

# ALCOMA AL..F

Wireless Solution for Ethernet,  
PDH and SDH Networks

The Easiest  
The Fastest  
**The Most Complex**

**4-38 GHz** | **400 Mbps**  
525 for MTU 64 B



## Features

- ▲ Frequency bands 4-38 GHz
- ▲ License exempt 5, 17 and 24 GHz (SRD equipment)
- ▲ Transmission capacity up to 400 Mbps, 1.6 Gbps for 4+0 configuration
- ▲ 2x Fast or 4x Gigabit Ethernet + 4x SFP, 1-4x STM-1 / OC-3, 2-126x E1 / T1
- ▲ Jumbo packets up to 9,728 bytes
- ▲ Modulation type QPSK to 256 QAM
- ▲ Adaptive coding & modulation (ACM)
- ▲ Forward error correction (FEC)
- ▲ Automatic TX power control (ATPC)
- ▲ Cross polarization interference cancellation (XPIC)
- ▲ ODU - IDU (split) link with antennas 0.35, 0.65, 0.9 or 1.2 m
- ▲ Standard 1U 19" rack unit
- ▲ ODU - IDU coaxial cable up to 300 m

## Management

- ▲ SNMP ver. 1, 2 and 3
- ▲ WEB interface
- ▲ SQL database
- ▲ Command line interface
- ▲ Independent diagnostic channel
- ▲ Software configurable
- ▲ System configurations 1+0, 1+1, 2+0 or 4+0
- ▲ Built-in Web-based GUI
- ▲ Embedded HTML Server
- ▲ Security
- ▲ CLI
- ▲ Full Featured MIB
- ▲ IEEE 802.1ag & ITU-T Rec. Y.1731
- ▲ OAM complies with IEEE 802.3ah

## Applications

- ▲ WIMAX / LTE / 4G backhaul
- ▲ Local / Metropolitan / Wide area networks
- ▲ IPTV distribution
- ▲ Interconnecting PBXs

## Ethernet

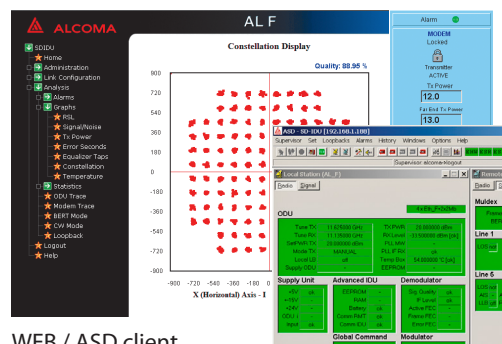
- ▲ IEEE 802.1D-2004
- ▲ IEEE 802.1Q-2003
- ▲ IEEE 802.3ad
- ▲ MEF 6, 9, 10.1, 11, 14
- ▲ SyncE / 1588
- ▲ ITU-T Rec. G.8032
- ▲ QoS Port-based, 802.1Q VLAN TAG, DiffServ, Four-Level priority queue



