

AL24F MP50-1000/IR

Technical specification

General parameters			
Type	AL24F MP50-1000/IR		
Band	24 GHz		
Band	License free		
Frequency range (GHz)	24.050 - 24.250		
Duplex spacing (MHz)	190 or software configurable		
Channel bandwidth (MHz)	3.5 to 112		
Modulation scheme	QPSK to 1024QAM		
Transmission capacity (Mbps)	5 to 900 full duplex (10 to 1800 aggregate) for 1+0		
Latency (ms)	< 0,09 for 900 Mbps		
Frequency stability	< 10 ppm		
Forward error correction FEC	Reed-Solomon FEC and Convolutional Interleaver		
System configurations	1+0, 1+1 or 2+0		
Radio Parameters			
Bandwidth / modulation	Transmission capacity full duplex (Mbps)	Receiver sensitivity for 10⁻⁶ (dBm)	Output power (dBm) *
3.5 MHz / QPSK	5	-94	-30 to -7
3.5 MHz / 8QAM	8	-91	-30 to -7
3.5 MHz / 16QAM	11	-88	-30 to -7
3.5 MHz / 32QAM	14	-84	-30 to -7
3.5 MHz / 64QAM	17	-81	-30 to -7
3.5 MHz / 128QAM	20	-78	-30 to -7
3.5 MHz / 256QAM	22	-75	-30 to -7
3.5 MHz / 512QAM	25	-71	-30 to -7
3.5 MHz / 1024QAM	27	-68	-30 to -7
7 MHz / QPSK	11	-91	-30 to -7
7 MHz / 8QAM	16	-88	-30 to -7
7 MHz / 16QAM	22	-85	-30 to -7
7 MHz / 32QAM	28	-82	-30 to -7
7 MHz / 64QAM	33	-79	-30 to -7

7 MHz / 128QAM	40	-76	-30 to -7
7 MHz / 256QAM	44	-73	-30 to -7
7 MHz / 512QAM	50	-70	-30 to -7
7 MHz / 1024QAM	55	-65	-30 to -7
14 MHz / QPSK	25	-88	-30 to -7
14 MHz / 8QAM	35	-85	-30 to -7
14 MHz / 16QAM	46	-82	-30 to -7
14 MHz / 32QAM	58	-79	-30 to -7
14 MHz / 64QAM	69	-76	-30 to -7
14 MHz / 128QAM	81	-73	-27 to -7
14 MHz / 256QAM	92	-70	-30 to -7
14 MHz / 512QAM	104	-67	-30 to -7
14 MHz / 1024QAM	115	-63	-30 to -7
28 MHz / QPSK	50	-85	-30 to -7
28 MHz / 8QAM	69	-81	-30 to -7
28 MHz / 16QAM	92	-78	-30 to -7
28 MHz / 32QAM	116	-75	-30 to -7
28 MHz / 64QAM	139	-72	-30 to -7
28 MHz / 128QAM	162	-69	-30 to -7
28 MHz / 256QAM	185	-66	-30 to -7
28 MHz / 512QAM	208	-64	-30 to -7
28 MHz / 1024QAM	230	-60	-30 to -7
56 MHz / QPSK	100	-83	-30 to -7
56 MHz / 8QAM	139	-79	-30 to -7
56 MHz / 16QAM	185	-76	-30 to -7
56 MHz / 32QAM	232	-73	-30 to -7
56 MHz / 64QAM	278	-70	-30 to -7
56 MHz / 128QAM	324	-67	-30 to -7
56 MHz / 256QAM	370	-64	-30 to -7
56 MHz / 512QAM	417	-60	-30 to -7
56 MHz / 1024QAM	459	-57	-30 to -7
80 MHz / QPSK	132	-81	-30 to -7
80 MHz / 8QAM	200	-77	-30 to -7
80 MHz / 16QAM	265	-75	-30 to -7
80 MHz / 32QAM	330	-71	-30 to -7

80 MHz / 64QAM	400	-68	-30 to -7
80 MHz / 128QAM	463	-65	-30 to -7
80 MHz / 256QAM	530	-62	-30 to -7
80 MHz / 512QAM	600	-58	-30 to -7
80 MHz / 1024QAM	660	-54	-30 to -7
112 MHz / QPSK	184	-79	-30 to -7
112 MHz / 8QAM	277	-75	-30 to -7
112 MHz / 16QAM	369	-73	-30 to -7
112 MHz / 32QAM	461	-69	-30 to -7
112 MHz / 64QAM	553	-66	-30 to -7
112 MHz / 128QAM	646	-63	-30 to -7
112 MHz / 256QAM	740	-60	-30 to -7
112 MHz / 512QAM	830	-56	-30 to -7
112 MHz / 1024QAM	900	-52	-30 to -7
Automatic power control	ATPC		
Adaptive coding and modulation	Hitless ACM with possibility of asymmetric operation		
User interfaces			
Protected terminal box	ALS1-GEth (RP) / ALS1-2GEth (RP)		
Line2	Ethernet 1000Base-T / 100Base-TX / 10Base-T, connector RJ-45 on terminal box		
Line3	Ethernet 1000Base-T / 100Base-TX / 10Base-T, connector RJ-45 on terminal box		
Line4	SFP slot for Ethernet 1000Base-SX / 1000Base-LX / 1000Base-BX / 1000Base-T or E1, connector on ODU		
Maximal packet length	2048 / 10240 bytes		
Supports	VLAN, Auto Negotiation or manual setting 1000 / 100 / 10 and Full / Half Duplex, QoS, Flow Control, Auto MDIX, Master / Slave		
Control and diagnostic system			
Management port	Ethernet NMS separately or together with user data with possibility of VLAN separation		
Management port	RS232 connector on ODU for direct NMS connection		
Supports	SNMP v1		
ODU connection			
Cable type	S-STP/S-FTP Cat.7 cable is connected to cutting strips "KRONE" both in ODU and protected terminal box		

Cable length	Up to 90 m for Ethernet 1000Base-T, up to 100 m for 100Base-TX and up to 250 m for 10Base-T
Optical cable	Fiber optic cable is determined by used SFP module
Antennas	
Horn gain mid band (dBi)	
0.35 m gain mid band (dBi)	35
0.65 m gain mid band (dBi)	40
Class	
Class	ETSI Class 2 or 3
Polarization	
Polarization	Dual
Power supply	
Power supply	48 V DC (36-72), floating ground
Power consumption	Up to 27 W
Temperature range	
Outdoor unit	-35 to +55 °C
Protected terminal box	-25 to +55 °C
Dimensions (w x h x d) and weight	
Outdoor unit	255 x 301 x 133 mm / 5.1 kg
Protected terminal box	147 x 44 x 163 mm / 0.4 kg
Horn antenna	
Antenna 0.35 m	6.5 kg
Antenna 0.65 m	8.9 kg
* Production plant always sets the output power regarding on used antenna diameter to 2W (+33 dBm) e.i.r.p.	