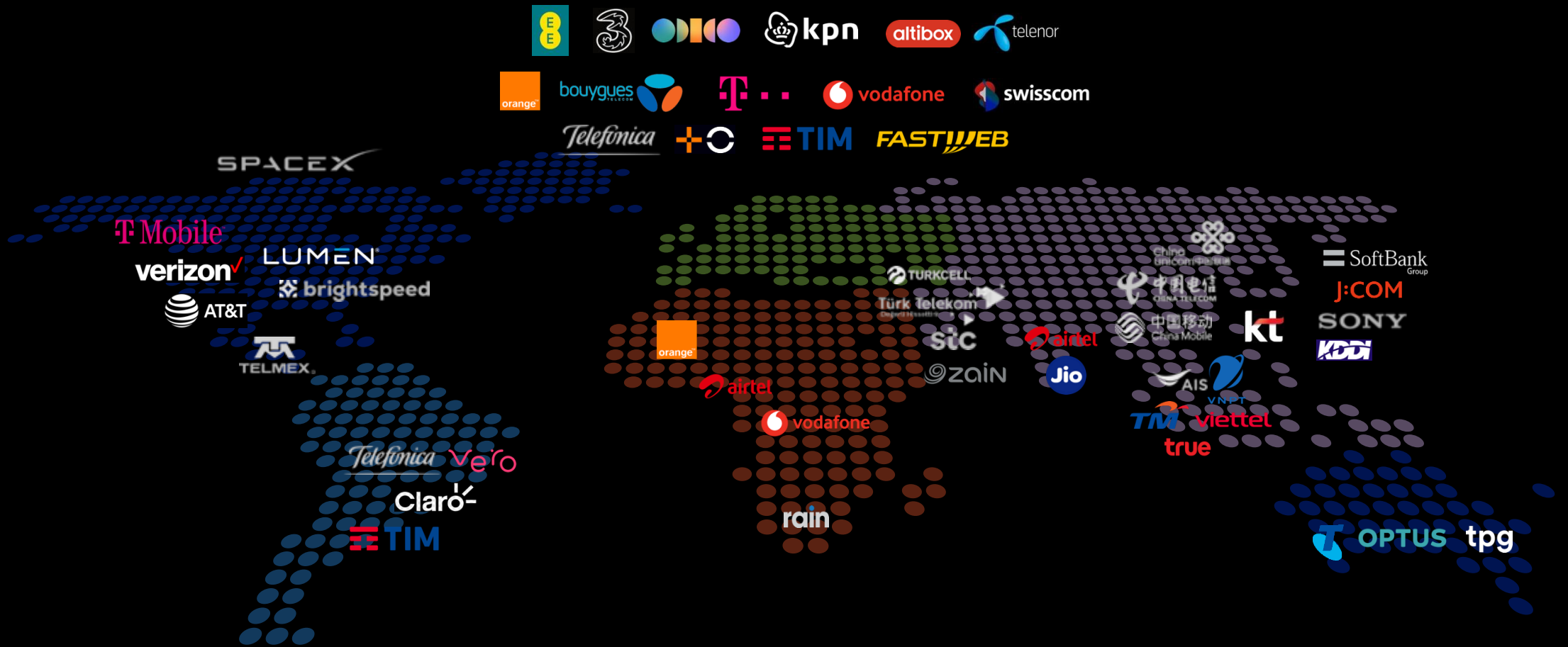
MediaTek and Starlink are working together to support wireless emergency alert messages over satellite communication, helping extend critical notifications beyond traditional network coverage. Through this collaboration, more mobile users will be able to receive alerts from the



MediaTek Broadband: The Fastest Growing



The Choice for Over 150 Operators



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