

ATAYA

5G/WiFi Convergence Solution in Private Network

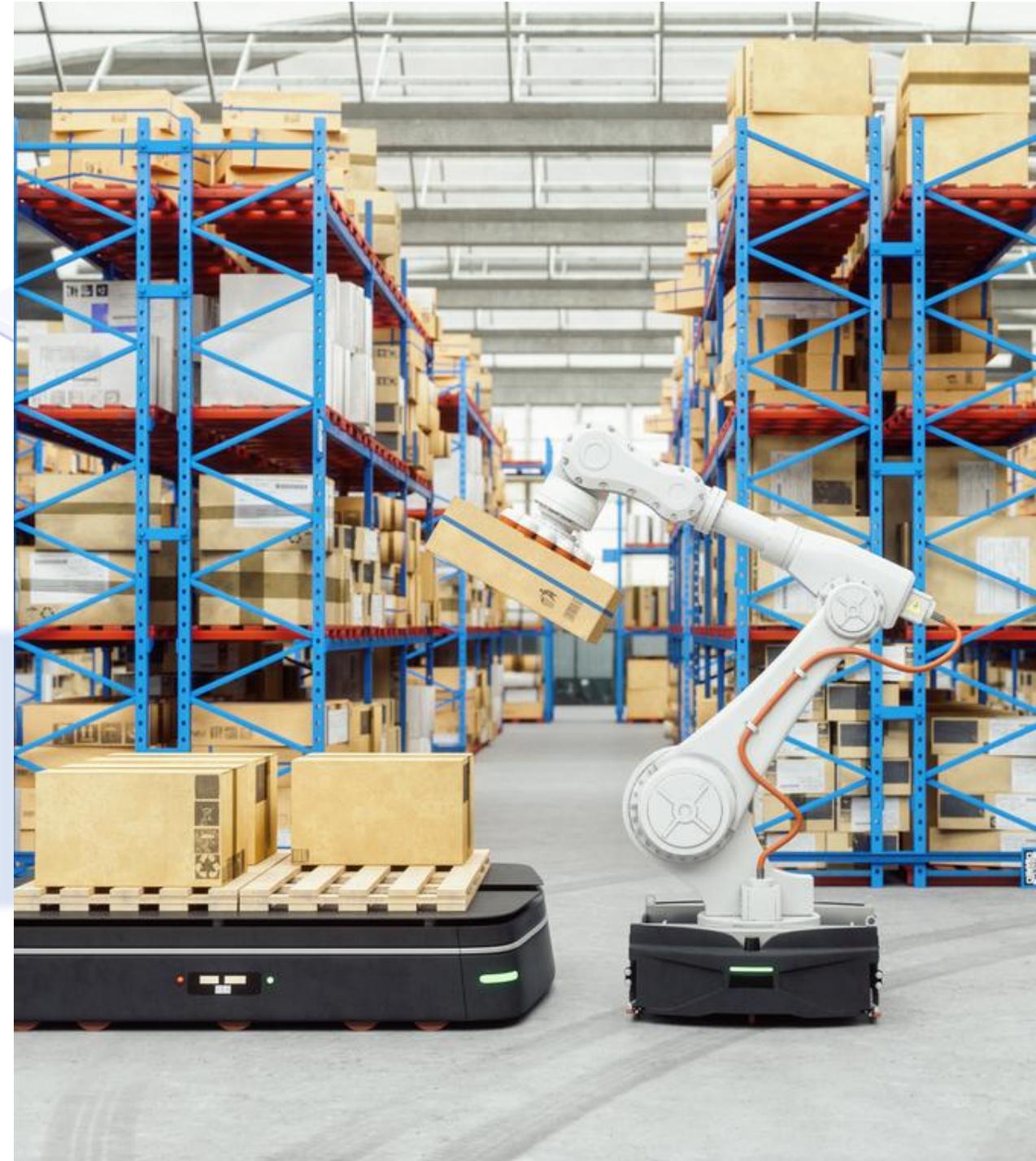
Li Fung Chang
SVP/Co-founder
lifung@ataya.io



