Allegro Network Multimeter 1000 Series

Hardware Datasheet

Analysis and Debugging Tool for Network Administrators

- Analyzes and correlates all metadata from L2 to L7
- Real-time live data and back-in-time analysis
- Retrospective and selective pcap extraction
- 100% reliable full capture-to-disk solution
- Active email alert
- Easy installation on a mirror port, tap or as a network bridge
- Simple licensing
- Development and support in Germany

Designed for ISPs, Corporate, Campus and Datacenter Networks

The Allegro 1000 Series fits perfectly into all environments with Gigabit and 10 Gigabit connectivity. It allows you to monitor the last 80,000 seen IP addresses and up to 32 million connections for retroactive debugging and investigation. The Allegro 1000 is the portable version (weighing less than 3 kg), whereas the Allegro 1200 is a 1U rack solution with more expansion slots.

Real-time Visibility and Statistics for all Connections

The Allegro 1000 and 1200 provide granular visibility and selective packet filtering across L2 to L7 in real-time and history mode. The web interface offers comprehensive overviews as well as detailed statistics for network quality, IPs, MACs, VLANs, Multicast, QoS, TCP, TLS, RTP, Profinet, VoIP and much more.

Traffic Recorder and Back-in-Time Playback

The Allegro 1000 Series is equipped with a back-in-time function that enables precise selection of the recorded information. Such data can be extracted with a simple click. In addition, selected data can be individually reimported into the network, to recreate specific events or security incidents, e.g. with IDS / IPS systems.

Expandable Ethernet Ports, In-memory Database and Ring Buffer

The Allegro 1000 and 1200 feature multiple expansion options for additional storage and connectivity. The number of ports can be increased by 4, selectable from 1 / 2.5 / 5 or 10 GbE Cu/SFP+ ports. The memory size for processing historical data in the In-memory database is 16 GB in the base version and can be expanded up to 512 GB. The ring buffer, for recording the traffic of a link or its selected traffic, enables the selective extraction of historical packets. The ring buffer can be expanded up to 16 TB internally.

Table 1 Allegro 1000 / 1200 Series Specifications

Feature	Allegro 1000 (revision 3)	Allegro 1200 (revision 3)
Order ID	110	111
Rack units	1 (half width)	1 (full width)
Size (L/H/W) in mm	264 x 43 x 226	439 x 43 x 249
Weight	2 kg	4 kg
Extension options	1 (network or disk extension)	1 for network extension 1 for disk extension
Power supply	150 W, external	200 W, internal
Possible disk extension	2 / 6.4 / 12.8 TB SSD 1 TB HDD	2 x 2 / 6.4 / 12.8 TB SSD 1 x 1 / 4 / 10 / 16 TB HDD
Airflow	Front-to-back or Back-to-front[1]	Front-to-back
Packaging	Portable soft shell case	Cardboard box
Internal database memory	Base unit: 16 GB ECC, extension: 64 / 128 / 256 / 512 GB ECC	
Management port	1 x 1000Base-T out of band 1 x WiFi 802.11n via USB adapter 1 x 1000Base-T IP KVM remote management	
Monitor ports	Base unit: 3 x 1000Base-T, 2 x 10GBase-T[8], 2 x SFP+ (Intel module)[9] Extension: 1000Base-T, SFP+, SFP28, QSFP, QSFP28/56	
Maximum throughput[2]	20 GBit/s	
Average throughput[3]	Full decode: 10 GBit/s, capture only: 20 GBit/s	
Average packets per second[3]	Full decode: 1.2 million pps, capture only: 4 million pps	
Max parallel connections	1 million concurrent open connections	
In-memory DB storage[4]	16 GB stores the last 10,000 active IPs and the last 4 million connections. 64 / 1 28 / 256 / 512 GB increase the memory capacity or the duration of the active IPs and connections by 4 / 8 / 16 or 32 times.	
Jumbo frames	9,000 bytes	
Hardware warranty	1 or 3 years, longer as option	
1U rack kit	Included	
Operating temperature	+10° C to +40° C (+50° F to +104° F)	
Non-operating temperature	-40° C to +70° C (-40° F to +158° F)	
Operating relative humidity	8 % to 90 % (non-condensing)	
Non-operating relative humidity	5 % to 95 % (non-condensing)	
Certifications	CE, FCC, RoHS	

Table 2 Network Extension Options

Please be aware that the Allegro 1000 has only one shared slot for either one network extension or one internal storage extension (order ID 403 to 408). The Allegro 1200 has two slots, one for network extension and one for internal storage expansion. All SFP+ ports require a SFP+ module, see Table 5 for available modules.

