

1. Meshlium router specifications



Processor	500MHz (x86)	
RAM memory	256MB (DDR)	
Disk memory	8GB - 32GB	
Power	5W (18V)	
Power Source	POE	
Normal Current Consumption	270mA	
High Current Consumption	450mA	
Max Supply Current	1'5A	
Enclosure	Dimensions	210x175x50mm
	Weight	1,2Kg
	External protection	IP65
Temperature Range	-20°C / 50°C	
Response Time to ethernet ping	60s	
Time to have all the services running	90s	
Types of power supply *	AC-220V	
	Battery – solar panel (DC-12V)	
	Car lighter (DC-12V)	
System	Linux, Debian. OLSR Mesh communication protocol. Madwifi Drivers.	
Management software	Meshlium Manager System (open source)	
Security	MAC filter, authentication WEP, WPA-PSK and WPA2 (EAP-TLS, EAP-TTLS and EAP-PEAP), built in RADIUS server, HTTPS secure access.	

*Only with the accessories supplied by Libelium

1.1 2.4GHz Low power Wifi radio



Chipset	Atheros AR5213A - IEEE 802.11b/g
Tx-Power	100mW - 20 dBm
Antenna	5dBi Dipole
Distance	200m*

*Depending on antenna and line of sight

V1.0 - September 2009

<http://www.libelium.com/meshlium>

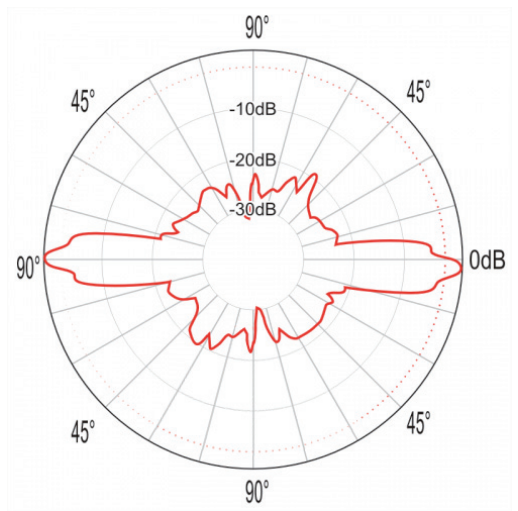
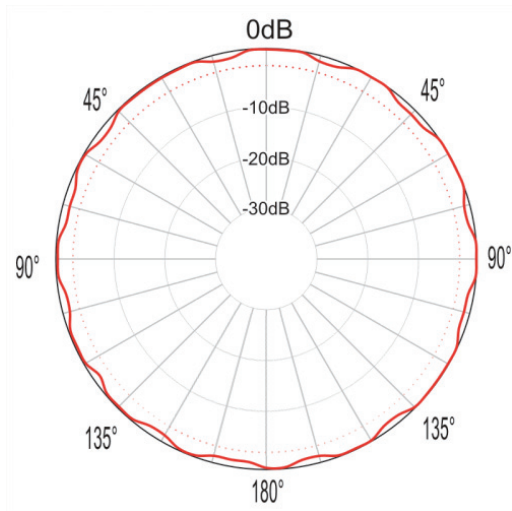
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 María de Luna 11, inst. CEEIARAGÓN, nave5. 50018
 Zaragoza. [Spain] Tlf: +34 976547492

1.2 2.4GHz High power Wifi radio for mesh networks



WIFI RADIO	
Chipset	Atheros AR5414 - IEEE 802.11b
Tx-Power	200mW - 23 dBm
Distance	2-10km*

ANTENNA	
Gain	8.5±0.5dBi Omnidirectional
Frequency	2400 - 2480 MHz (Channels 1-11)
Polarization	Vertical
(-3dB) horizontal	360°
(-3dB) vertical	25°
Impedance	50 OHm
Power handling	50w (cw)
Mechanical Connector	N-Female
Dimensions	550x81mm
Weight	380g



Images by Interline

1.3 5GHz High power Wifi radio for mesh networks



WIFI RADIO	
Chipset	Atheros AR5414 - IEEE 802.11a
Tx-Power	600mW - 28 dBm
Distance	5-50km*

