

Wireless WiFi 6 (802.11ax)

Wi-Fi risinājumi

1

September 19



Wireless WiFi 6



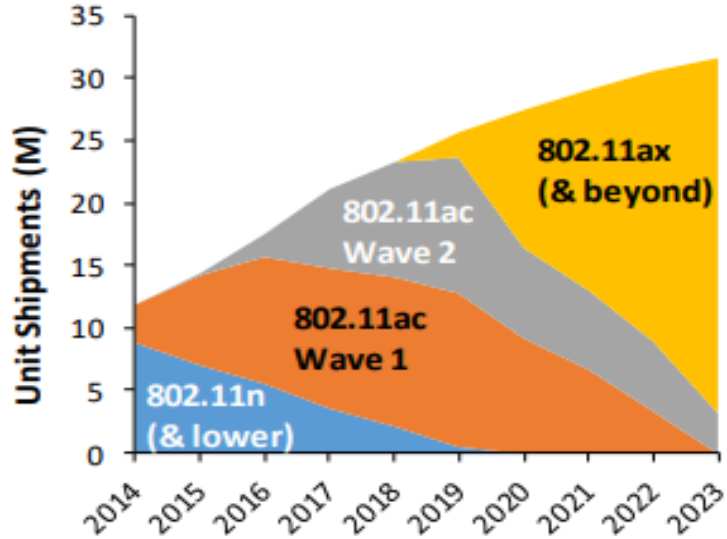
2

September 19

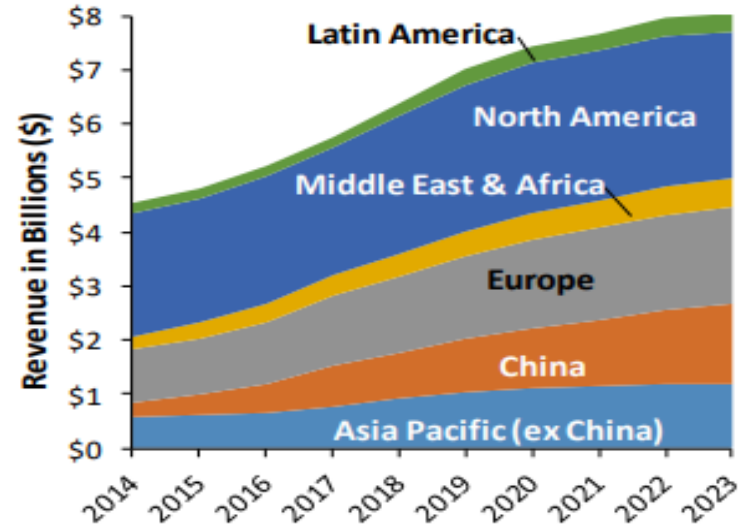


Next 5YRs WLAN Market Forecast

Enterprise WLAN Unit Shipments Forecast



Enterprise WLAN Regional Forecast



- We expect that by end of year 2019, most Enterprise class vendors will begin shipping 802.11ax Access
- We expect that 802.11ax will become the dominant technology in the coming years