About Ataya

- Based in Silicon Valley
 - Founded in Aug 2021
 - Based on software from Taiwan's III and ITRI (developed during 2018-21)
 - Offices in Santa Clara and Taipei
 - Executive leadership with 5G, Enterprise and networking experience from Cisco, Broadcom, Qualcomm, Ruckus
- Universal connectivity platform for Private 5G, Wi-Fi and Wired endpoints
 - First product, **Ataya Harmony**, released in Mar 2023
 - Software platform, cloud or on-premise
 - Second product, **Ataya Chorus**, to be released in Q3, 2024
 - Industry first cloud based Private 5G with local data plane
 - Partnering with 5G Radio vendors to embed Ataya agent
- Primary RTM via SIs and distributors
- Focused on IIOT/OT environments and Industry 4.0 use cases

ATAYA
Harmony



Problem and Solution Statement

PROBLEM

Enterprises will have 5G, Wi-Fi and wired networks. However, vendors like Nokia, Ericsson, Celona, etc., provide pure 5G solution while enterprise vendors like Cisco, HPE Aruba, etc., offer standalone Wi-Fi/Wired solution.

Siloed and standalone systems lead to operational complexity, security challenges, and high cost.



SOLUTION

Ataya Harmony unifies 5G, Wi-Fi, and wired networks into a universal connectivity platform with

- Single Pane of Glass for endpoint management
- Zero Trust policies across all endpoints
- Edge application lifecycle management
- Simplified network operations.

Ataya Harmony



Wired



5G



Wi-Fi

Gartner

COOL
VENDOR
2023

Gartner

Ataya

Why Cool:

Ataya is headquartered in San Jose, California. The company focuses on empowering enterprises and private mobile network (PMN) service providers.

Ataya is cool because of its agnostic approach and universal connectivity features that unify isolated networks — including private 5G, Wi-Fi and fiber — into a single, seamless dashboard. This integration addresses the challenges faced by enterprises and PMN service providers dealing with isolated networks and separate management systems. By eliminating the barriers to zero-trust security, edge application utilization, and seamless network upgrades, Ataya's solution simplifies network management and enhances overall efficiency.

One of Ataya's key differentiators is its solution supporting zero-trust security regardless

