M6

Wi-Fi 6 Mesh System

MERCKU

www.mercku.com

Confidential. February 2021

Awarded “Networking Product of the Year” 2021

Consumer Technology Association™ | Smart Home Division Mark of Excellence

2021 WINNER

*2021 Mark of Excellence Award in the Networking Product of the Year category. The Award series annually recognizes the tech industry’s top smart home innovations.

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https://cta.tech/Events/Awards/Mark-of-Excellence/2021-Winners/M6-AX-Mesh-System

Powerful Wi-Fi 6 Mesh System

Powerful Performance

Proprietary technology, combined with the power of Wi-Fi 6, brings better connectivity to any space

Award-winning Design

Integrates seamlessly with your décor, envisioned by our award-winning design team

360° Remote Management

Powerful management capabilities for users and operators, anywhere and anytime

User- & Operator optimized

Ubiquitous connectivity by bridging and meeting expectations of end-users and service providers

Coverage up to

3,000 sq.ft. | **280** sq.m.

*This is a Mercku laboratory performance. The real environment may cause changes.

Technical Specifications

Wireless

EasyMesh AX1800 Router 2×2

2.4 GHz - IEEE 802.11b/g/n/ax

5 GHz - IEEE 802.11a/n/ac/ax

High-performance WHEMS antenna

Processor

Qualcomm 1.2 GHz Quad-Core

Ports

2 × 1000Base-T Ethernet LAN ports

1 × 1000Base-T Ethernet WAN port

Security

WPA2 / WPA3 Encryption

Over-The-Air Updates

Parental Controls

Memory

1Gb NAND Flash and 512MB DDR3 RAM

Power

DC 12V/1.5A 100-240V 50/60Hz

Dimensions

140×52.6×206 mm

What's inside

1 × Mercku M6 Mesh Wi-Fi Router

1 × Power Adapter

1 × Ethernet Cable - 1 m

1 × Set-up Guide

Mercku App

Remote management with multiple advanced network features

GET IT ON Google Play

Download on the App Store

Wi-Fi 6

4X better than AC routers, even in dense environments

MU-MIMO

Enhanced simultaneous data streaming and throughput

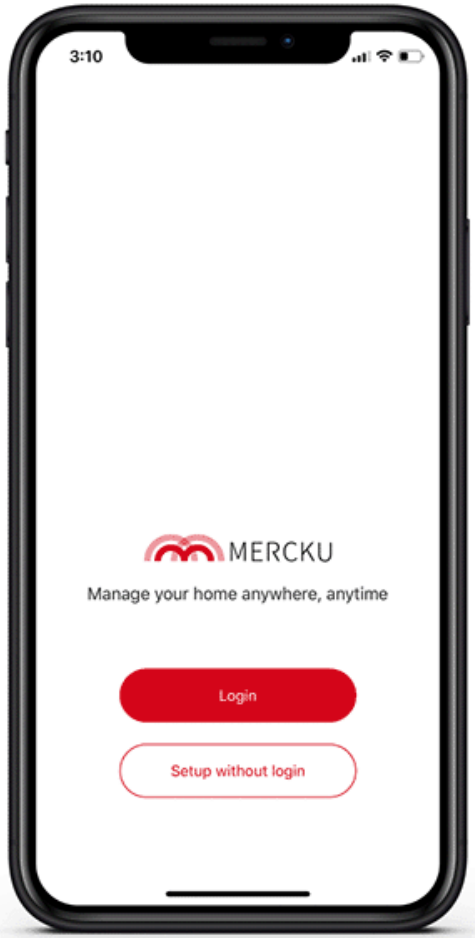
OFDMA

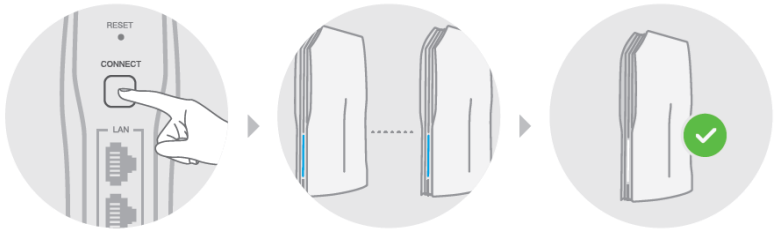
Highly efficient data channeling to multiple devices at once

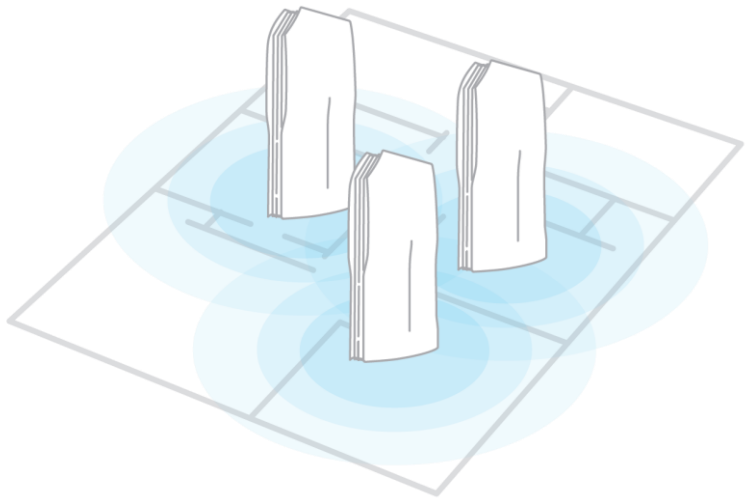
Target Wake Time

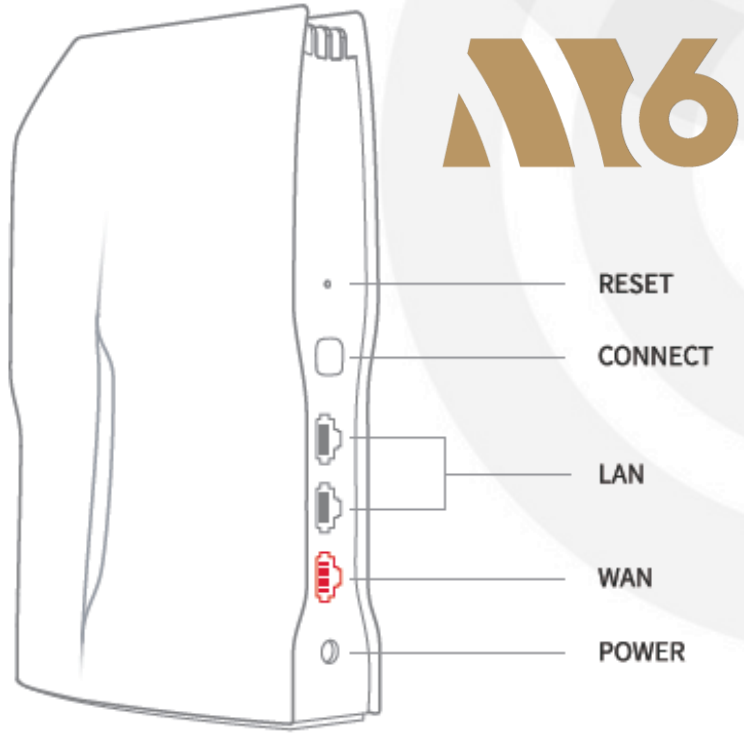
Reduces device's power and battery consumption