802.11ax : Wi-Fi Technology Evolution

22 Yrs Airtime &

2 Mbps

10 Gbps

Growing

2.4GHz

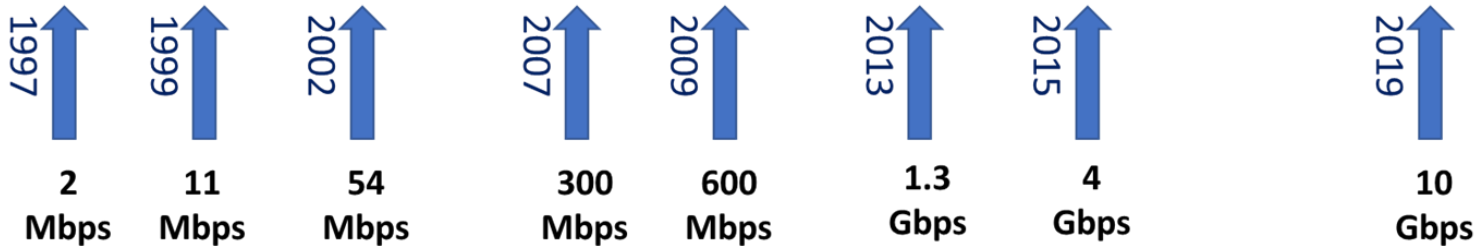
802.11 b/g/n

802.11 ax

5GHz

802.11 a/n/ac

802.11 ax



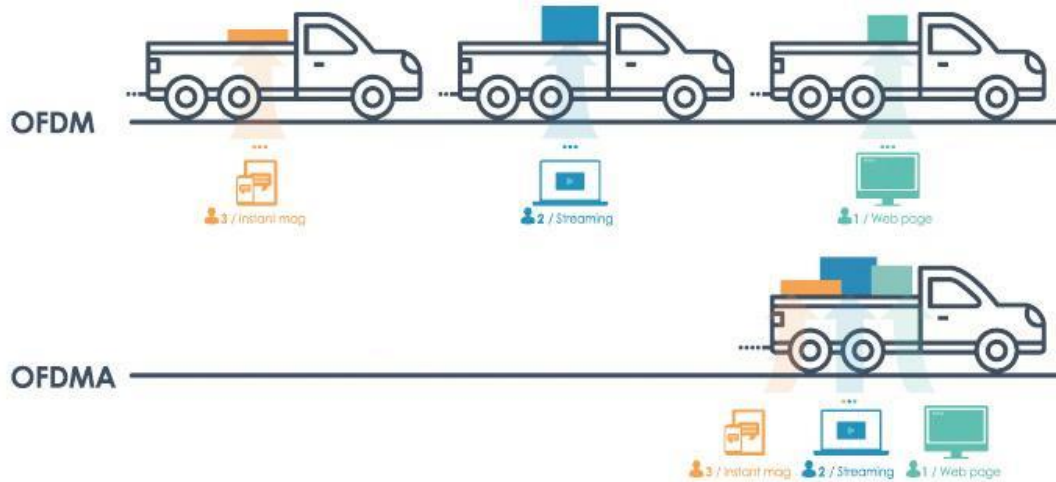
802.11ax

Key Technical characteristics (vs 802.11ac)

	Technology/ Standard		
Feature	802.11ac Wave 2	802.11ax	Benefit
MU-MIMO	DL (Up to 4SS)	UL-DL (Up to 8SS)	Improved Network Throughput, UL deferred to 802.11ax Wave 2
Frequency Multiplexing	OFDM	OFDM & OFDMA	Improved Network Concurrency + Latency. Combination of OFDMA + MU-MIMO is deferred to 802.11ax Wave 2
Modulation	Up to 256-QAM	Up to 1024-QAM	Increased peak data rates
Target Wait time	NA	Supported	Reduced power consumption. TWT allows stations to wake up at scheduled times which allows longer sleep times improving battery life
Guard Interval	0.4, 0.8us	0.4, 0.8, 1.6, 3.2us	Outdoor performance improvement
Symbol duration	3.2us	3.2, 6.4 & 12.8us	Outdoor performance improvement

