

Transmission solution for a low total cost of ownership

True Ethernet

Allgon Microwave was the first company to release a PDH Microwave Radio with an integrated Ethernet interface. The AMR Streamline – LAN100 handles both data and voice in one single device for easy interconnection between LANs for private networks. With high availability and flexibility the AMR Streamline – LAN100 enables cost efficient solutions as backbone for wireless ISPs, connection between two operational sites of an enterprise, campus networks or IT networks in rural areas.

The AMR Streamline – LAN100 has a 4-port Layer 2 switch supporting Quality of Service (QoS) which is needed for modern IP-networks with real-time services such as Voice over IP and Video on Demand. The traffic priority feature enables not only safe delivery of information, but also low delay and a minimum of packet loss over the transmission as well as minimum need for external equipment. The Ethernet capacity can be flexibly assigned from 4 to 36 Mbit/s and supports port to port VLANs. Voice traffic (PBXs, Tetra communication solutions, alarm/communication signaling etc) is connected via the included E1 interface.

The AMR Ethernet Streamline has such a low latency that the contribution to the total amount is negligible. By eliminating the need of external switches on site the latency of these are eliminated as well.

ISP statistics shows that the average packet size in the regular internet traffic is low. For other vendors equipment both licensed the throughput falls dramatically at heavy load and for small packets. It is also the only microwave equipment on the market that offers the same throughput for all packet sizes.

The management of the AMR Streamline – LAN100 is based on internet protocols, a solution that makes the equipment either HTTP or Telnet or SNMP managed.



Allgon Microwave Radio (AMR) - Ethernet

Key Features/Benefits

- **Layer 2 Switch interface**
Manageable 4-port Ethernet switch directly in the terminal reducing the need of external switches and other equipment.
- **Full support for Layer 2 QoS**
Priority and VLAN support according to IEEE 802.1p and IEEE 802.1q, end-to-end flow control, RMON statistics and latency control built in.
- **Excellent system gain**
Higher output power and lower thresholds enabling smaller antennas, higher availability or longer connections.
- **Mixed network abilities**
Simultaneous Ethernet and E1 traffic networking for multi-usage connections/networks.
- **Flat throughput behavior**
Same throughput for all packet sizes.
- **Sub-millisecond latency for VoIP service**



Product Specifications

Allgon Microwave - Ethernet Radio LAN-100

System

Frequency bands, GHz	7	8	13	15EHP	15HP	18	23	26	38
Output power, dBm	24	24	20	28.5	21	24	23	22	21
Power control	>30 dB dynamic range, software controlled in 0.1 dB steps								
Receiver thresholds in dBm at BER 10 ⁻⁶ *									
4 Mbit/s (3.5 MHz)	-90	-90	-90	-91	-89	-90	-89	-89	-88
8 Mbit/s (7 MHz)	-88	-88	-88	-89	-87	-88	-87	-87	-86
16 Mbit/s (14 MHz)	-85	-85	-85	-86	-84	-85	-84	-84	-83
36 Mbit/s (28 MHz)	-82	-82	-82	-83	-81	-82	-81	-81	-80
Redundancy	Hot standby, space-, frequency- and polarization diversity								
Backplane routing	Supported								

Ethernet Specific Data

Capacity	Up to 36 Mbps software controlled (Flat performance)
Number of ports	4x10BaseT/100BaseTx Layer 2 Switch, 4xE1
Performance	Full VLAN support (port based, multi-access and trunk) IEEE802.1q Full priority support according to 802.1p End-to-end flow control, Head-of-line blocking prevention support
Physical interfaces	Ethernet: 4 x RJ-45 (IEEE802.3) 10/100 half or full duplex auto negotiate 37 pin DSUB (120 Ohm balanced) (ITU-G.703)

AMR Ethernet Radio is also available in a LAN-10 version. Please ask for separate data information.

Management

Physical interfaces	Ethernet 10BaseT, 2 X RS-232 (PC or modem), Embedded control channel (64 kbit/s timeslot in E1) Control panel with keypad and display.
Built-in management protocols	HTTP server, Telnet server, SNMP agent, FTP client, SMTP agent and SNMP agent.

Physical

Power supply	24, 48 VDC, any polarity, max consumption 60W
Environmental robustness	According to ETSI standards, CE marking
Temperature ranges:	
Indoor Unit	0° C to +40° C
Radio Frequency Unit	15-38 GHz -45° C to +65° C / 7-13 GHz -40° C to +60° C
Dimensions:	
Antenna Unit	0.3, 0.6, 1.2 or 1.8m (depending on frequency)
Radio Frequency Unit	185x185x140 mm (WxHxD, incl. handle)
Indoor Unit	483x44x277 mm (WxHxD) (19", 1U)
Weight:	
Indoor Unit	< 4.0kg Radio Frequency Unit < 4kg (15-38 GHz), <10kg (7-13 GHz)
Antenna Unit	Depending on frequency and size

All specifications are subject to change without notice. Please contact your Allgon Microwave representative for more performance data.

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