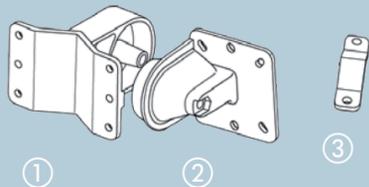


LANCOM OAP-321

Hardware Quick Reference



Mounting



Fix the connector flange ② to the back panel of the housing using the four screws and washers supplied.

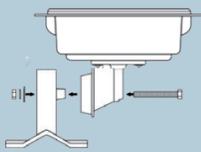
Wall mounting

Use the mounting arm ① as a template. Fix the mounting arm to the wall using the screws and dowling plugs supplied.

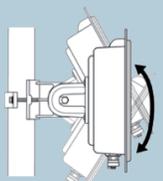
Pole mounting

Place the clamp profile ③ around the pole. Screw the clamp profile to the mounting arm with the screws supplied.

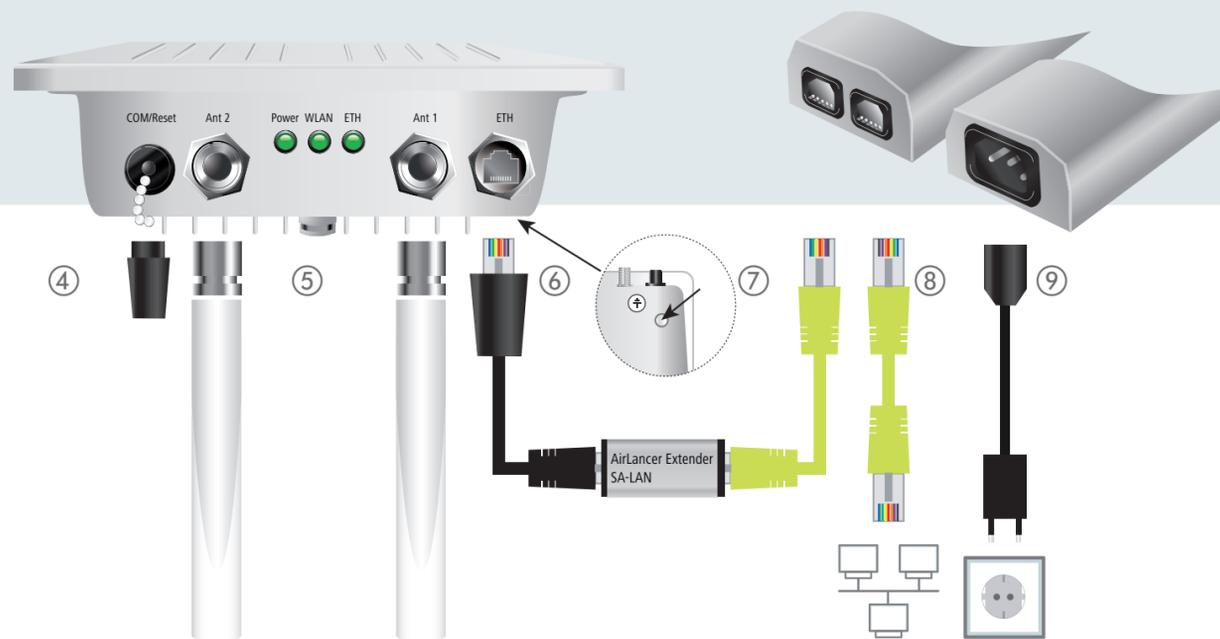
Attach the access point with the connector flange ② to the mounting arm ③. Use the screw (M8 x 110), washer, locking washer and nut for this.



To adjust the main beam direction of the integrated antenna, tilt the access point with the connection flange up or down relative to the mounting arm.



When mounting, please observe the instructions in the accompanying LANCOM Wireless Outdoor Guide. Installing access points and external antennas without adequate lightning protection can lead to serious damage to the devices themselves or to the network infrastructure they are connected to.



④ Optional: Reset

To restore the device's default configuration, unscrew the threaded connector for the COM port/reset port and, with the device switched on, insert the reset plug. Wait until the 3 LEDs on the device go off and unplug the reset plug again. There now follows an automatic reboot and the device loads its default configuration.

⑤ Optional: Antennas

When setting up a 2.4-GHz wireless link, attach the supplied dipole dual-band antennas to the two N-connectors on the underside of the device. Antennas are only to be connected to or disconnected from the device when it is switched off. Connecting or disconnecting antennas while the device is switched on may cause the destruction of the WLAN module!

⑥ LAN and Power

The LAN connection has a dual function as it also supplies power to the LANCOM OAP-321. Plug in the water-proof power cable to the LAN port on the underside of the device and carefully tighten the threaded connector. Connect the other end of the power cable to the 'Power Out' connector on the supplied PoE Injector.

⑦ Grounding

Screw one end of the green grounding wire to the housing and attach the other end to a suitable ground.

⑧ LAN

Using a normal Ethernet cable, connect the 'LAN In' connector of the supplied PoE Injector to an available network connection socket in your local network.

⑨ Power

Supply power to the PoE Injector. Use the supplied PoE Injector to supply power to the LANCOM OAP-321 only. Pay particular care not to connect the PoE Injector to Ethernet devices that are not powered by PoE!



A LAN-side surge arrester AirLancer Extender SA-LAN is obligatory required for outdoor installations and already supplied in the LANCOM OAP-321 Bridge Kit.