802.11ax

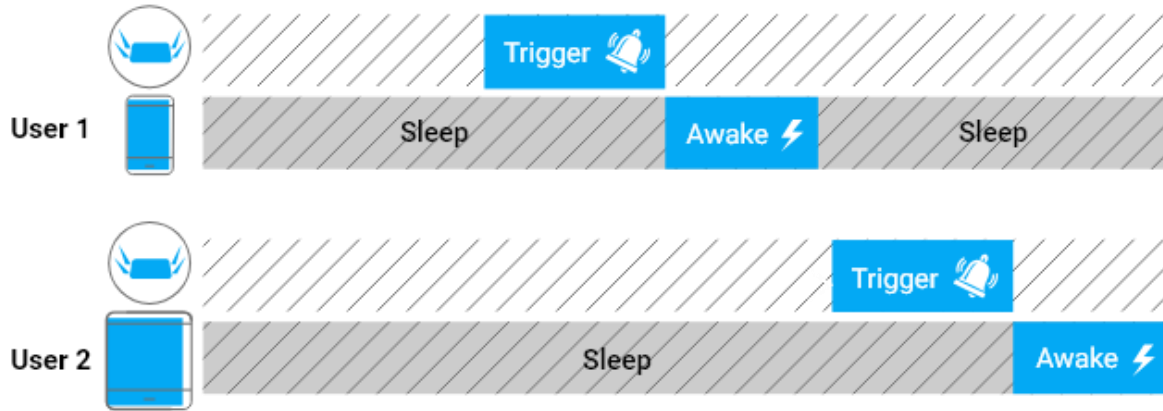
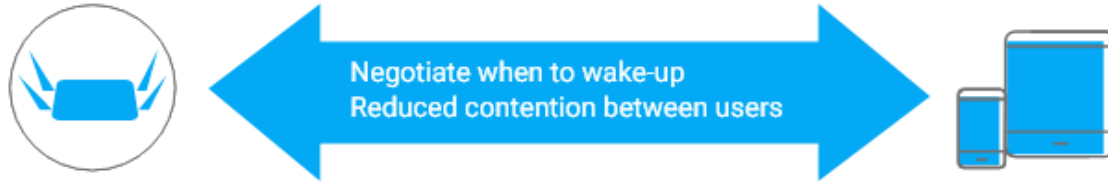
OFDMA schedules to reduce payload and latency



802.11ax adopts OFDMA to allow multiple users with varying bandwidth needs to be served simultaneously. It results in fixed overhead payload size, reduced latency, and increased efficiency.

802.11ax

Target Wake Time






The target wake time feature lets your devices to keep a radio receiver sleeping and wake it up as needed to receive periodic transmissions from an access point. The result is significant power-saving for battery-powered devices.

802.11ax Technology WHY ?

High Performance Next Gen WiFi

- ✓ Increased network throughput
- ✓ Increased efficiency in dense environments
- ✓ Increased robustness outdoors
- ✓ Reduced power consumption
- ✓ Enhanced Wi-Fi coexistence
- ✓ Peak link throughput increase
- ✓ Reduced overhead (user/device contention)

Generation of network connection	Sample user interface visual
Wi-Fi 6 (802.11ax)	
Wi-Fi 5 (802.11ac)	
Wi-Fi 4 (802.11b/g/n)	



Wireless WiFi risinājumi

9

September 19



Alcatel-Lucent
Enterprise



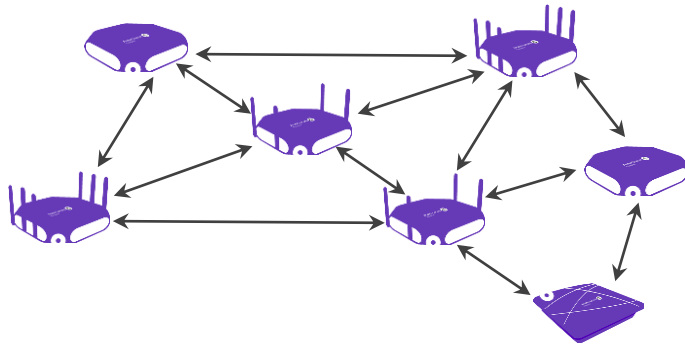
OmniAccess[®] STELLAR WLAN



Wifi Express 16□32□64□256 cluster size



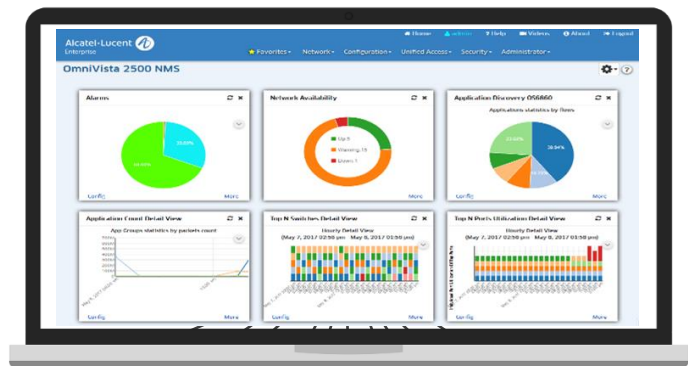
- Expand up to 256 APs in a Single Managed Cluster
 - Minimum of 8 QTY of AP122x or AP123x or AP1251 required
 - Guest Account Limit - 2K
 - Connected Client Limit - 4K