Simple plug-and-play experience for users









Examples of other Wi-Fi 6 mesh systems

	tp-link	Deco X20	~$ 399.99 (3-pack)
	ASUS	RT-AX1800 RT-AX56U	~$149.99 ~$199.99
	LINKSYS	Max-Stream	~$149.99
	NETGEAR	Nighthawk MK62	~$129.99
	D-Link	COVR	~$269.99 (2-pack)
	comcast xfinity	xFi Advanced Gateway XB7	→ Very poor reviews
	eero	eero 6	~$ 270.00 (3-pack)

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Feature overview of Wi-Fi 6 mesh systems

	EasyMesh	Beamforming	BSS Coloring	Target Wake Time	App + Portal	Bridge Mode	Guest Wi-Fi	NOC
Mercku M6	✓	✓	✓	✓	✓	✓	✓	✓
TP-Link Deco X20	✗	✓	✓	✗	✓	✓	✓	✓
Linksys MR7350	✗	✓	✓	✗	✓	✓	✓	✗
Asus RT-AX1800	✗	✓	✗	✗	✓	✓	✓	✗
Asus RT-AX56U	✗	✓	✗	✓	✓	✓	✓	✗
Netgear MK62	✓	✓	✗	✗	✓	✓	✓	✗
D-Link DIR-X1860	✗	✓	✓	✓	✓	✗	✓	✗
eero 6	✗	✓	✓	✓	✓	✗	✓	✗

Note: Only a few systems offer EasyMesh certification, NOC, BSS Coloring and Target Wait Time in combination. Mercku's partners can leverage these more unique attributes when marketing the offering to subscribers

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The M6 product family is growing in 2021

concept phase

	M2	M6	M6c	M6s
Global MSRP	$ 99	$ 139	$ 119	$ 199
Throughput	AC 1200	AX 1800	AX 1800	AX 3000
Antenna	2x2	2x2	2x2	4x4
Bands	Dual-band	Dual-band	Dual-band	Tri-Band
Chipset	Realtek, 1 GHz single-core	Qualcomm, 1.2 GHz, quad-core	MediaTek, 880 MHz, dual-core	Qualcomm, 1.2 GHz, quad-core
Flash	1 Gb NAND	1 Gb NAND	1 Gb NAND	1 Gb NAND
RAM	128 MB DDR3	512 MB DDR3	256 MB DDR3	1 Gb DDR3
Mesh Wi-Fi	802.11s	EasyMesh R2	EasyMesh R2	EasyMesh R2
Mobile App	Yes	Yes	Yes	Yes
Remote Control	NOC + TR069	NOC + TR069	NOC + TR069	NOC + TR069
WAN / LAN	2* 1G	3* 1G	3* 1G	1* 2.5G, 2* 1G
Market launch	Since 2019	March 2021	July 2021	Winter 2021

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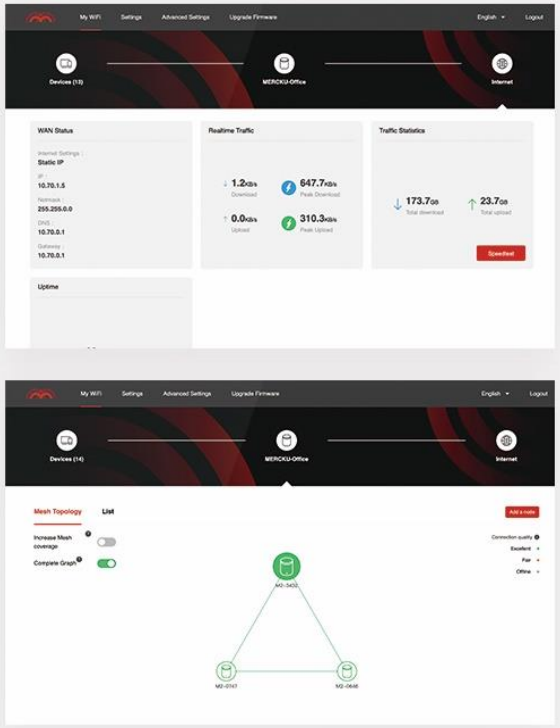
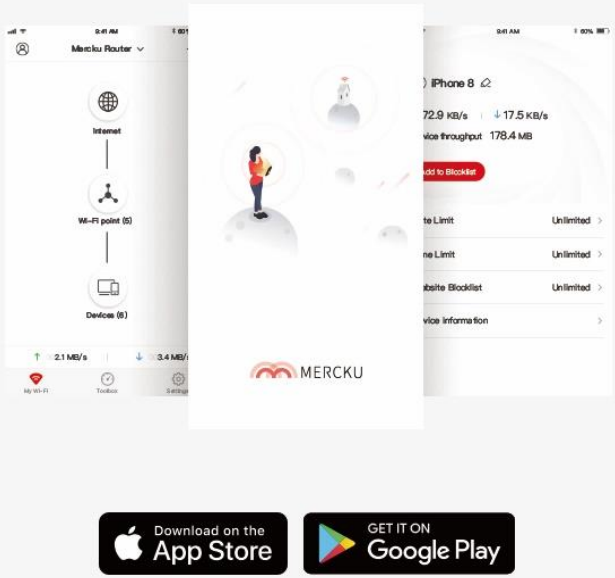
Supported with a 360° network management system

- Web UI
- Mobile App
- NOC
- TR-069





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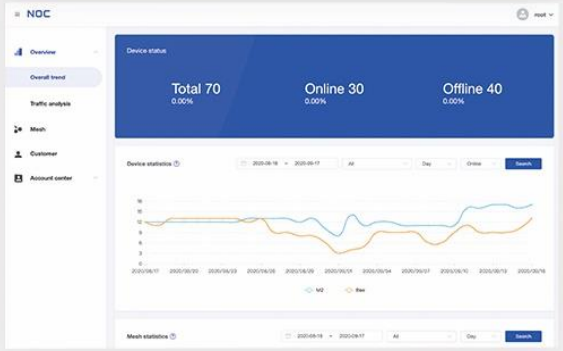