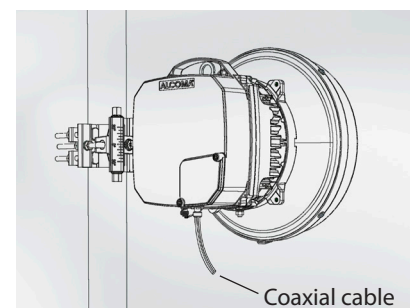
ODU with antenna



IDU 2+0 configuration (800 Mbps) with XPIC



WEB / ASD client



Coaxial cable

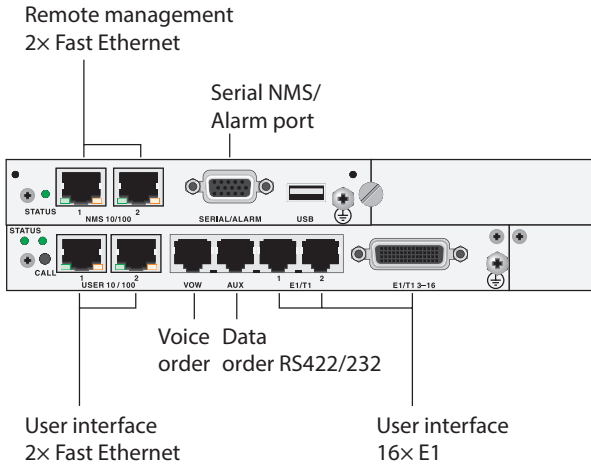
# ALCOMA



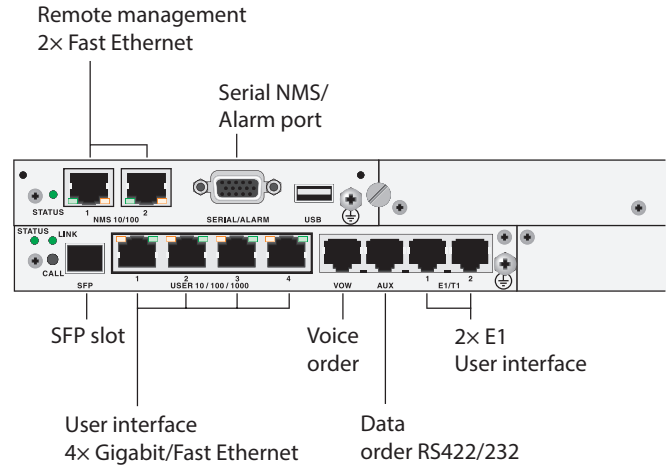
# ALCOMA AL..F

Wireless Solution for Ethernet, PDH and SDH Networks

## 2x Fast Ethernet + 16x E1



## 4x Gigabit Ethernet + SFP + 2x E1



General	4/5 GHz AL4F/5F	6/7/8 GHz AL6F/7F/8F	11 GHz AL11F	13 GHz AL13F	15 GHz AL15F	18 GHz AL18F	23 GHz AL23F	26 GHz AL26F	32 GHz AL32F	38 GHz AL38F	17 GHz AL17F	24 GHz AL24F
Frequency Range (GHz)	3.4–6.2	5.85–8.5	10.7–11.7	12.75–13.25	14.4–15.35	17.7–19.7	21.2–23.6	24.25–26.5	31.8–33.4	37.0–40.0	17.1–17.3	24.0–24.25
TX / RX Spacing (MHz)	100–320	119–340	490 / 500 / 530	266	315–728	1,008–1,560	1,008–1,232	800–1,008	812	700–1,260	–	–
Channel Spacing (MHz)	3.5–60											
Capacity (Mbps)	5–400 / 5–525 for MTU 64 bytes											
Modulation	QPSK / 16 / 32 / 64 / 128 / 256 QAM											
Frequency Stability	< 10 ppm											
Forward Error Correction	Reed-Solomon error correction											
System Configurations	1+0, 1+1 SD/FD, 2+0 or 4+0, XPIC											
<b>Radio</b>												
TX Power max. (dBm)	30	30	26	26	26	26	24	24	23	22	20 EIRP (12 dBm max.)	
ATPC	Yes											
XPIC	Yes											
Adaptive coding & modulation (ACM)	Yes											
<b>Interfaces</b>	2x 100Base-TX / 4x 1000Base-T + 1x SFP / 4x 1000Base-T + 4x 1000Base-T / SX / LX / BX10 (SFP Slot), Packet length 2,048 / 4,000 bytes, optionally 9,728 bytes											
	1–4x STM-1 / OC-3											
	2 / 16 / 18 / 23 / 32 / 37 / 42 / 58 / 63 / 126x E1 (G.703 2 Mbps) / T1											
	Network management system channel 100Base-TX, Data order wire channel 64 kbps RS422 / RS232											
	Voice order wire channel, Input/Output alarm relay ports											
<b>ALCOMA Antennas</b>												
0.35 m Mid Band Gain (dBi)	–	–	29	30	31	33	35	36	38.5	40	32.5	35.5
0.65 m Mid Band Gain (dBi)	–	–	34.5	35.5	36.5	38.5	40.5	41.5	44	45	38	41
0.9 m Mid Band Gain (dBi)	–	34	38	39	40	42	43.5	–	–	–	41.5	44
1.2 m Mid Band Gain (dBi)	–	36	40	41	42	44	45.5	–	–	–	43.5	46
Class	RPE Class 2 or Class 3											
Polarization	Vertical or Horizontal										Dual polarized	
Large Diameter Antennas	from other producers											
<b>Power Supply &amp; Cabling</b>												
Range (V)	–39 to –60 DC											
Power Consumption (W)	1+0 up to 100, 1+1 and 2+0 up to 150										up to 50 / 80 (2+0)	
ODU-IDU	Coaxial cable 50 Ω, RG213 up to 140 m, RT50/20 up to 240 m, N and TNC connector											
<b>Operating Temperature</b>												
ODU (°C)	–35 to +55											
IDU (°C)	–5 to +50											
<b>ODU / IDU Dimensions and Weight</b>												
Width × Height × Depth (cm)	25.5 × 30.1 × 13.3 – 25.5 × 30.9 × 17.5 / 48.2 × 23.9 × 4.4											
Weight (kg)	4.6–6.7 / 2.7–3.4											

ver. 150310

For more technical information please see [www.alcoma.com](http://www.alcoma.com).



ALCOMA, the Czech company founded in 1993, is a leading designer and producer of point-to-point microwave and millimeter wave radio relay links. All production is manufactured in its own factories in Prague and Kolin.

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