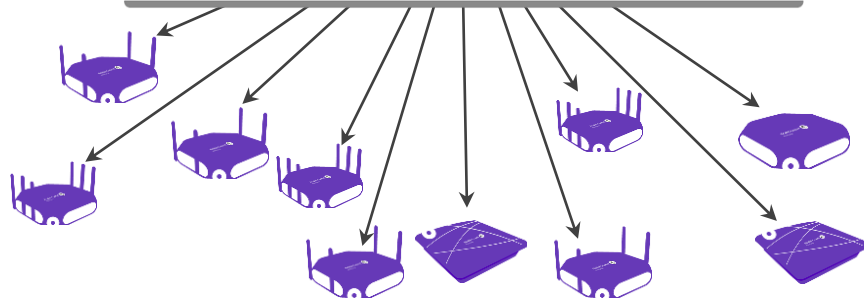
✓ Low or No Touch IT

- 3 stars Hotels
- Assisted Living Spaces
- Small schools

WiFi Enterprise - Central managed deployment



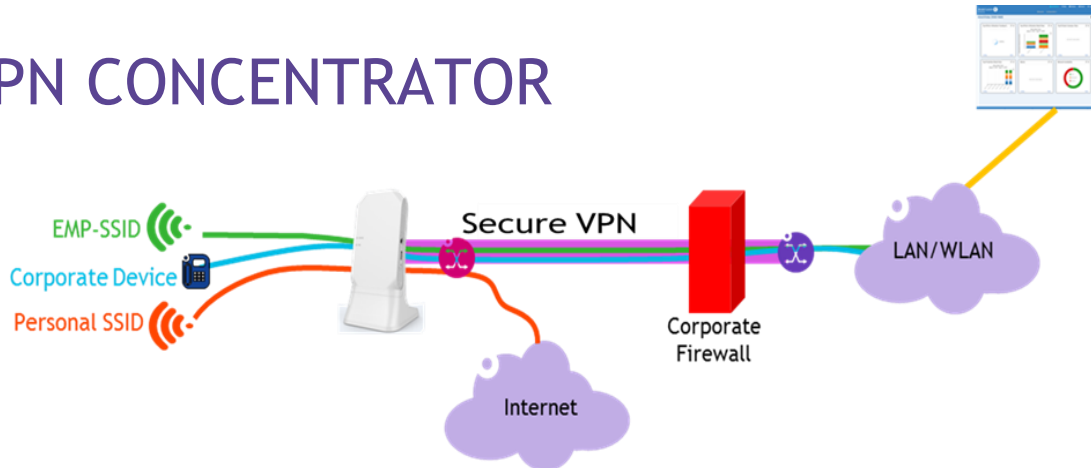
- Local or Cloud
- Unified wired-wireless
- Access Management (Guest/BYOD)
- Role based policy enforcement
- Smart Analytics
- Distributed intelligence control
 - Up to 4000 APs
- Advanced wireless features
 - WLAN topology on a map and heat map
 - Wireless security (wIDS/wIPS)
- High availability