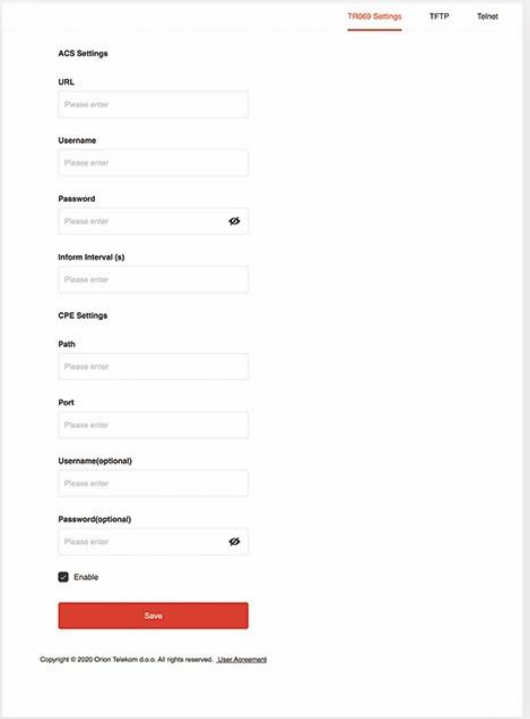

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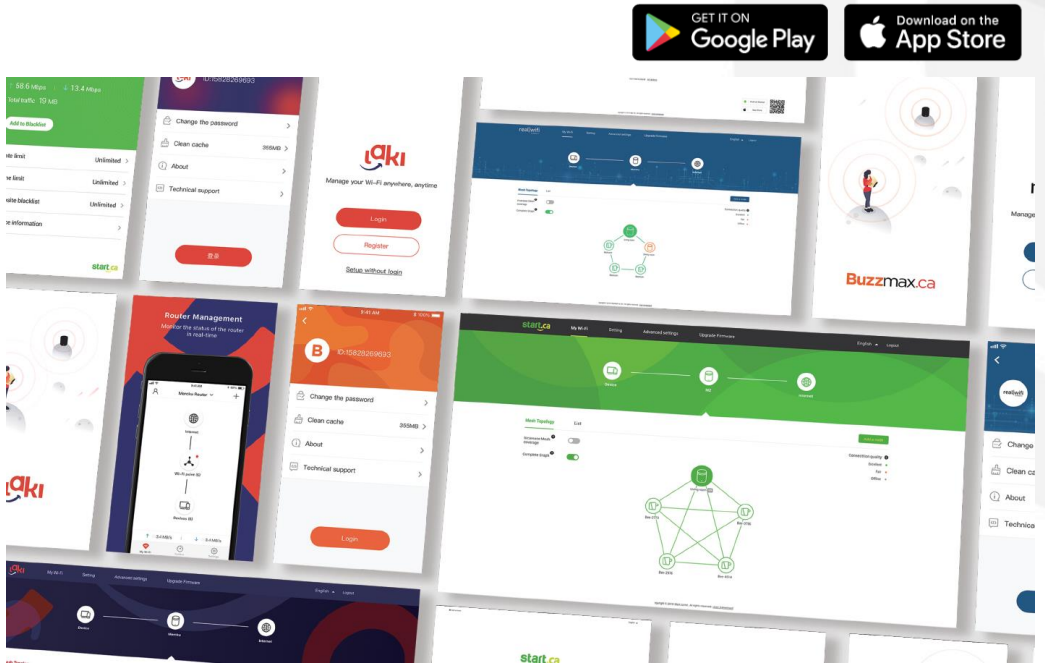
Flexible product design for strong branding opportunities

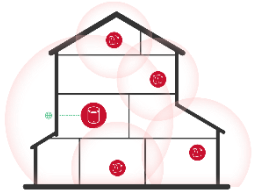
- **Advanced customization options** including hardware, firmware, packaging, mobile app, Web UI, remote management integration and marketing assets
- **Flexible development** approach allows ISPs to capitalize on new market dynamics as identified



M6: examples of supported features

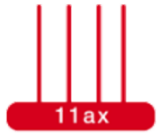
Management
Device list
Wi-Fi Settings
Internet Settings
Parental Controls
Port Forwarding
VPN, VPN Passthrough
DMZ Host IP Address
Router Mode, Bridge Mode
Static IP Lease
Diagnostic Tools
Clone MAC Address

…and more



Mesh Wi-Fi
EasyMesh R2
Managed setup
Client & device roaming
Client steering
Band steering
Node steering
Self-healing
Mesh Topo
Mesh management
Node management
Setup helper

…and more



Advanced Wi-Fi
TR069, TR098
NOC
IPv4, IPv6
System modularity
Beamforming
MU-MIMO
1024 QAM
BSS Coloring
Target Wake Time (TWT)
Wireless Backhaul
OFDMA

…and more

Smart Wi-Fi
Quality of Service (QOS)
Remote configuration
Smart connect
Channel selection

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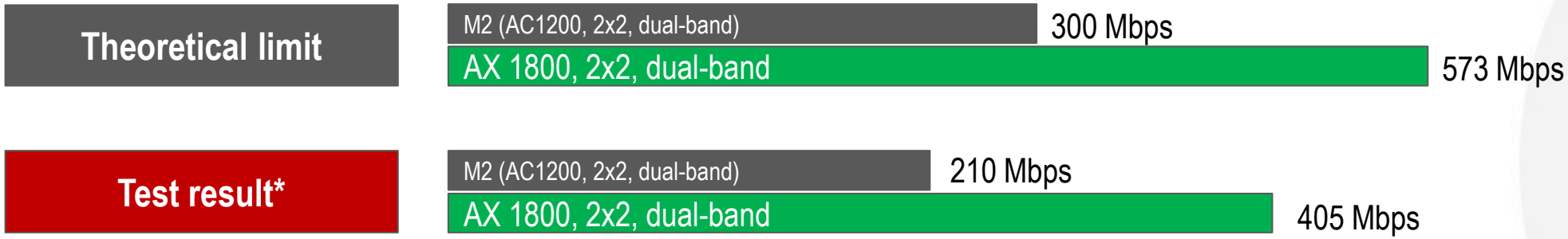
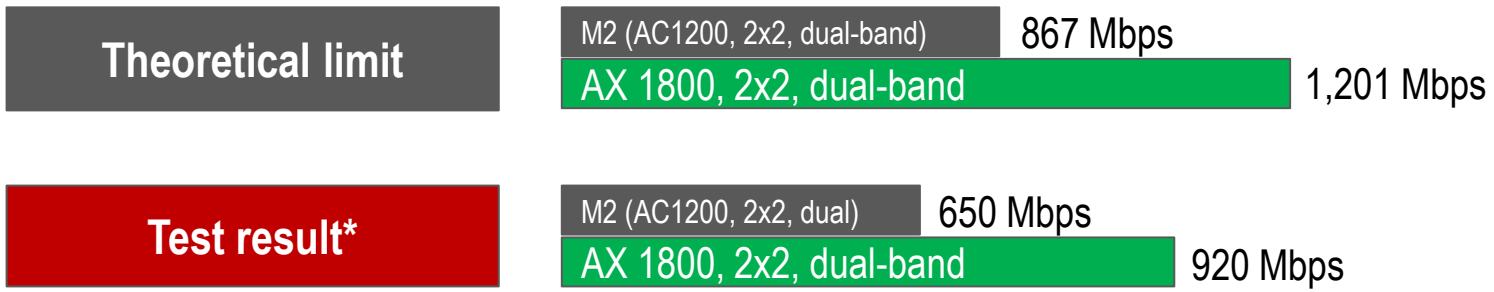
Wi-Fi 6 (M6) compared to Wi-Fi 5 (M2) throughput

