1Gb Ethernet that speaks AV’s language
Demand for AV-over-IP continues to expand at an exponential rate. One of the fastest growing areas is for applications that need 1Gb Ethernet connectivity, but until now, it was under-served. That has all changed with the introduction of the industry’s first dedicated 1Gb switches designed specifically for the AV market, helping users and their installers explore the benefits of IP-enhanced sound and vision even more.
Who needs 1Gb for AV?

AV-over-IP has revolutionized AV in recent times, providing unprecedented levels of flexibility and quality. Network switches are at the heart of delivering AV-over-IP, and devices with potential of 10G and above have tended to be more in the spotlight, with the traction around 4K and even 8K high-definition content. That has made sense: delivering efficient, high-performance AV in theaters, concert venues, and similar environments requires high bandwidth with low latency, and will continue to be a rapidly expanding AV-over-IP sector.

However, there is a vast volume of AV applications that require much less bandwidth, typically no more than 1Gb, while still providing high quality video and audio. Examples include many digital signage situations, conferencing systems in offices, smaller auditoriums (such as those found in schools), sports bars and restaurants, and residential AV.

These are all categories of users who are embracing the benefits of AV-over-IP, and what they require are 1Gb switches that deliver performance and reliability, but at an attainable price point. They also want switches that are easy to install and to manage, rather than having to be IT experts, and the same applies for their installers too.
What 1Gb AV has been missing

The problem is that there have not been switches designed for these users. Of course, there are 1Gb Ethernet switches widely available, but these have largely been aimed at business IT networks, not AV. So, not only do these switches often come with a higher price tag, users and their installers have had to work around some issues to fit into AV environments.

For instance, on a typical IT switch, the cabling is at the front: imagine seeing all those cables cluttering the rack of equipment in an upscale car showroom. In AV, switches are often in very visible locations, so looks matter (whereas with an IT network switch, chances are that it is hidden away in a comms cabinet).

Second, and not surprisingly, IT switches are designed to speak IT language, with the functionality that IT users need. AV uses different terminology and has its own design requirements.

AV needs switches designed for AV

Ease-of-use – from installation onwards, with the features that AV users want, but without unnecessary and complicated setup

An effortless fit – products designed with the specific requirements of AV environments in mind (e.g., cables in the back, alternative mounting options)

Affordable high-performance – the reliability and quality that 1Gb AV users need, but at a price point that is within their budgets

Support – comprehensive pre- and post-sales support, rather than leaving users or installers to troubleshoot queries themselves

AESTHETICS
FRONT OF MIND
Creating products with usability is central to the NETGEAR DNA. That is why, when we started looking at developing some dedicated AV 1Gb switches, we consulted with our Pro AV Council of integrators and consultants, who know the market inside-out.

Of course, we already knew that these new products would need to be simple-to-install, operate and affordable. We also had some other ideas based on the experience we’ve had with our M4300 10Gb Ethernet switch, which has been very popular in higher-bandwidth AV applications. The Pro AV Council added some more insight into what the market wants, and that is reflected in our new M4250 Series of 1Gb switches designed for AV.
The missing link in 1Gb AV

Built from the ground-up for 1Gb AV, the M4250 is a series of managed network switches and the start of the new AV Line from NETGEAR. Building on our existing track record, the M4250 takes usability and purpose-built design for AV to a new level, across:

**Design** - a chassis design, user interface and features that fit perfectly into AV environments

**Usability** - including user interfaces, out-of-the-box performance and support

**Flexibility** - multiple configuration options and integrations with AV vendors. Plus easy to expand as needs grow or change.

…Plus the affordability for which NETGEAR SMB products are known.

1Gb AV-over-IP in action

Here are some examples of how the M4250 fits into real-world AV:

**4K digital signage** - distributed throughout an office building, school or hospital

**Consistent, latency-free audio** - for PA, microphone systems and networked audio, building or campus-wide

**Office conference rooms** - high quality video and audio that just works for a great meeting experience

**Home cinema** - replicate the theater experience in the comfort and privacy of home

**Sports bars/restaurants** - distribute sporting events and news across the facility
A closer look at the M4250

Designed for AV
A sleek, black LED panel at the front blends in with other AV equipment and offers quick port status. Cabling is now standardized on the back of the unit but reverse rack-mounting is possible with the included mounting hardware. There are also threaded holes at the bottom and the front to support universal mounting options, which may sound like a simple thing, but gives AV users much more versatility.

Especially evident to AV users is the new web-based AV user interface allowing customization or configuration as needed. Specific AV profiles allow the user to ensure the switch is setup correctly for their particular use case. The advanced IT interface is there, too, for those IT admins who need to tweak a setting for their particular installation.

Easy to set up and use
The M4250 is ready-to-go out-of-the-box: simply plug it in and connect your endpoints. Use the intuitive AV user interface to take advantage of built-in configurations for a friction-free experience. If needed, help is at hand, through the dedicated NETGEAR Pro AV Engineering Services team.

Offering free network design services and installation support, the NETGEAR Engineering Services Team is ready to help ensure 1G deployments with the M4250 AV over IP switches go as smoothly as possible. Just send an email at ProAVDesign@netgear.com to get started.

The M4250 series comes with the NETGEAR ProSAFE Limited Lifetime Hardware Warranty, providing 90 days of technical support via phone and email. Lifetime tech support is available through online chat one and email, and next day hardware replacement.
Affordable
Like all NETGEAR switches, the M4250 is designed to fit within today's SMB budgets, but still deliver true business-grade performance. Plus, the M4250 can be used to power AV equipment up to 90 watts, through Power over Ethernet (PoE), and so simplifying the installation by reducing the need for additional electrical cables and energy consumption.

Flexible
When needed, the M4250 can be easily customized to suit a wide variety of requirements, including VLANs, QoS, and the ability to mix with other NETGEAR switches in a star-topology, without needing any complex configuration.

Multiple third-party AV integrations include Dante, Q-SYS and AES67 profiles built-in for audio; for video NVX, SVSI, Q-SYS, NDI, Dante and more. The M4250 comes with robust support for Audio Video Bridging (AVB), for which a license can be purchased separately.

The M4250 series ranges from 8 ports with uplink 1G options for audio installations or standalone video installations as well as 10G uplinks for larger scale video deployments. The M4250 series also includes 12-port multi-gigabit Ethernet and 16-port 1G/10G fiber models for plug and play aggregation in a star topology.
Sound and Vision for the 21st century
AV-over-IP has been one of the most significant changes in the AV market for many years, bringing vast potential to so many more users and applications. The M4250 is part of the new AV Line from NETGEAR, a foundation for AV-over-IP both today and in the future, building on the company’s existing track record in network technology, as well as its experience in serving the pro-AV market. The M4250 delivers the performance, flexibility, affordability and ease-of-use that are fundamental to all NETGEAR products, while being tailor-made for AV.

Benefits to resellers
AV-over-IP represents a tremendous growth market for all types of resellers, including IT networking specialists who want to expand their portfolios. Like the M4300 10Gb series, the M4250 gives partners the opportunity to offer their customers simplified, affordable AV switches, without the necessity of anyone having to become IT experts. If needed, NETGEAR experts are always on hand through the dedicated Pro AV Engineering Services team.

Plus, resellers can target different specialist markets, such as residential, education, hospitality or corporate, taking advantage of the easy and highly flexible configuration of the M4250 series of managed switches.

Find out more visit netgear.com/avline