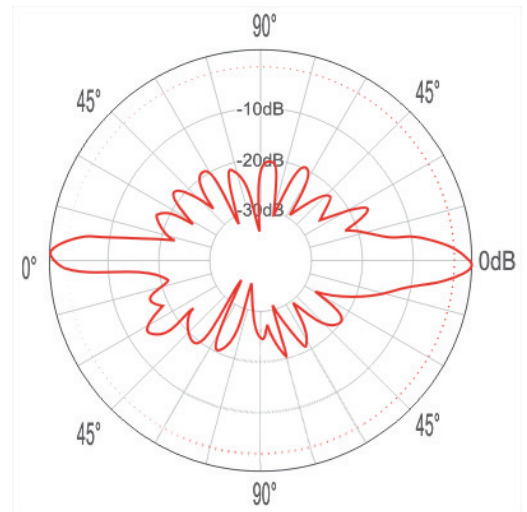
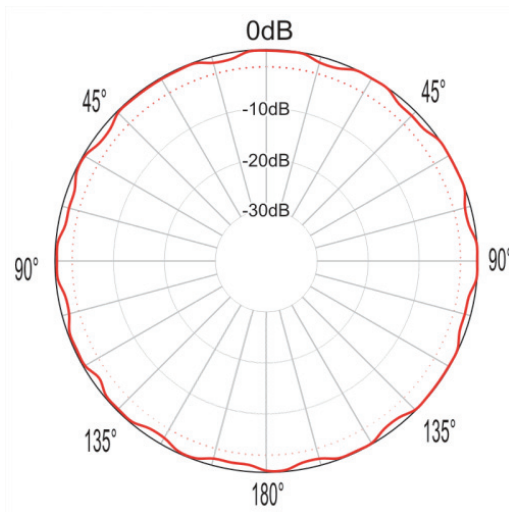
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ANTENNA	
Gain	12dBi Omnidirectional
Frequency	5450 - 5850 MHz (Channels 108-165)
Polarization	Vertical
(-3dB) horizontal	360°
(-3dB) vertical	6°
Impedance	50 OHm
Connector	N-Female
Dimensions	465x23mm
Weight	0,5kg



Images by Interline

1.4 Zigbee radio



Model	XBee - PRO - 802.15.4
Frequency	2,4GHz
Tx-Power	100mW
Rx Sensitivity	-100dBm
Antenna	5dBi Dipole
Distance	7km*

Model	XBee - PRO - ZigBee
Frequency	2,4GHz
Tx-Power	50mW
Rx Sensitivity	-102dBm
Antenna	5dBi Dipole
Distance	7km*

Model	XBee - PRO - 868
Frequency	868MHz
Tx-Power	315mW
Rx Sensitivity	-112dBm
Antenna	5dBi Dipole
Distance	40km*

Model	XBee - PRO - 900
Frequency	900MHz
Tx-Power	50mW
Rx Sensitivity	-100dBm
Antenna	5dBi Dipole
Distance	10km*

Model	XBee - PRO - XSC
Frequency	900MHz
Tx-Power	100mW
Rx Sensitivity	-106dBm
Antenna	5dBi Dipole
Distance	24km*

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1.5 Bluetooth radio



Model	BT100 - Bluetooth 1.1 - IEEE 802.15.1
Tx-Power	17dBm
Transmission Rate	721Kbps
Antenna	5dBi Dipole
Distance	200m*

1.6 GSM/GPRS Module



Model	Hilo
Quad Band	850MHz/900MHz/1800MHz/1900MHz
Tx-Power	2W(Class 4) 850MHz/900MHz, 1W(Class 1) 1800MHz/1900MHz
Sensitivity	-106dBm
Rx Rate	85'6Kbps
Tx Rate	42'8Kbps
Antenna	2,5dBi - 3m. Sticker surface

1.7 GPS Module



Model	A1084 - Vincotech
Output	NMEA
Tracking Sensibility	-159dBm
Hot start	< 1s
Warm start	< 32s
Cold start	< 35s
Antenna	26dBi (+-4.5dBi) - 3m cable. Magnetic surface