Throughput (Single 2.4G channel)



Throughput (Single 5G channel)



*Test result may vary according to different testing environment
** The test is comparing performance of AC speeds (M2) with AX speeds

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Wi-Fi 6 technology building blocks

Multi-User MU-MIMO

OFDMA

Beamforming

160 MHz Ch. Bandwidth

Target Wake Time

BSS Coloring

8 Spatial Streams

1024-QAM

Source: Qualcomm

- **MU-MIMO:** Services multiple devices simultaneously
- **OFDMA:** Better dividing up the spectrum
- **Eight Spatial Streams 5Ghz band:** Double the number of spatial streams
- **Beamforming:** Directing signals toward specific clients
- **Target Wake Time:** Negotiate with devices when/how often to wake up
- **1024-QAM:** encoding more data in same spectrum
- **BSS Coloring:** Ignoring traffic that is communicating on another network
- **160 MHz channels:** Increases bandwidth to deliver greater performance

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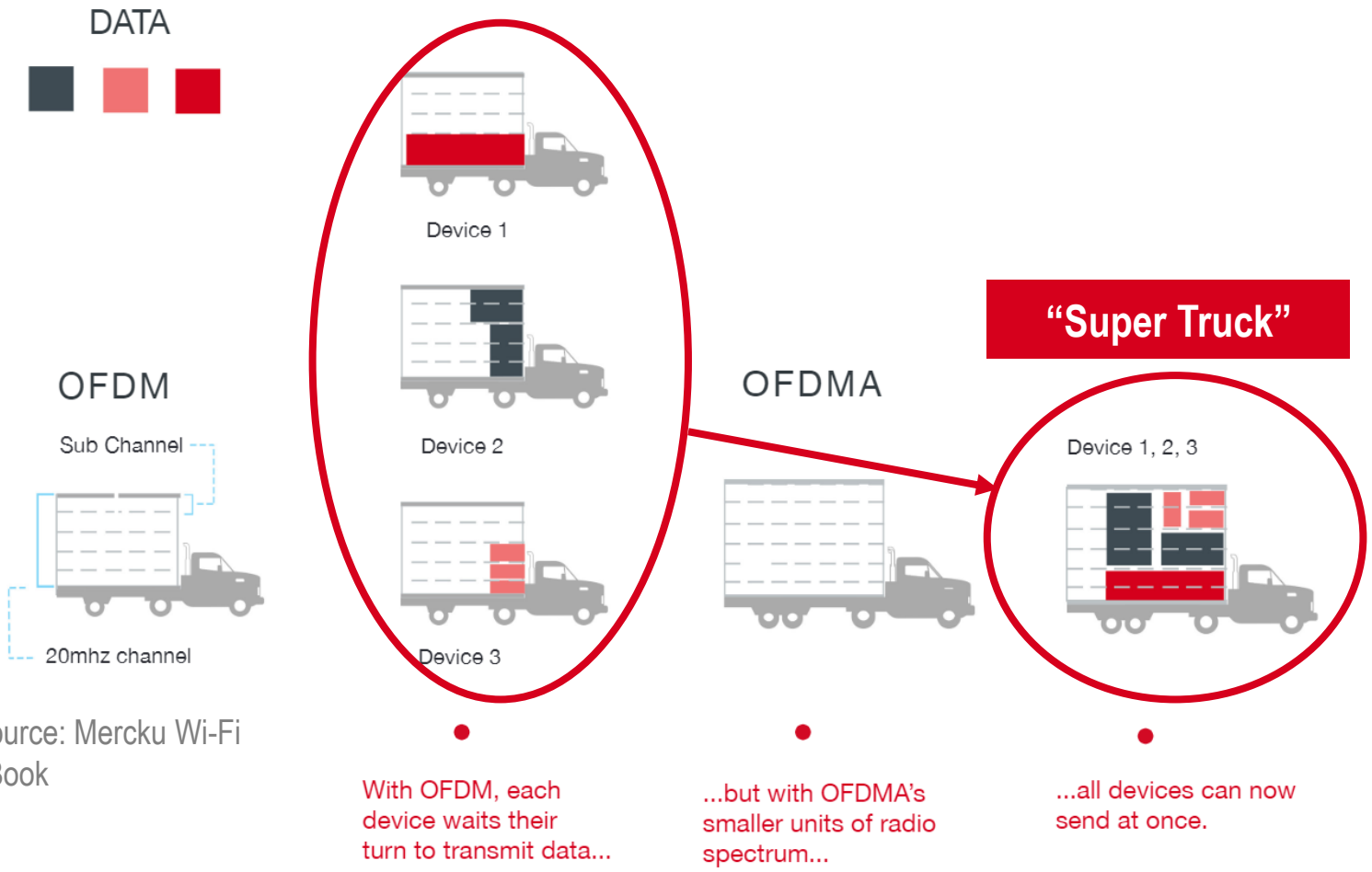
Better OFDMA and MU-MIMO

Orthogonal Frequency-division multiple access & multi-user multiple-in multiple-out



Source: Mercku Wi-Fi eBook

Why is MU-MIMO better with Wi-Fi 6?

- Wi-Fi 6 uses **8 Stream** DL/UL (Downlink, Uplink) MU-MIMO
- Multiple users can access the router simultaneously without any noticeable decreases in bandwidth quality - up to a point