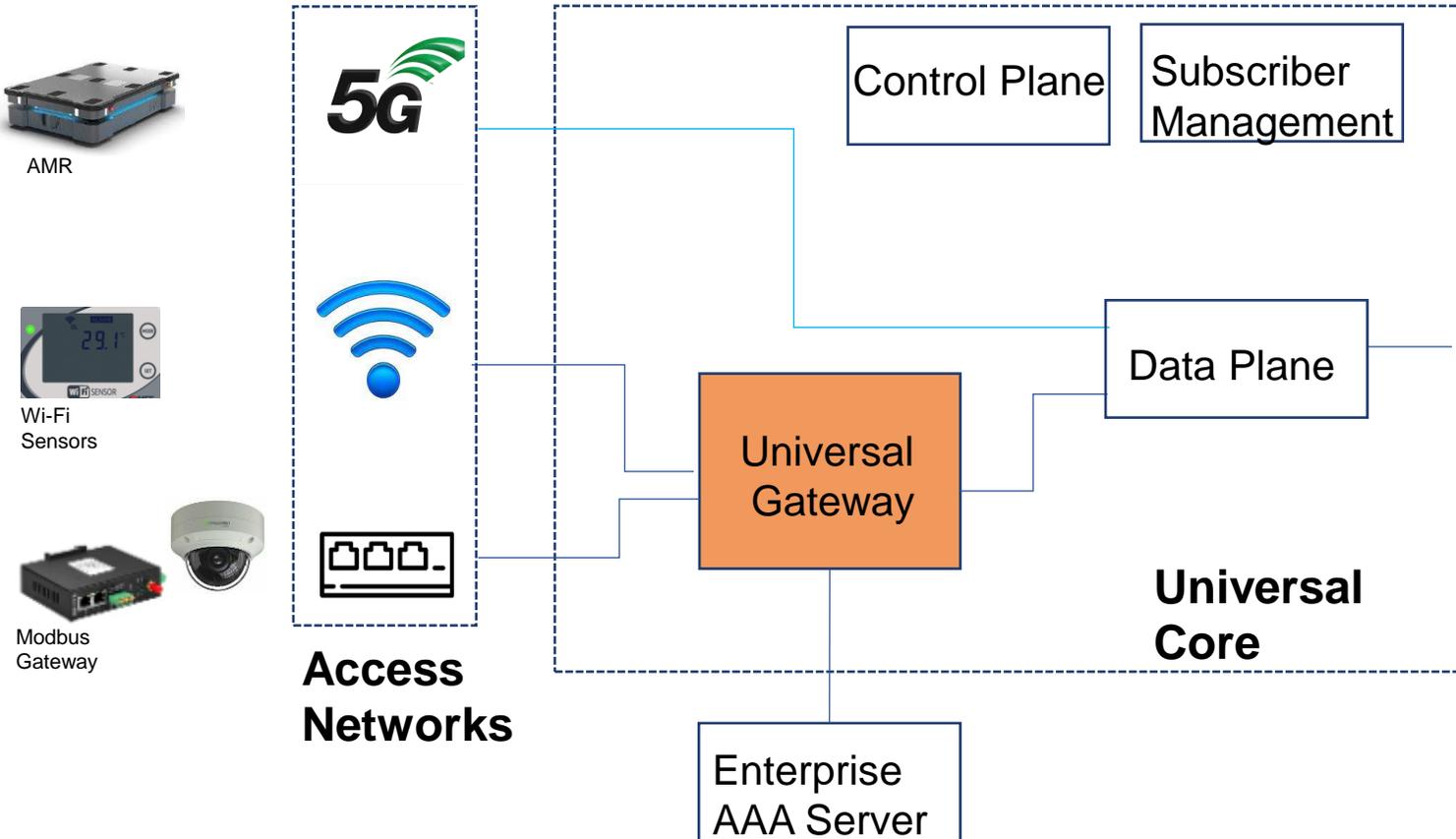
Congratulations!

Frost & Sullivan is proud to present Ataya with this year's Best Practices New Product Innovation Award in the global private 5G network industry.

An enterprise that installs a private 5G network will still have wired network(s) and Wi-Fi network(s). However, most suppliers of these networks offer a siloed approach to each network and to each network's management. Ataya provides a solution to bring these networks and their services together. This is unique in the industry.

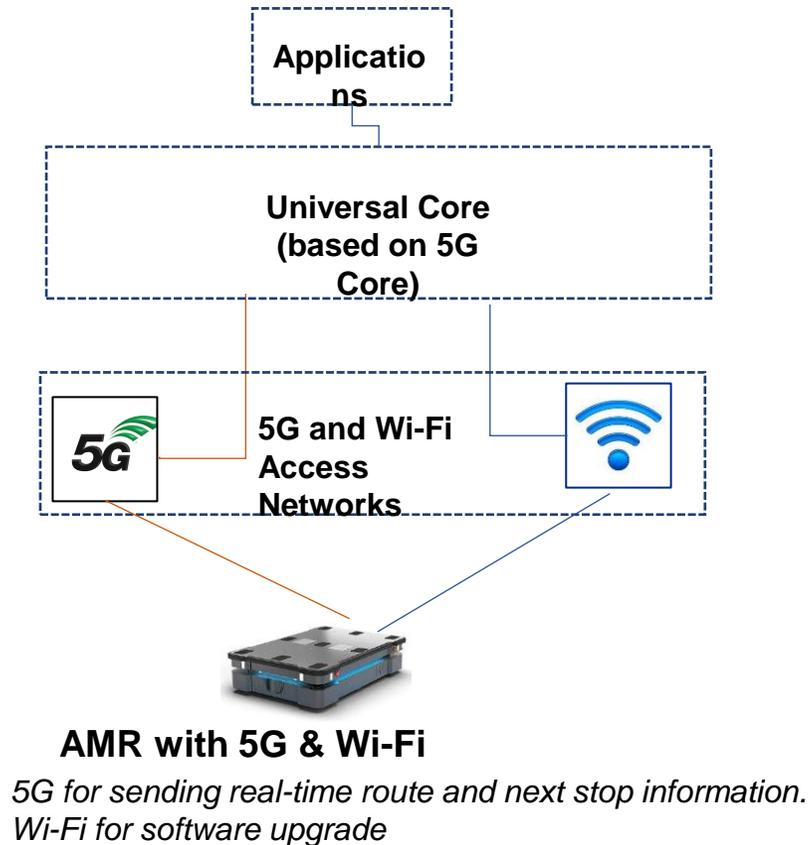
Ataya's primary product—and the focus of this award—is *Harmony*, what the company describes as a “Universal Connectivity Platform” that manages and secures devices on the private 5G network, as well as on existing Wi-Fi and wired networks. This provides both simplicity and increased security on all networks.