Order ID	Product Description
211	SFP+ 2-port extension (1 / 10 G)
212	SFP+ 4-port extension (1 / 10 G)
213	SFP+ 2-port extension with nanosecond timestamp support
214	SFP+ 2-port extension with GPS based nanosecond timestamp support
215	10GBase-T 2-port Cu extension (1 / 2.5 / 5 / 10 G)
216	1000Base-T 4-port Cu extension (100 M / 1 G)
217	SFP28 2-port extension (1 / 10 / 25 G)
218	QSFP 2-port extension (40 G)
219	1000Base-T 4-port BYPASS Cu extension
220	10G 2-port BYPASS short range extension
221	QSFP28 2-port extension (40 G / 100 G)
222	1000Base-T PoE+ Cu 4-port extension
224	QSFP56 2-port extension (200 G)

Table 3 Memory Extension Options

Upgrade this to store more historical data in the In-memory database. 16 GB are always included in the base version.

Order ID	Product Description
310	Memory extension 16 to 64 GB
311	Memory extension 16 to 128 GB
312	Memory extension 16 to 256 GB
313	Memory extension 16 to 512 GB

Table 4 Internal Storage Expansion Options

Internal storage acts as a packet ring buffer for the full link or for selected traffic. This allows for historic packet capture extraction. It is not included in the base version. An USB 3 disk can be used as storage if the extension slot is blocked by a network extension for the Allegro 1000. Order ID 402 does not block the extension slot and can be installed in addition to a NIC.

Order ID	Product Description
402	Internal 2 TB SSD[5], up to 10 GBit/s full packet capturing, limited warranty 3,600 TBW
403 / 404 / 405 / 406	Internal 1 / 4[6] / 10[6] / 16[6] TB HDD, up to 700 MBit/s / 1.2 GBit/s / 1.2 GBit/s / 1.2 GBit/s full packet capturing
407 / 408	6.4 / 12.8 TB U.2 SDD, full packet capturing up to 20 GBit/s, limited warranty 37,300 / 74,700 TBW

Table 5 SFP Module Options

Order ID	Product Description
700	1 G / 10 G SFP+ short range multimode, LC up to 300 m via multimode OM3 @ 2,000 MHz fiber (MMF)
701	1 G / 10 G SFP long range singlemode, LC up to 10 km via singlemode OS2 G.652 fiber (SMF)
702	1 G / 10 G BaseT Cu SFP+ RJ45 Module
703	10 G SFP+ BIDI 10 km, Tx1270/Rx1330nm, singlemode, LC, Type U
704	10 G SFP+ BIDI 10 km, Tx1330/Rx1270nm, singlemode, LC, Type D
710	40 G QSFP SR, MPO connector up to 100 m via multimode OM3 @ 2000 MHz fiber (MMF)
711	40 G QSFP LR, LC connector up to 10 km via singlemode OS2 G.652 fiber (SMF)
720	100 G QSFP28 SR, MPO connector up to 100 m via multimode OM4 @ 4,700 MHz fiber (MMF)
721	100 G QSFP28 LR, LC connector up to 10 km via singlemode OS2 G.652 fiber (SMF)
730	100BaseT / 1000BaseT SFP modules (only for nanosecond timestamp capture)[7]
731	100FX SFP modules (only for nanosecond timestamp capture)[7]
740	25 G SFP28 SR up to 100 m via multimode OM4
741	25 G SFP28 LR up to 10 km via singlemode OS2 G.652 fiber (SMF)

Table 6 Product Bundles

Order ID	Product Description
810	Allegro Network Multimeter 1000 bundle with internal 1 TB disk and 2 x SR SFP modules
811	Allegro Network Multimeter 1200 bundle with 4 x SFP+ extension, internal 4 TB disk and 6 x SR SFP modules
812	Allegro Network Multimeter 1000 bundle with internal 1 TB disk, 2 x SR SFP modules and 64 GB memory extension
813	Allegro Network Multimeter 1200 bundle with 4 x SFP+ extension, internal 4 TB disk, 6 x SR SFP modules and 64 GB memory extension

[1] Rackmount kit can be installed on both ends, depending on airflow requirements
[2] Under ideal testing conditions
[3] Real-world datacenter throughput scenario
[4] Real-world datacenter traffic
[5] Can be installed in addition to a NIC extension in all 1000 products
[6] Only for Allegro 1200, not available for Allegro 1000 due to internal space limitations
[7] Only for nanosecond capture card, order ID 213 and 214
[8] Supports 1000Base-T, but not 100Base-T
[9] Basis SFP+ ports require Intel branded SFP module