The housing of the device may become warm during operation. If the device is operated with outside temperatures exceeding 60 °C, it should be mounted with protection against contact.

SETTING UP AND CONNECTING THE DEVICE



Power

off	Device switched off
green (permanently)	Device operational
green blinking	Configuration password not set. Without a configuration password, the configuration data in the device is unprotected.

ETH

off	No networking device attached
green (permanently)	Connection to network device operational, no data traffic
green flickering	Data traffic

WLAN

off	No WLAN network defined or WLAN module deactivated. The WLAN module is not transmitting beacons.
green	At least one WLAN network is defined and the WLAN module is activated. The WLAN module is transmitting beacons.
green inverse flashing	Number of flashes = number of connected WLAN stations and P2P wireless connections, followed by a pause (default). Alternatively, the frequency of the flashes can indicate the signal strength with which a P2P connection is being received, or the signal strength to the access point to which the device is connected in client mode.
green blinking	DFS scanning or other scan procedure.

Hardware	
Power supply	Via Power over Ethernet, compliant with IEEE 802.3af
Power consumption	Max. 11 Watts, incl. PoE-Injector
Environment	-33°C to +70°C
Housing	Robust metal housing, IP 66 protection rating, ready for wall and pole mounting, 3 LEDs for status display. Please note: device must not be mounted in salt water environments without a suitable protective housing. Dimensions 255 mm x 250 mm x 80 mm (Length/Width/Height) Weight approximately 2.787 kg including pole mounting material
LED display	3 LEDs for Power, Ethernet and WLAN
WLAN	
Frequency band	2.4 GHz or 5 GHz, 2400-2483.5 MHz (ISM) or 5150-5825 MHz (depending on country-specific restrictions)
Antenna Gain	Up to 17 dBi in 5 GHz possible with the integrated dual polarisation antenna
Data rates 802.11b/g	54 Mbps to IEEE 802.11g (fallback to 48, 36, 24, 18, 12, 9, 6 Mbps, Automatic Rate Selection) compatible to IEEE 802.11b (11, 5.5, 2, 1 Mbps, Automatic Rate Selection), 802.11 b/g compatibility mode or pure g or pure b
Data rates 802.11a/h	54 Mbps (fallback to 48, 36, 24, 18, 12, 9, 6 Mbps, Automatic Rate Selection), fully compatible with TPC (adjustable power output) and DFS (automatic channel selection, radar detection) according to ETSI EN 301 893 V.1.5.1., EN 302 502
Data rates 802.11n	300 Mbps according to IEEE 802.11n with MSC15 (Fallback to 6,5 Mbps with MSC0)
Range (outdoor / P2P)	More than 20 km in 5 GHz. See our LANCOM Antenna Distance Calculator under www.lancom.de
Output power at radio module, 5 GHz	802.11a/h: 17 dBm @ 6 bis 24 Mbps, 15 dBm @ 36 Mbps, 13 dBm @ 54 Mbps, 802.11n: 17 dBm @ 6,5/13/30 Mbps (MCS0/8), 13 dBm @ 65/130/300 Mbps (MCS7/15)
Minimum transmission power	Transmission power reduction in software in 1 dB steps to min. 0.5 dBm
Receiver sensitivity 2.4 GHz	802.11b: -89 dBm @ 11 Mbps, -94 dBm @ 1 Mbps 802.11g: -93 dBm @ 6 Mbps, -79 dBm @ 54 Mbps
Receiver sensitivity 5 GHz	802.11a/h: -93 dBm @ 6 Mbps, -75 dBm @ 54 Mbps 802.11n: -93 dBm @ 6,5 Mbps (MCS0/8), -71 dBm @ 65 Mbps (MCS7/15)
Radio channels 2.4 GHz	Up to 13 channels, max. 3 non-overlapping (2.4 GHz band)
Radio channels 5 GHz	Up to 26 non-overlapping channels (available channels and further obligations such as automatic DFS dynamic channel selection depending on national regulation)
Interfaces	
LAN	10/100/1000 Mbps, auto-sensing algorithm, IEEE 802.3af compliant
Serial interface	Serial configuration interface / COM port (10 pin plug): 19,200 - 115,000 baud
External antenna	Two N connectors
Declarations of conformity	
CE	EN 301 489-1, EN 301 489-17, EN 60950
2.4 GHz	WLAN ETS 300 328
5 GHz	WLAN EN 301 893 version 1.5.1, EN 302 502 (BFWA)
Notifications	Certifications notified in Germany, Belgium, Netherlands, Luxembourg, Austria, Switzerland, UK, Italy, Spain, France, Portugal, Czech Republic, Denmark
Package content	
Access Point	1 x LANCOM OAP-321
Surge arrester	2 x AirLancer Extender SA-LAN surge arrester for LAN cable
Reset plug	Plug for resetting the device via serial interface
Cable	Per LANCOM OAP-321 one water-resistant, UV-resistant Ethernet PoE cable with water-resistant screw connector, 15m
Manual	Hardware Overview (EN, DE), Installation Guide (DE/EN/FR/ES/IT/PT/NL)
CD/DVD	Data medium with firmware, management software (LANconfig, LANmonitor, WLANmonitor) and documentation
Antennas	Two 3 dBi dipole dualband antennas (not included in the Bridge Kit package)
Power supply unit	Via Power over Ethernet, 1 x PoE Injector supplied

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TECHNICAL DATA