Non 5G clients supported using Universal Gateway



- Unified Data Plane: Extending 5G Data Plane to support
 - Non 5G Wi-Fi clients (without SIM cards)
 - Wired Ethernet clients (like cameras)
 - Modbus and other IOT clients connected through Ethernet gateways
- Integrates seamlessly with existing Wi-Fi and Ethernet infrastructure (e.g., Cisco/Meraki, Mist/Juniper, etc.)
- No installation of software on Clients (like VPN, etc.)
- Authentication and authorization for non 5G clients remain with existing AAA server and proxied by Universal Gateway.

Enhanced Performance and Reliability for Dual Mode Devices



- Universal Core enables both Wi-Fi and 5G for dual-mode devices
- Three routing modes:
 - Path Failover: Creates a backup path
 - Load Balancing: Increases throughput
 - Packet Duplicator: Reduce packet loss
- Dynamic routing based on policy and network conditions

5G + Wi-Fi Convergence Demo Architecture

DESKTOP-FG8UD00 (192.168.100.173)

C55_5G_IndustrialRouter (192.168.100.1)
 Version: 0.60-6.1
 Load: 1.55 1.24 0.54
 Core temp: 59.9 °C
 Uptime: 0h 3m 51s
 Lan address: 192.168.100.1
 Lan range: 192.168.100.100 - 192.168.100.249