Central unified management for larger deployments

RAP & STELLAR VPN CONCENTRATOR

AWOS 3.0.R7*
Q3 2019

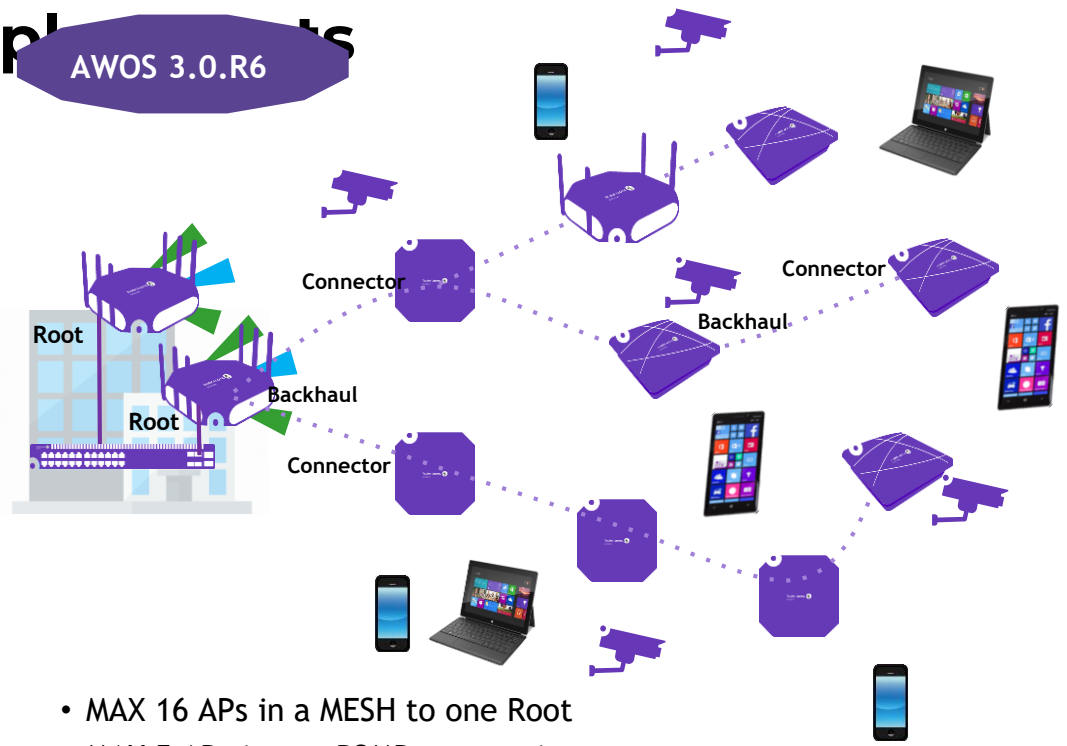


- RAP solution for remote home users and remote offices providing secure access to corporate applications
 - RAP requires no unpacking and configuration by IT in corporate. Default factory shipped Stellar AP is capable of being deployed as RAP
- On Premise Stellar Wireless traffic can be securely tunneled to the concentrator
 - Enabling secure overlay transport
 - Enabling low touch Stellar deployment on non ALE LAN infrastructure
- Remote Traffic steering capabilities
 - Layer 2 connectivity between clients and HQ network, clients get the same VLAN/Role/IP address from HQ network just like inside HQ Network. No local breakout.
 - Layer 3 connectivity between clients and HQ networks, AP will act as the first gateway of clients. Local breakout supported to access local printer or direct Internet access.
 - Local Layer 2 network ONLY including access to Internet

*RAP Available in POC mode

Wireless MESH – Flexible Deployments

AWOS 3.0.R6



- The LAN/WAN connected AP is the Root
- All APs also broadcast client WLAN services (max 5)
- If there are two roots configured in the setup, the downlink APs will connect to the root with BEST RSSI
- IF Root fails the downlink APs will try to search for next best Root
- Recommend 5GHz MESH link

- MAX 16 APs in a MESH to one Root
- MAX 5 APs in any P2MP connection
- MAX 4 Hops

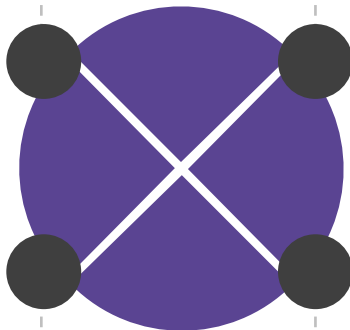
UPAM Enhancements

Unified Policy Authentication Manager

Authentication

- OV Management & UPAM in different subnets
 - Multiple External Radius/ EDUROAM
 - Aruba integration with UPAM
- Provision to add 3rd party Vendor Radius Attributes
- IPv6 Client authentication & policy
 - Customizable HTML Pages
 - Multi-Lingual

