



...connecting your business

LANCOM 1781EW

Quick Reference Guide

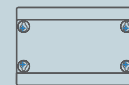


Please observe the following when setting up the device

- For devices to be operated on the desktop, please attach the adhesive rubber footpads
- Do not rest any objects on top of the device



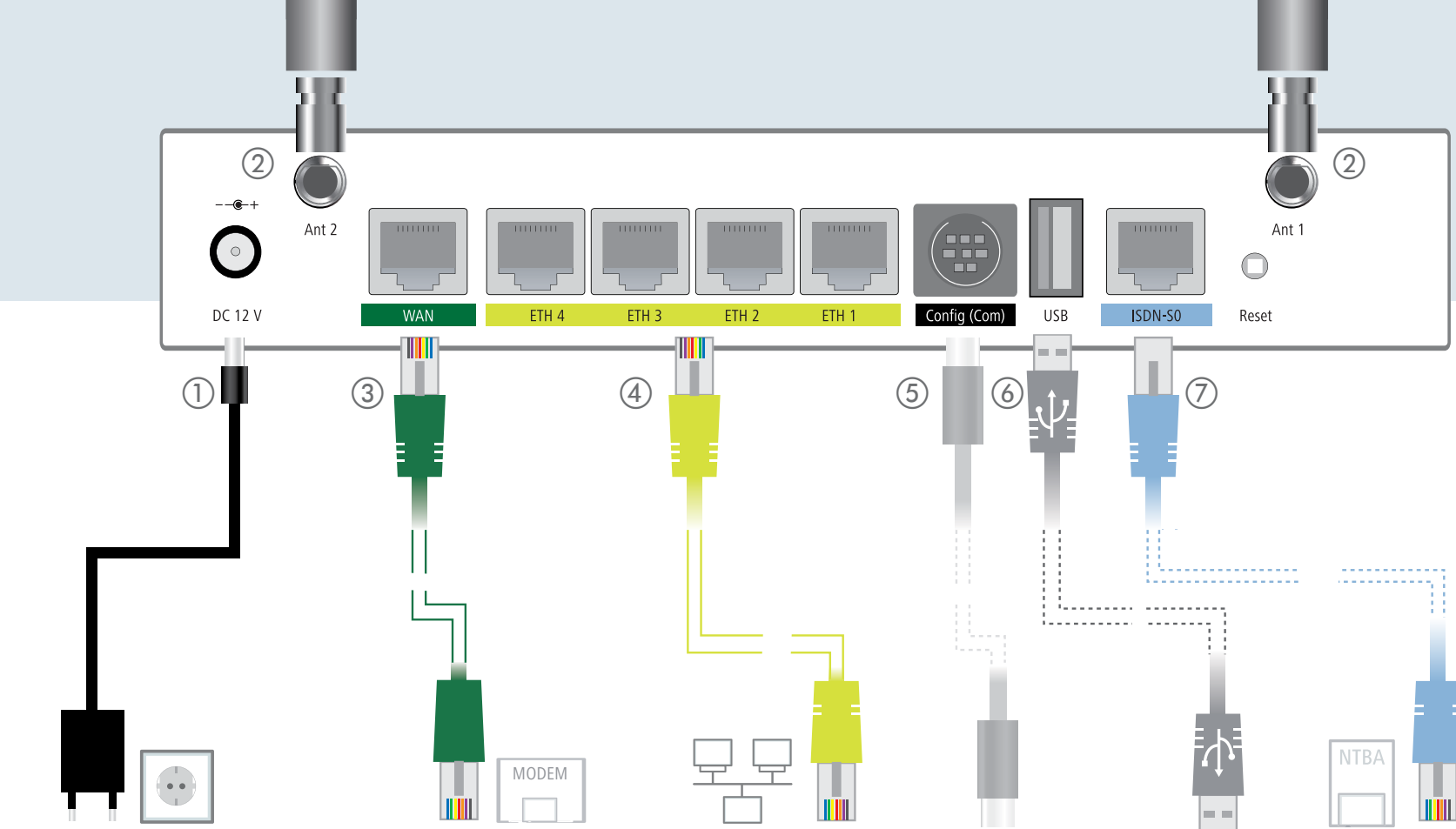
- Keep the ventilation slots on the side of the device clear of obstruction
- In case of wall mounting, use the drilling template as supplied



- Rack installation with the optional LANCOM Rack Mount (not supplied)