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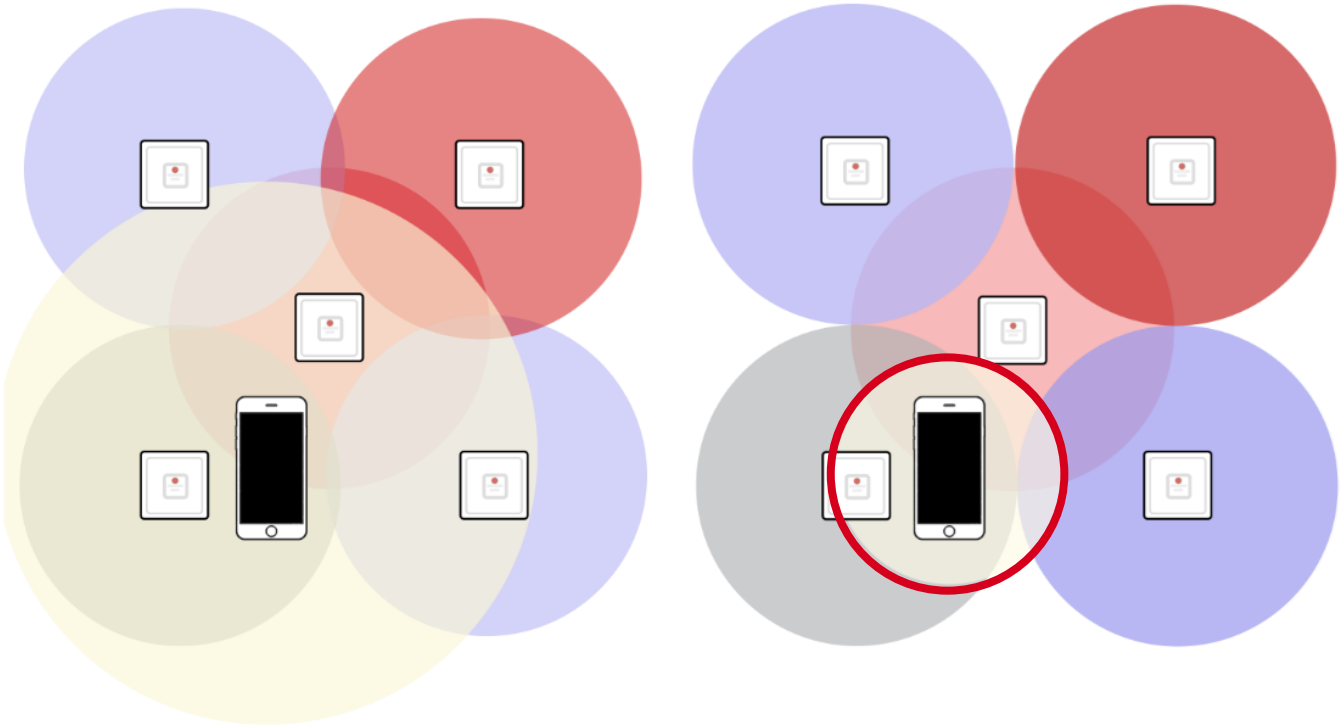
BSS Coloring

Basic Service Set Coloring

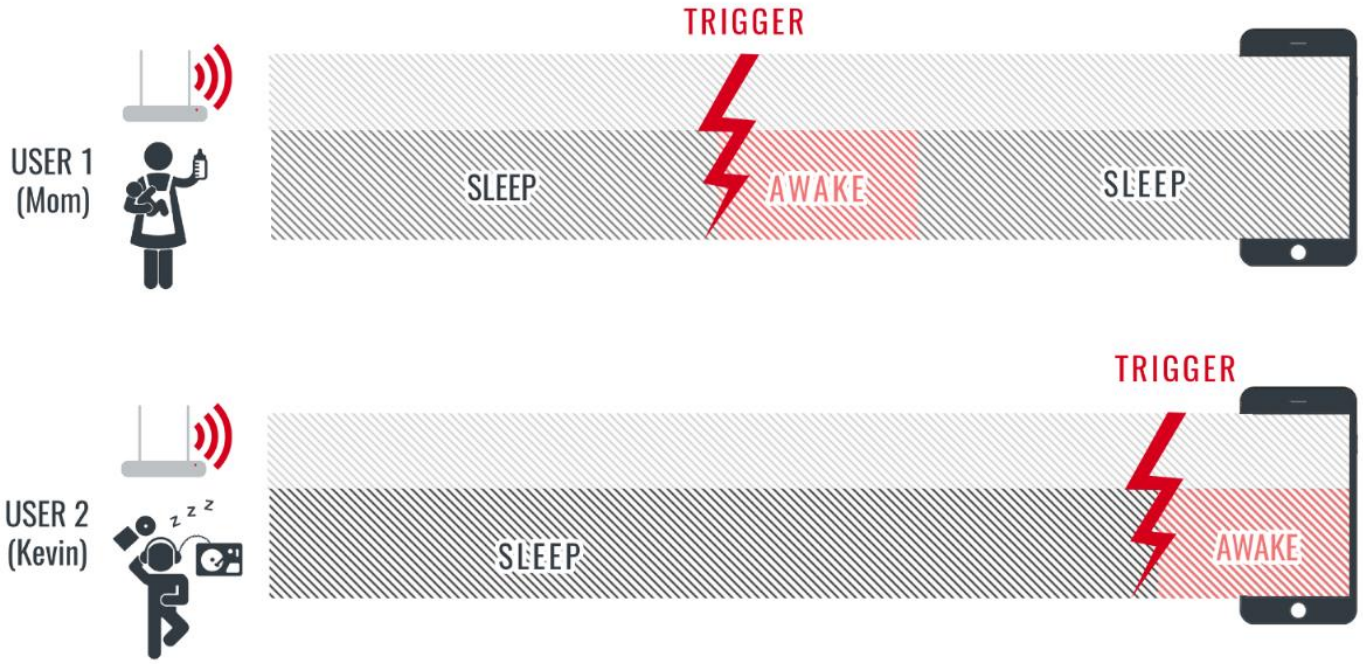


What is BSS Coloring?

- Reduce Co-Channel Interference in high density environments
- AP colour codes devices to associate them with close AP
- Increase battery life of device via adjusting and lowering of Wi-Fi power
- AP will ignore other colours

Source: Mercku Wi-Fi eBook

TWT Target Wake Time



What is target wake time?

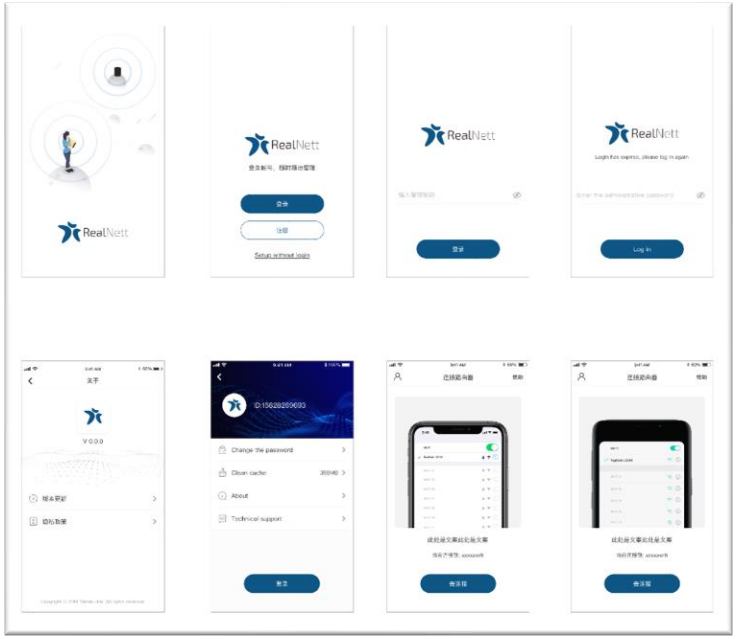
- AP and device can schedule when device “wakes up” to send data using radio
- Increase battery life for IoT devices with sensors and scheduled reporters
- Decrease unnecessary recurring noise on network