Portal



Guest

- Multiple Service Level (Standard/ Gold/ Platinum member etc.) operator provisioning
- Ease Multiple Guest Account creation
- WeChat/ ALE Rainbow Social Login
- Self-registration option (T&C) to collect INFO, without requiring account to connect.
- Elastic Licensing

BYOD

OmniAccess® Stellar WLAN Access Point Lineup

AWOS 3.0.R6



AP1101
802.11ac Wave 1
2 radios
2x2:2 @ 2.4GHz
2x2:2 @ 5GHz
1 GE port



AP1201
802.11ac Wave 2
2 radios
2x2:2 @ 2.4GHz
2x2:2 @ 5GHz
BLE, Zigbee
1 GE port
DPI



AP1221/AP1222
802.11ac Wave 2
2 radios
2x2:2 @ 2.4GHz
4x4:4 @ 5GHz
BLE w/USB
1 GE Port
DPI



AP1231/AP1232
802.11ac Wave 2
3 radios
4x4:4 @ 2.4GHz
Dual 4x4:4 @ 5GHz
BLE
1xGbE + 1x2.5GbE
DPI



AP1251
802.11ac Wave 2
2 radios
2x2:2 @ 2.4GHz
2x2:2 @ 5GHz
1 GE port uplink
1x GE downlink
DPI



AP1201H
802.11ac Wave 2
2 radios
2x2:2 @ 2.4GHz
2x2:2 @ 5GHz
BLE w/USB
1 GE port
3x GE downlink
RJ45 Passthrough

Special Use
Hotel Rooms
Education Dorms
Patient care rooms
Remote Office
Etc.

OmniAccess Stellar AP Nomenclature

OAW-AP1XXXX

OAW-AP1

1 : 802.11 AC W1
2 : 802.11 AC W2
3 : 802.11 AX

7 Premium Outdoor
6 Entry
5 Premium High End
4 Entry
3 Premium Mid Range
2 Entry
1 Premium Low End
0 Entry

2 External
1 Internal

H Hospitality
D Directional
L Light

Root

Technology

Range

Antenna

Suffix (optional)

Datasheets

Management Platform

- OmniVista 2500 [datasheet](#)
- OmniVista Cirrus [datasheet](#)

LAN Switches

- OmniSwitch 2200 SMB WebSmart switch: [datasheet](#)
- OmniSwitch 6350 SMB LAN switch: [datasheet](#)
- OmniSwitch 6450 Stackable Gigabit Ethernet LAN switch: general [datasheet](#) , 10 port [datasheet](#)
- OmniSwitch 6465 Hardened L2+ LAN Switch [datasheet](#)
- OmniSwitch 6560 - Stackable Multigig LAN switch: [datasheet](#)
- OmniSwitch 6860 - Stackable LAN switch with multigig and DPI option [datasheet](#)
- OmniSwitch 6865 - Hardened L3 Switch [datasheet](#)
- OmniSwitch 6900 - Stackable 40G core switch [datasheet](#)
- OmniSwitch 9900 - Chassis core switch [datasheet](#)

Stellar WLAN

- OmniAccess AP1101 SMB 802.11ac AP: [datasheet](#)
- OmniAccess AP1201 entry-level 802.11ac Wave 2 AP: [datasheet](#)
- OmniAccess Stellar AP1220 Series- High performance wave 2 AP: [datasheet](#)
- OmniAccess Stellar AP1230 Series - Ultra high performance wave 2 AP: [datasheet](#)
- OmniAccess Stellar AP1251 - Rugged wave 2 AP: [datasheet](#)

CONTACTUS



katrina.levita@adventus.lv

andris.laumanis@al-enterprise.com

WEBSITE

www.adventus.lv

www.al-enterprise.com

Follow us on:

