

The NETGEAR Align Controller (GB406)



The NETGEAR Align Controller (GB406) is a purpose-built platform designed to simplify and strengthen AV-over-IP deployments, while enabling scalable, service-led solutions for integrators, service providers, and manufacturers

Built for modern AV and broadcast operations

As AV networks grow in complexity, integrators are expected to:

- Ensure continuous system performance
- Enable remote monitoring and support
- Minimize downtime in business-critical environments

The Align Controller is designed to support this shift:

- Not just hardware, but a platform for efficient, service-driven AV operations
- Enables more scalable and profitable deployment models

Flexible deployment, reduced complexity

Compact, rack-ready design for easy integration across:

- Corporate and enterprise environments
- Broadcast and media installations
- Live events and staging
- High-end residential projects

Reduces system complexity by:

- Consolidating key network services
- Supporting multiple applications in parallel
- Eliminating the need for multiple discrete devices
- Streamlining deployment and ongoing maintenance

Advanced management & remote access

Simplifies installation and transforms post-installation operations with:

- Local browser-based access including NETGEAR Engage (up to 5 users)
- Remote access through NETGEAR Insight (license required)

Enables teams to:

- Monitor system health in real time
- Troubleshoot issues remotely
- Deliver ongoing support without on-site presence

Creates new opportunities to:

- Offer managed services
- Generate recurring revenue
- Improve reliability and customer confidence

Optimized for AV and media over IP ecosystems

For manufacturers and ecosystem partners, the Align Controller offers:

- Stable, standards-based platform
- Support for widely adopted AV timing protocols (ST2110, PTPv2, AVB)
- Built-in core network services (NTP, Syslog, DNS, DHCP)

Benefits include:

- Reduced integration complexity
- Consistent performance across systems
- Interoperability support across multi-vendor environments

Future-ready platform

Designed with extensibility in mind, the platform supports:

- Additional NETGEAR applications
- Integration with third-party solutions over time

Provides a flexible foundation to:

- Add new services and capabilities
- Enhance system intelligence
- Adapt to evolving customer and market requirements

Drive long-term value

The Align Controller enables a shift beyond just deployment:

- Service-driven AV operations
- Lifecycle management and remote support
- Sustainable, long-term value creation

Warranty and Support

The Align Controller is covered under NETGEAR Enterprise 5-year Warranty**

- Includes 90 days of complimentary technical support through all support channels and Fast RMA replacement once the faulty unit is received
- Sprint support contracts available with 24/5 Technical Support (phone, online, chat) and Advance RMA Replacement
- Overdrive support contracts available for 24/7 Technical Support (phone, online, chat), 2h SLA for P1 cases, and Next Business Day RMA Replacement



**This product comes with a limited warranty valid only if purchased from a NETGEAR authorized reseller, covering unmodified hardware, fans and internal power supplies. Requires product registration at www.NETGEAR.com/business/registration within 90 days of purchase. See www.NETGEAR.com/about/warranty for details. Intended for indoor use only.

Technical specifications

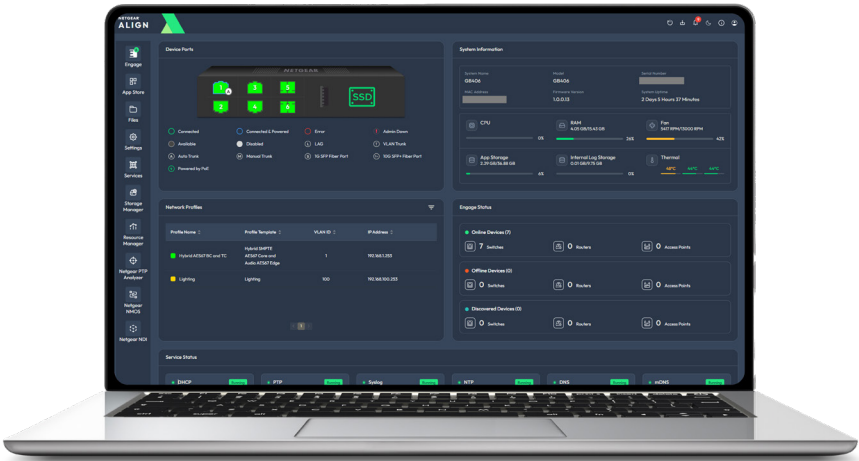
Features	
Hardware	
Form factor	Half-width, shallow 1U, rack-mountable
Processor	Intel® Amston Lake Octa-core x7809C 2.4GHz CPU
Fan	1 x PWM fan (32.8dB@25°C)
Memory	16GB RAM LPDDR5
Storage	64GB eMMC internal storage
Expansion	Storage bay for SATA III 6Gb/s M.2 2242 solid-state drive (22x42mm) delivering speeds up to ~550MB/s
USB	1 x USB-A storage port (USB 3.0)
Networking	
4 x Intel® I226	4 x 2.5G ports supporting 100M, 1G and 2.5G speeds, including one PoE powered device (PD) port that enables the unit to be powered using PoE++ 90W (IEEE 802.3bt Type 4 Class 8)
1 x Intel® X710-BM2	2 x 10G SFP+ ports supporting 1G and 10G speeds
Support of Auto-LAG	Yes (with NETGEAR AV Managed Switches M4250, M4300, M4350, M4500)
Support of Auto-Trunk	Yes (with NETGEAR AV Managed Switches M4250, M4300, M4350, M4500)
Power input	
Main	1 x 2.5G PoE++ (90W) powered device (PD) port that enables the unit to be powered using PoE++ 90W (IEEE 802.3bt Type 4 Class 8)
Secondary	1 x DC connector for 54V/1.66A power adapter (C14 connector 100-240V for local AC power cord)
Redundancy	1+1 seamless power redundancy
Power consumption	
GB406	71W - 242.26 BTU/hr (max)
Touch panel	
Panel	2.99" TFT LCD Touch Panel (72x24.12mm active area) with various status information, including the color of the profiles assigned to the ports
Other interfaces	
Power button	1 x power button with power LED
Reset button	1 x pinhole reset button
Per port LEDs	Speed, link, activity
Initial installation	
Default IP Address	The Align Controller ships with an initial VLAN 1 IP address set to 192.168.1.250 / 255.255.255.0
Installation	During the installation, the VLAN 1 IP address can be changed (static IP only)

Technical specifications

Features	
Management	
Local management	Browser-based GUI for up to 5 concurrent local users on the LAN network (HTTPS)
Cloud remote management	Optional 5-year electronic license (GB406P60-10000S) — NETGEAR Insight Cloud remote management and third-party app support beyond the included 3-month period
Console	1 x USB-C port (Leverages the same USB driver used across NETGEAR AV Managed Switches)
LAN Ports	Any of the 6 LAN ports (4x2.5G and 2x10G SFP+) can be assigned to VLAN(s) in untag (PVID) mode or tagged (trunk) mode using the Network Profiles
Pre-installed NETGEAR applications	
NETGEAR Engage	Powerful, centralized configuration and monitoring of AV switches, Pro Routers, and WiFi 7 Access Points used in AV networks. Includes offline provisioning
Services\DHCP server	Comprehensive and scalable DHCP Service with DHCP templates, most major DHCP options, and active client classification rules. Engage can host VLAN DHCP servers on the Align Controller.
Services\PTP GM clock	Supports up to 6 PTPv2 / AVB gPTP instances with Default 1588, AES67, SMPTE-2059-2, AES-R16-2016, or 802.1AS AVB and their respective BMCA settings. - For PTP, the Align Controller supports PTP 2.0 only, PTPv1 and PTPv2.1 are not supported - Each PTPv2 / AVB gPTP instance must be attached to one VLAN and one physical interface (port) - Since Auto-Trunk is enabled by default, only one PTPv2 / AVB gPTP instance can be attached to the Auto-Trunk port - Auto-Trunk and Auto-LAG need to be disabled on the Align Controller to support several PTPv2 / AVB gPTP instances - The Align Controller can support up to 1,000 BC/OC (Boundary Clock / Ordinary Clock) clients - Additionally, each port can handle up to 200 BC/OC (Boundary Clock / Ordinary Clock) clients
Services\Syslog server	Centralized log collection, storage & retention from multiple devices supporting the standard Syslog protocol (UDP/TCP, typically port 514)
Services\NTP server	Provides time synchronization across devices on the network. Includes the local reference clock (Fudge) and local Stratum level for the trust or accuracy of the clock
Services\DNS server	Supports both Forward Lookups (name->IP) and Reverse Lookups (IP->name), authoritative DNS (serving official records for the domains), recursive resolver (querying other DNS servers), and Zone management

Technical specifications

Features		
Third-party applications		
Future extensibility	Optional 5-year electronic license (GB406P60-10000S) - NETGEAR Insight Cloud remote management and third-party app support beyond the included 3-month period	
Architecture	NETGEAR Store, Ubuntu, Docker	
Physical specifications		
Dimensions without the SSD module bay protruding	Width: 8.66 inches (220 mm); Height: 1U - 1.7 inches (43.2 mm); Depth: 9.06 inches (230.2 mm)	
Dimensions with the SSD module bay protruding	Width: 8.66 inches (220 mm); Height: 1U - 1.7 inches (43.2 mm); Depth: 9.60 inches (243.75 mm)	
Weight without the power adapter	3.75 lb (1.7 kg)	
Weight with the power adapter	4.62 lb (2.1 Kg)	
Mean Time Between Failures (MTBF)	@ 25 °C ambient (77 °F)	@ 50 °C ambient (122 °F)
GB406	377,896 hours (~43.1 years)	188,460 hours (~21.5 years)



Remote AV network management using the NETGEAR Engage application, enabled with the NETGEAR Align Controller

Technical specifications

Features	
Environmental specifications	
Operating:	
Temperature	0° to 45°C (32° to 113°F)
Humidity	5% to 95% relative humidity, non-condensing
Altitude	10,000 ft (3,000 m) maximum
Storage:	
Temperature	0° to 45°C (32° to 113°F)
Humidity	5% to 95% relative humidity, non-condensing
Altitude	10,000 ft (3,000 m) maximum
Electromagnetic emissions and immunity	
Certification marks	Commercial Class A for: CE FCC VCCI RCM ISED BSMI KC
Safety	
Certification marks	CB CE CSA RCM BSMI
Hardware installation guide	
You can download the HIG here:	https://www.netgear.com/support/product/GB406
Package content	
GB406	Align Controller One external 54V/1.66A power adapter and local AC power cord(s) USB Type-C to USB-A 2.0 console cable Rubber caps for the SFP+ sockets Rubber footpads for tabletop installation QR code to the installation guide 1-unit rackmounting standard brackets 2-unit pairing kit for two half-width GB406 Align Controllers in a single rack space

Technical specifications

Features		
Fiber and copper transceivers, DAC cables		
AGM731F	1000BASE-SX SFP LC Transceiver (multimode, 1000m OM4, 550m OM3 50/125µm, 275m OM2/OM1 62.5/125µm)	AGM731F
AGM732F	1000BASE-LX SFP LC Transceiver (single mode, 10km 9/125µm)	AGM732F
AGM734	1000BASE-T SFP RJ45 Transceiver	AGM734-10000S
AXC761	10G Direct Attach SFP+ to SFP+ 1 Meter Passive DAC Cable	AXC761-10000S
AXC763	10G Direct Attach SFP+ to SFP+ 3 Meter Passive DAC Cable	AXC763 -10000S
AXM761	10GBASE-SR SFP+ LC Transceiver (multimode, 550 OM4, 300m OM3 50/125µm, 33m OM2/OM1 62.5/125µm)	AXM761-10000S
AXM762	10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm)	AXM762-10000S
AXM763	10GBASE-LRM SFP+ LC Transceiver (multimode, 260m OM4/OM3 50/125µm, 220m OM2/OM1 62.5/125µm)	AXM763-10000S
AXM764	10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm)	AXM764-10000S
AXM765v2	10GBASE-T SFP+ RJ45 Transceiver (80m)	AXM765-20000S
NETGEAR Enterprise warranty and support		
NETGEAR Enterprise Warranty	5-year	
Support		
Initial Deployment	90 days of complimentary technical support through all support channels and Fast RMA replacement once the faulty unit is received	
Sprint Support	Not included, available with support contracts for 24/5 Technical Support (phone, online, chat) and Advance RMA Replacement	
Overdrive Support	Not included, available with support contracts for 24/7 Technical Support (phone, online, chat), 2h SLA for P1 cases, and Next Business Day RMA Replacement	
NETGEAR Enterprise support contracts		
Support contracts for:	Sprint Support, 1 year / 3 years / 5 years	Overdrive Support, 1 year / 3 years / 5 years
GB406	SPR-GB406-12 / SPR-GB406-36 / SPR-GB406-60	DRV-GB406-12 / DRV-GB406-36 / DRV-GB406-60
Ordering information		
NETGEAR GB406 — Align Controller		
North America; Europe	GB406-100NES (NA, UK, EU)	
Asia Pacific	GB406-100AJS (JP, AU)	
Optional 5-year electronic license for NETGEAR Insight Cloud remote access and third-party applications		
Worldwide	GB406P60-10000S	Requires internet connectivity during the initial onboarding on NETGEAR Insight

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