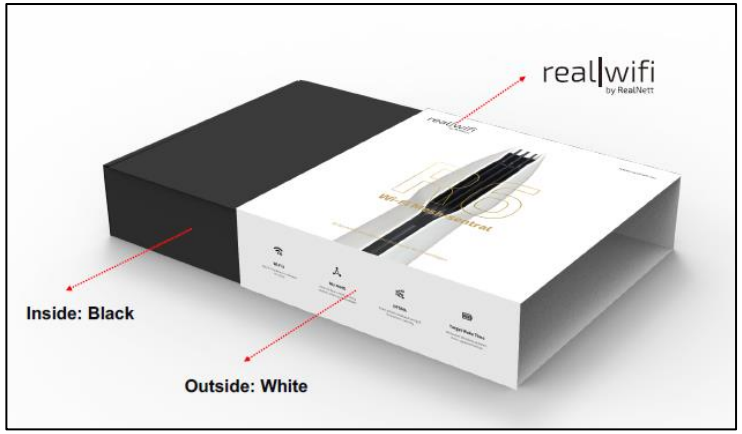
Source: Mercku Wi-Fi eBook

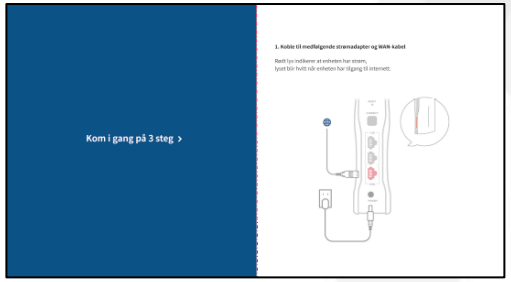
Client example: RealNett, Norway

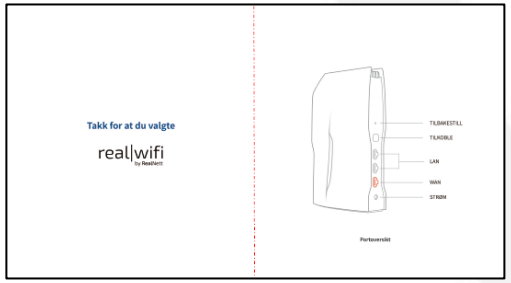
https://www.realnett.no/realwifi

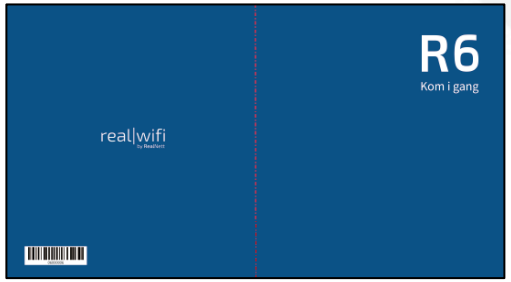
RealNett











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Welcome Home

Manage your home anywhere, anytime

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For purpose of brevity, some product descriptions in this sheet remain at platform level and may not be referred to as detailed datasheets of the products. Mercku reserves the right to amend, omit or add products, product-lines, and/or features without notice. As product specifications may change without notice, always contact Mercku to obtain the latest product specification sheets.
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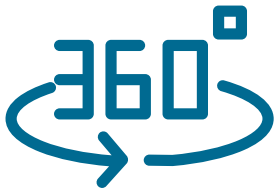
Appendix

Mercku provides Connectivity-as-a-Service to ISPs

Hardware

High-performance Wi-Fi mesh systems with award-winning industrial design



360° Network Management

Management tools include Mercku's Network Operations Center (NOC), Mobile App, and Web UI

Advanced Features

Enhanced security and additional premium feature integration with Mercku systems

[HaaS] Hardware-as-a-Service

Technology leadership for partners

- Frequent over-the-air updates & innovative CPEs

Option for rental/leasing

- Friendly rental or purchasing terms

Wall-to-Wall connectivity

- Reliable, powerful Wi-Fi systems to blanked entire home with connectivity

More Products on the roadmap

- Smart home devices, indoor positioning, modem gateways, Cellular CPEs,…

MUSE DESIGN AWARDS 2020 GOLD WINNER

tbaytel

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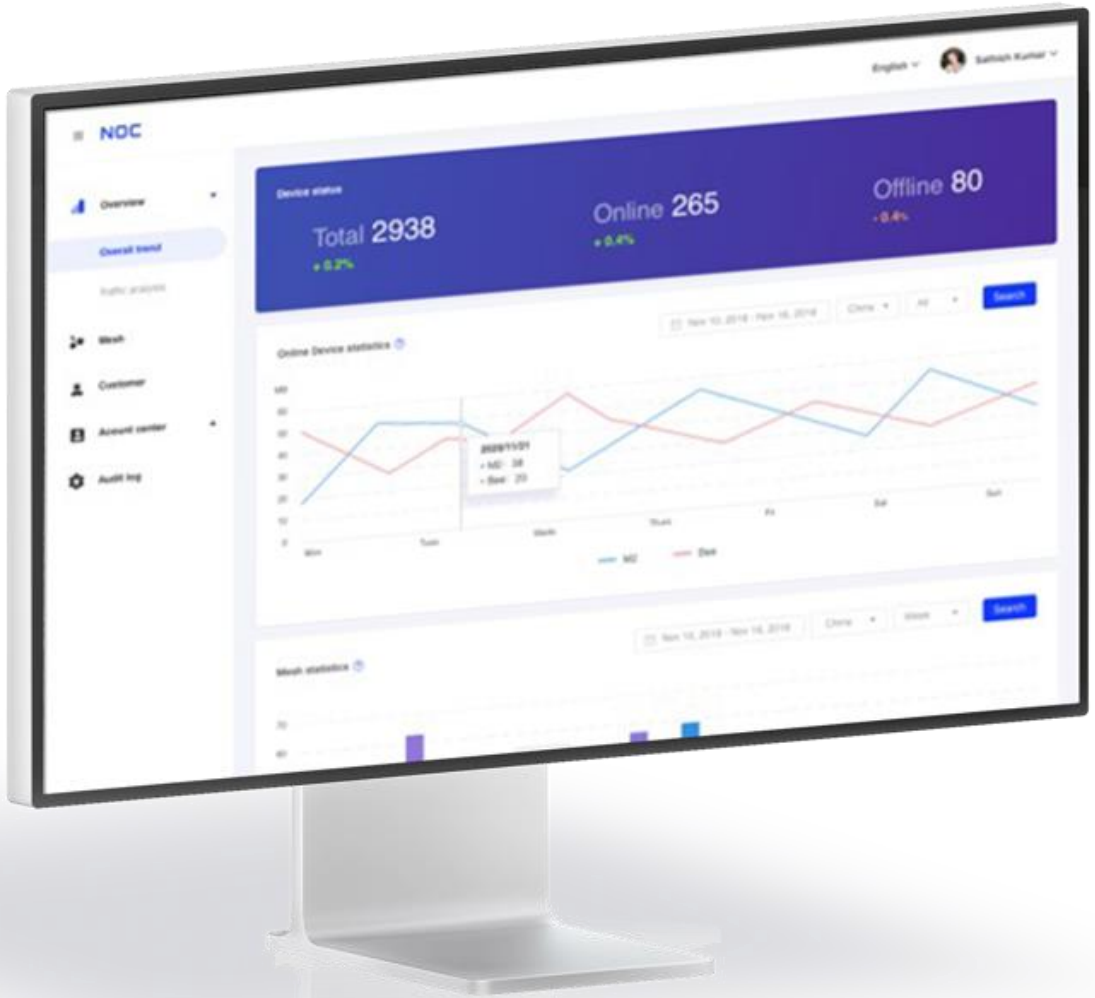
[SaaS] Software-as-a-Service