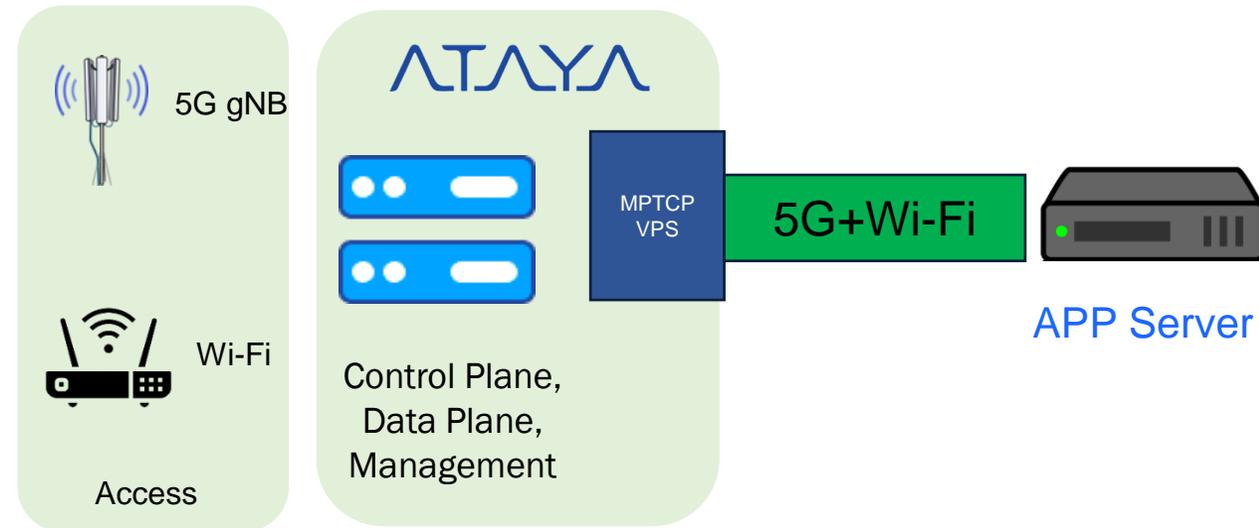
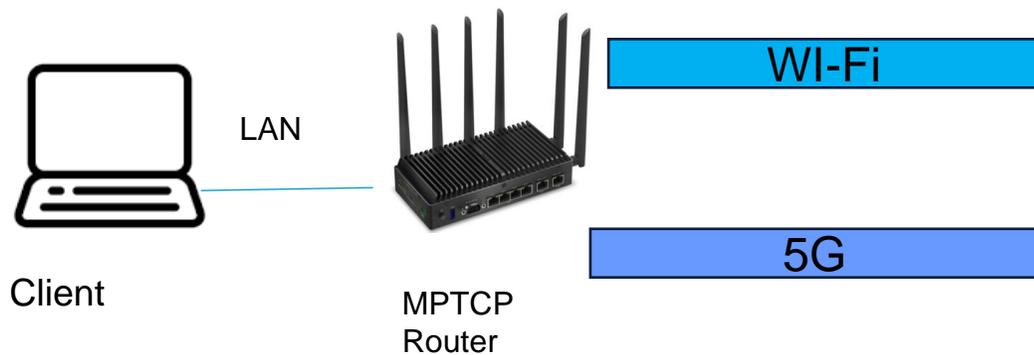
5G (192.168.225.1)
 Ip address: 192.168.225.37
 wan address: 10.101.1.3
 interface: eth1
 whois: PRIVATE-ADDRESS-ABLK-RFC1918-IANA-RESERVED
 latency: 16 ms
 mtu: 1500
 multipath: master

WiFi (10.102.1.254)
 Ip address: 10.102.1.4
 wan address: 10.102.1.4
 interface: phy0-sta1
 whois: PRIVATE-ADDRESS-ABLK-RFC1918-IANA-RESERVED
 latency: 4 ms
 mtu: 1500
 multipath: on

