

Making Sense Of New Hardware Options

February 2023



Comprehensive | Secure | Hassle-free



Tom Alexander

CEO
Uplevel Systems



Cory Ware

Sr. Director of Channel
Management
Uplevel Systems

Uplevel Systems has introduced a number of new gateways and switches in the past few months.

Choosing between them can be complicated!

This webinar explains how you can pick the appropriate hardware for a project.



Every partner has his or her method ... but here's what we recommend

First, select a Gateway

Based on: number of employees, storage needs, firewall throughput



Next, choose the APs you need

Based on: office square footage, number of employees, % coverage



Finally, pick the number and size of LAN switches

Based on: number of wired devices (including APs), plus safety factor for growth

There used to be one ... now there are many!



UG-206Pro



UG-101

- Rated capacities from 1 employee to 1000 employees
- WAN bandwidth from 900 Mb/s to 2000 Mb/s
- DPI firewall performance from 200 Mb/s to 1100 Mb/s
- VPN throughput from 100 Mb/s to 1500 Mb/s






UG-204



- Port count from 2 to 7 LAN ports (and 10GE SFP+ in the near future!)
- Storage capacities from single 1TB to dual 8TB RAID

UG-208Max



Gateway	Ports	Storage Options	IDS/IPS Throughput	Recommended Max Employees
UG-204 	2 x WAN (1 Gb/s RJ-45) 2 x LAN (1 Gb/s RJ-45)	No storage	200+ Mb/s	25
UG-101 	2 x WAN (1 Gb/s RJ-45) 7 x LAN (1 Gb/s RJ-45)	1 TB 5 TB	220 Mb/s	99
UG-206Pro 	2 x WAN (1 Gb/s RJ-45) 4 x LAN (1 Gb/s RJ-45)	1 TB Dual 1 TB RAID Dual 4 TB RAID Dual 8 TB RAID	900-1000 Mb/s	200-250
UG-207Pro (upcoming) 	2 x WAN (1 Gb/s RJ-45) 6 x LAN (4 x 1 Gb/s RJ-45 <i>plus</i> 2 x 10 Gb/s SFP+)	1 TB Dual 1 TB RAID Dual 4 TB RAID Dual 8 TB RAID	900+ Mb/s	200-250
UG-208Max 	2 x WAN (1 Gb/s RJ-45) 6 x LAN (1 Gb/s RJ-45)	1 TB Dual 1 TB RAID Dual 4 TB RAID Dual 8 TB RAID	1100+ Mb/s	1000

We designed these gateways based on our customer mix



UG-204

Tiny, fanless, great for SOHO, remote workers



UG-101

Our “workhorse” midrange, fits most small-biz offices

And there’s a new “UG-205” midrange in the near future ...



UG-206Pro

For a larger number of users (churches, schools, etc.)



UG-208Max

The “Big Kahuna” – just barely fits as an ‘SMB’ product!

Usually, number of employees is a good proxy for required performance

**10 or less people in the office?
No storage? No Active
Directory? Mostly Wi-Fi?**



UG-204

Sometimes a higher-performance gateway may be needed even for smaller firms (e.g., clients doing lots of video editing). Call us if you have questions about specific customers!

**Typical small office: 25-50 people,
moderate firewall performance &
storage, price-conscious?**



UG-101

**More than 100 people? Need
to max out WAN link with all
firewall features enabled?**



UG-
206Pro

More than 400 people?



UG-
208Max



UAP-101B

Standard dual-radio 2x2 MIMO Wi-Fi 5 AP



UAP-201

***New* dual-radio 2x2 MIMO Wi-Fi 6 AP**



UAP-102

Dual-radio 2x2 MIMO Wi-Fi 5 *Outdoor* AP

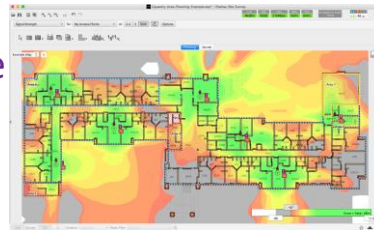
Selecting between indoor and outdoor APs is easy: choose the outdoor AP for hostile environments, use the indoor AP for everything else

But the *rest* of the process is a black art!!

- How many APs do I need? Depends ...
- Where should I put them? Well, depends ...
- What power/channel settings should I use? Hmmm, it depends ...
- Will the customer complain? Probably 😞

The Large Enterprise way:

- Buy thousands of \$\$ worth of tools
- Do a site survey and build heatmaps
- Place & configure APs for best coverage
- Wait for the users to complain



The Small Business way:

- See how big the office is
- See how much the customer is willing to spend
- Place as many APs as you can afford, without busting the budget pulling cable
- Wait for the users to complain



Look at the floorplan first

For a small office, eyeball the place; larger offices have floorplans posted (required by fire code)
Count up the square footage and the number of employees present, check for odd-looking walls



At least 1 AP for every 2000 sq. ft.

AP signal strength falls off as the *square* of the distance
Free-space (outdoor) range <100' for Wi-Fi 5, <300' for Wi-Fi 6
Indoor range varies wildly depending on building materials



At least 1 AP for every 10-20 people

Radio channel loses efficiency rapidly with simultaneous users
Every person typically represents 2-3 Wi-Fi devices (watch, phone)
Modern devices are always hitting the nearest AP



For large or complex spaces, budget for an extra AP or two

You might not need it, but it prevents blowback from the customer later
Sometimes an outdoor AP will get the signal through when an indoor AP won't cut it

If in doubt ... call Uplevel Support. We've worked with many Wi-Fi deployments.

Ethernet is pretty straightforward, thank goodness



- Uplevel offers 8-port, 24-port and 48-port switches
- *All* switches are PoE capable on every RJ-45 port (except uplinks)
- *All* switches can drive an AP or phone on every port
 - 60W for ULS-100 8-port (smallest), 130W for ULS-101 8-port, 410W for 24 and 48-port switches
- *All* switches have SFP ports for inter-building fiber
 - New ULS-202 24-port switch has 10GE SFP+ ports
- *All* switches run same firmware with same autodiscover capabilities, and are managed identically from portal
- *All* switches are rackmountable except for ULS-100

When planning LAN infrastructure, we suggest having >25% spare ports
 Try to avoid enormous chains of switches if possible; short chains have higher performance and are more reliable

We have a wide selection of hardware – use it to your benefit!

Pick the right gateway for your customer needs

Remember that you can always move up or down in terms of gateway performance and capacity, provided that you prepare the way with your customer first

Add switches and APs as you need them

You can always use third-party equipment with Uplevel gateways (and we'll help you make the setup work), but you'll lose a lot of the simplified, no-security-holes management benefits

Call us if you need help with a proposal or a layout!

Contact Us:

info@uplevelsystems.com

sales@uplevelsystems.com

971-770-2468

support@uplevelsystems.com

971-317-3001

Cory Ware

cory@uplevelsystems.com

503-746-6098





Comprehensive | Secure | Hassle-free