OTT Network Operations Center (NOC)

- A platform for ISPs to remotely monitor, manage and optimize their customers' home connectivity
- Helps ISPs improve service quality, lower customer service costs, reduce truck rolls, and conduct data-driven business optimization

Monthly subscription

- Monthly service fee to augment customer service teams
- Data-driven insights help drive business optimization

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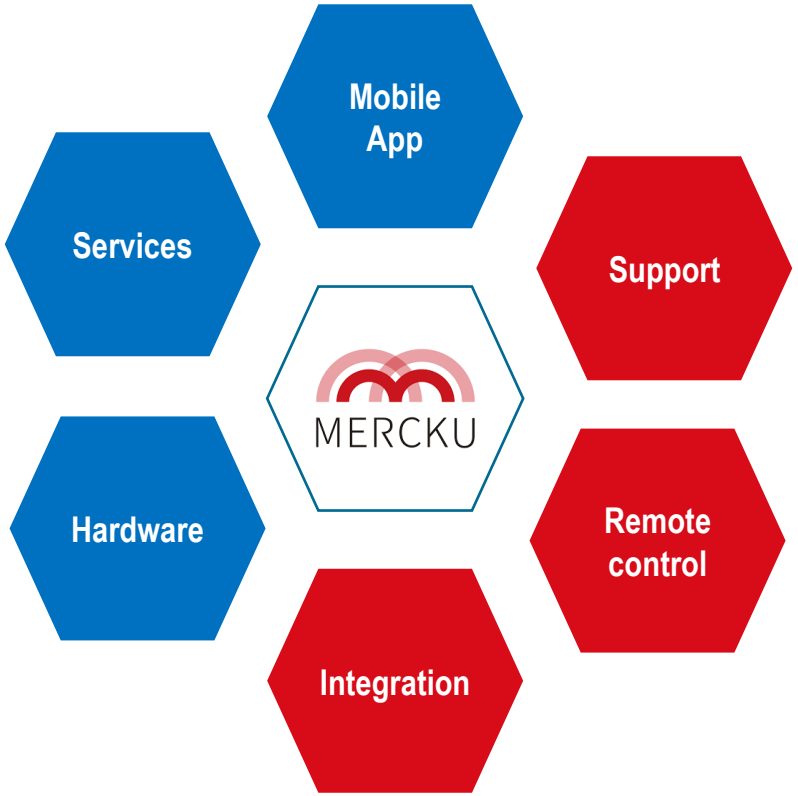
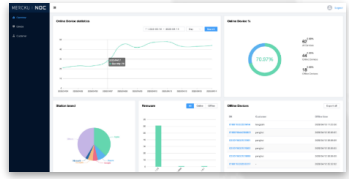
Solutions are optimized for subscribers and operator

User optimized

- User-friendly UX & UI
- Focus on speed and performance
- App with many controls



Operator optimized



- Customer service augmentation
- Reliable, powerful, affordable solution
- RMM Remote monitoring and management

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Router

Access Point

Package

Product Packaging

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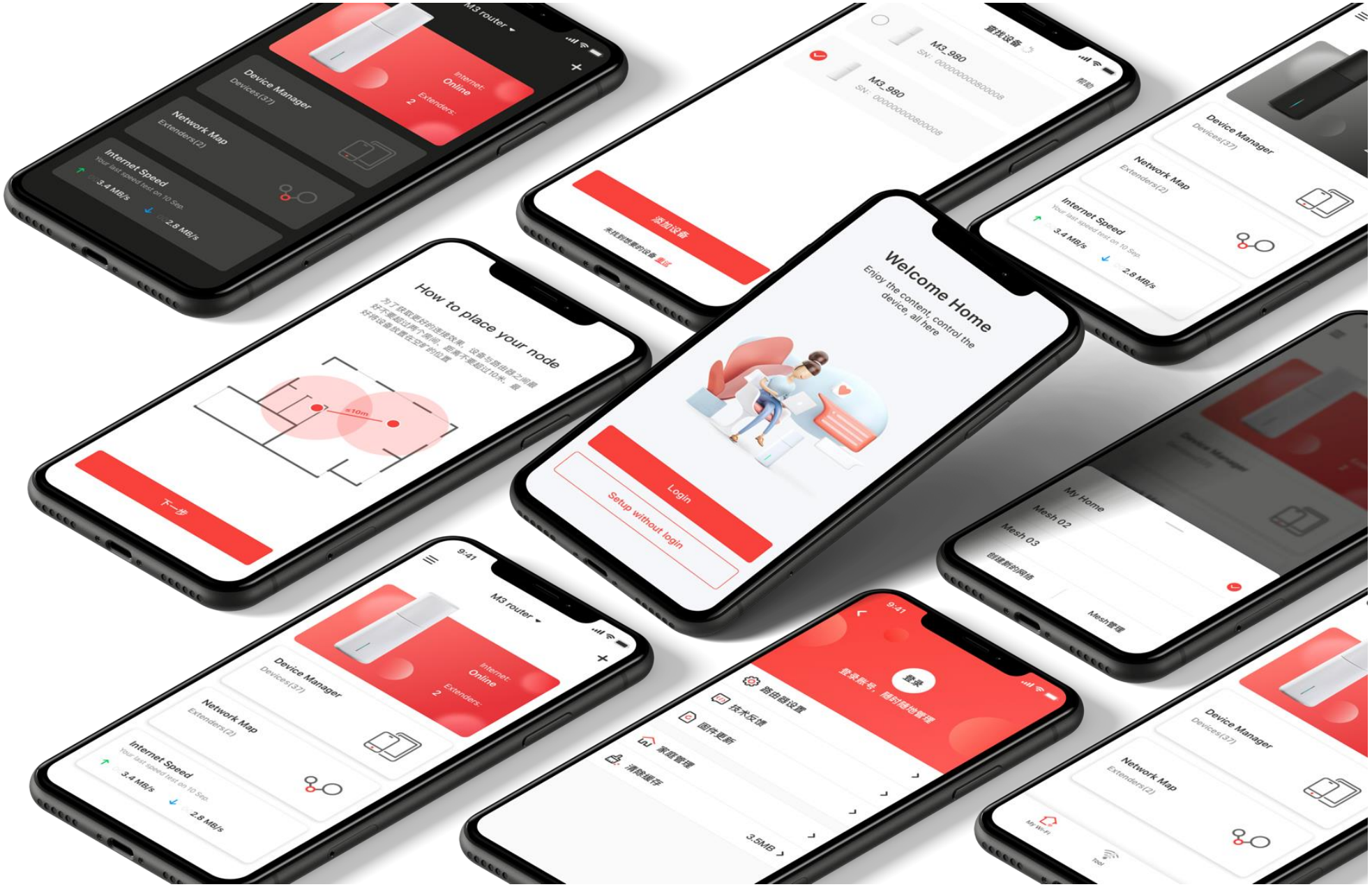