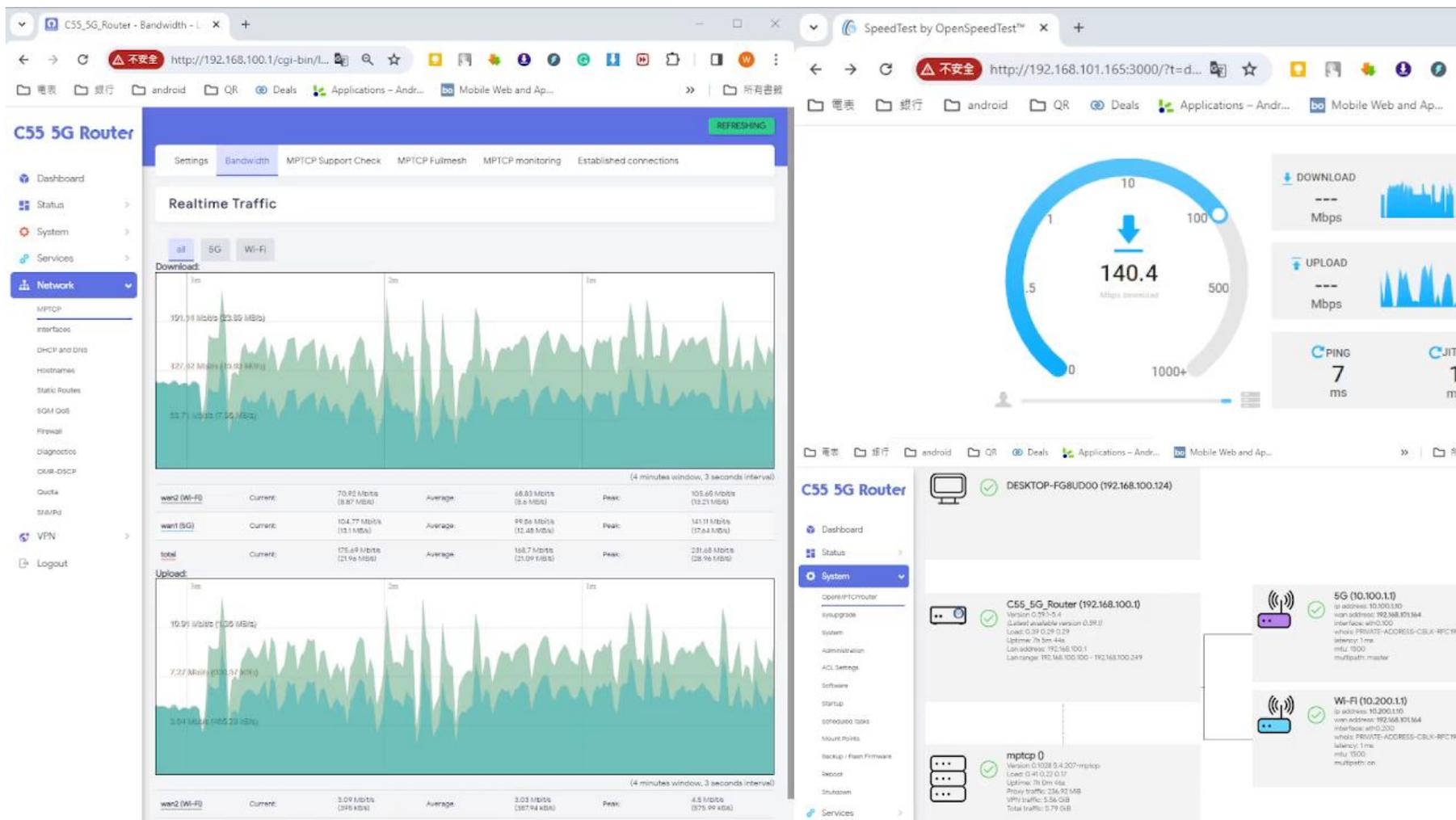
VPS (220.130.186.56)
 Version: 0.1030 6.1.0-21-amd64
 Load: 0.16 0.13 0.09
 Uptime: 1d 22h 7m 33s
 Proxy traffic: 6.35 MiB
 VPN traffic: 2.08 MiB

Active Clients (4)

Name / ID	IP Address	Last Connected	DNN	gNB ID	gNB IP	Site
UE241 999666100000241	10.101.1.1	05/31/2024, 12:33 p.m	internet	-	-	Default Network
C55_5G_IndustrialRouter 999666100000246	10.101.1.3	05/31/2024, 10:12 a.m	internet	10	192.168.2.74	Default Network
Edge-core 14448f76fdb1	10.102.1.3	05/30/2024, 09:15 p.m	internet	-	-	Default Network
C55_5G_IndustrialRouter dca6324efb95	10.102.1.4	05/31/2024, 12:36 p.m	internet	-	-	Default Network