UI

User Interface

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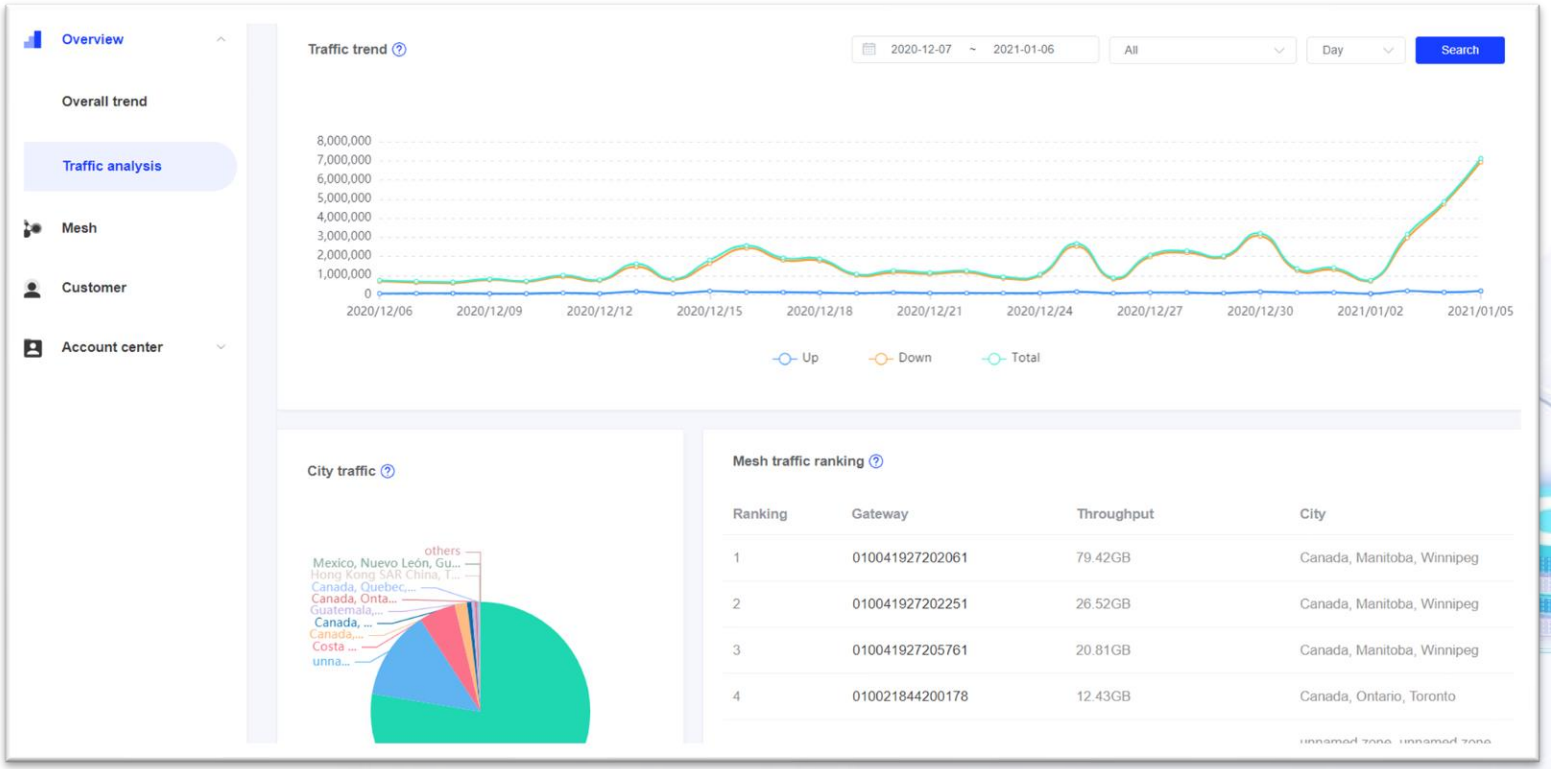

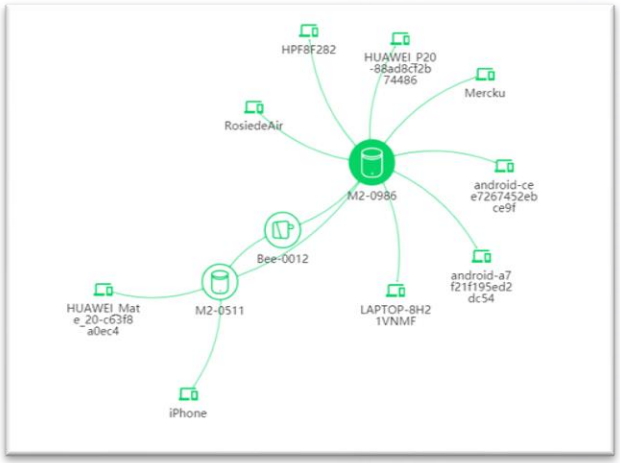

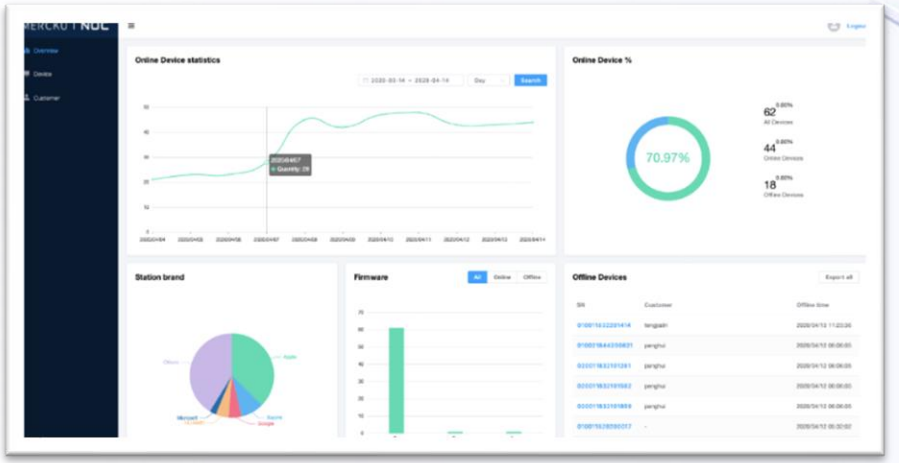

NOC

Remote Control