Demo-5G + Wi-Fi Connectivity



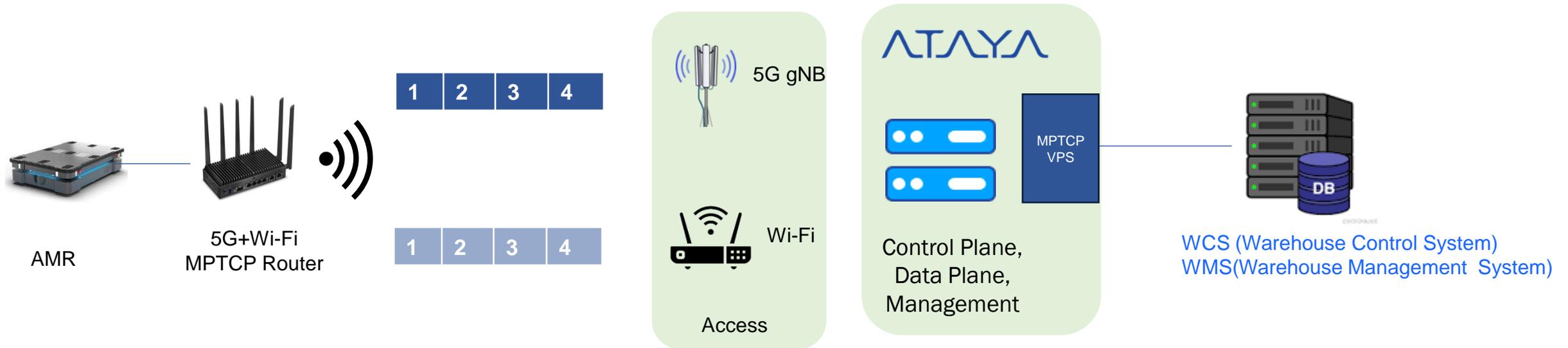
Private Multi-access convergence network Use Cases

- Ultra high-reliability connections like industry automation (5G +Wireline Packet Duplicator)
- Low Latency & Reliable Connections like AGV (5G /WiFi failover)
- Wide-area Field/Campus like Smart ports (Private 5G + Public 5G/LEO satellite failover to overcome coverage issue)
- High demanding Services like (5G + WiFi load balancing)



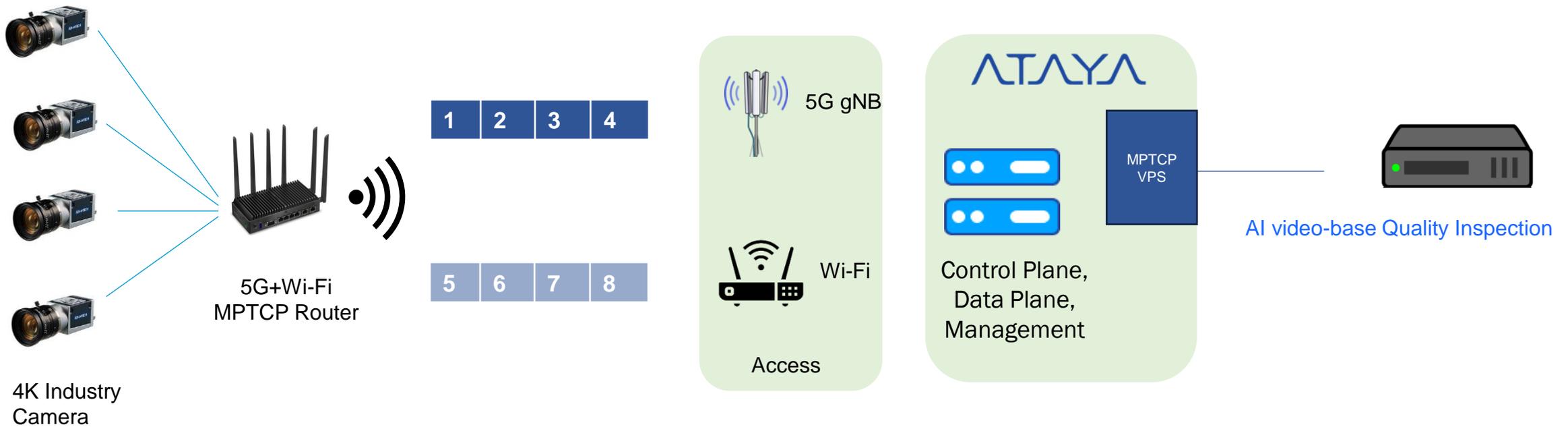
Scenario-Automatic Guided Vehicle (AGV) and Autonomous Mobile Robots (AMR)

- 5G+ Wi-Fi dual streams provide a **Dual-links seamless switch over** to maintain high reliability



AI Video Surveillance for remote monitoring and workplace safety

- 5G+ Wi-Fi dual streams **Bonding 5G and Wi-Fi uplink bandwidth** to provide the High Uplink Capacity for multiple high-resolution AI Camera



Thank You