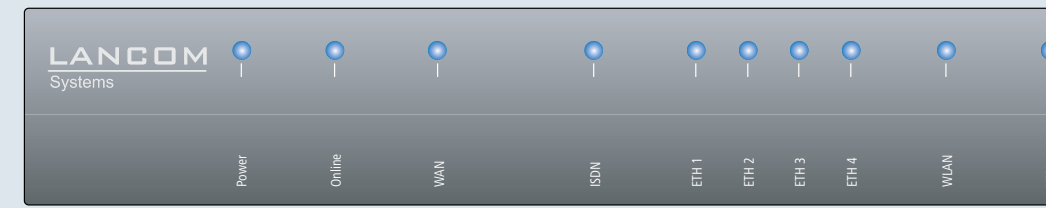
LANCOM
Systems



- Power**
When connecting the cable to the device, turn the bayonet connector 90° clockwise until it clicks into place.
- WLAN antennas**
Screw the WLAN antennas supplied to the connectors Ant1 and Ant2. Depending on how the antennas are to be used, the 'Antenna Grouping' parameter may need to be configured in order provide the desired MIMO behavior.
- WAN**
Connect the WAN interface to your WAN modem using the cable with the green connectors.
- LAN**
Use the cable with the kiwi-colored connectors to connect one of the interfaces ETH1 to ETH4 to your PC or a LAN switch.
- Optional: Serial configuration cable**
You can connect the device to a PC with a configuration cable (available separately).
- Optional: USB**
You can use the USB interface to connect a compatible USB cellular modem, a USB printer or a USB flash drive for device configuration.
- ISDN cable**
Use the ISDN cable with the light-blue connectors to connect the ISDN interface to the NTBA if you wish to use ISDN.

! If you operate separately purchased antennas, please ensure that you do not exceed the maximum allowed transmission power for your system. The system operator is responsible for adhering to the threshold values. Antennas are only to be attached or changed when the device is switched off. Mounting or demounting antennas while the device switched on may cause the destruction of the WLAN module!

MOUNTING AND CONNECTING THE DEVICE



1 Power	
Off	Device switched off
Green on (permanently)	Device operational
Blinking green/orange	Configuration password not set. Without a configuration password, the configuration data in the device is unprotected.
Blinking red	Charge or time limit reached

2 Online	
Off	WAN connection inactive
Green on (permanently)	WAN connection active
Red on (permanently)	WAN connection error

3 WAN	
Off	interface deactivated
Blinking orange	Synchronizing with modem
Orange on (permanently)	Modem synchronization successful
Green on (permanently)	WAN connection established
Flickering green	WAN data transmission

4 ISDN	
Off	interface deactivated
Green on (permanently)	D-channel active
Orange on (permanently)	B-channel active
Flickering green	ISDN data transmission
Flickering red	ISDN transmission error
Blinking red/orange	ISDN hardware error

7 VPN	
Off	VPN connection inactive
Green on (permanently)	VPN connection active
Blinking green	Establishing VPN connections

6 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 WLAN module activated. The WLAN module is transmitting beacons.
Green inverse flashing	The number of flashes between pauses indicates the number of connected WLAN stations. When operating point-to-point connections, the number can also indicate the signal strength.
Blinking green	DFS scanning or other scan procedure.

5 ETH	
Off	No networking device attached
Green on (permanently)	Connection to network device operational, no data traffic
Flickering green	Data transmission

Hardware	
Power supply	12 V DC, external power adapter (230V) with bayonet connector to secure against disconnection
Power consumption	Max. ca. 12.5 W
Environment	Temperature range 5 – 40 °C; humidity 0 – 95%; non-condensing
Housing	Robust synthetic housing, rear connectors, ready for wall mounting, Kensington lock; measures 210 x 45 x 140 mm (W x H x D)
Number of fans	None; fanless design, no rotating parts, high MTBF

Wireless LAN	
Frequency band	2400-2483.5 MHz (ISM) or 5150-5825 MHz (restrictions vary between countries)
Transmission rates, 802.11b/g	54 Mbps as per 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
Transmission rates, 802.11a/h	54 Mbps as per IEEE 802.11a/h (fallback to 48, 36, 24, 18, 12, 9, 6 Mbps, automatic rate selection), full compatibility with TPC (adjustable power output) and DFS (automatic channel selection, radar detection) as per ETSI EN 301 893 V. 1.5.1., EN 302 502
Transmission rates, 802.11n	300 Mbps as per IEEE 802.11n with MSC15 (fallback to 6.5 Mbps with MSC0). IEEE 802.11 a/g/n compatibility mode or pure g, pure a, pure n, IEEE 802.11n/g, IEEE 802.11n/a
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 (channels available vary according to country regulations; DFS for automatic dynamic channel selection required)

Interfaces	
WAN	10/100/1000 Mbps Gigabit Ethernet
ETH	4 individual ports, 10/100/1000 Mbps Gigabit Ethernet, by default set to switch mode. Up to 3 ports can be operated as additional WAN ports. Ethernet ports can be electrically disabled in the LCOS configuration. The ports support the energy-efficient features as per IEEE 802.3az
USB	USB 2.0 Hi-Speed host port for connecting USB printers (USB print server), serial devices (COM-port servers), USB data media (FAT file system), or supported UMTS USB modems
ISDN-S0	ISDN-S0 bus
Config (Com)	Serial configuration interface / COM port (8-pin Mini-DIN): 9,600 - 115,000 baud, suitable for optional connection of analog/GPRS modems. Supports the internal COM-port server
Ant1, Ant2	Two reverse SMA connectors for the supplied dipole antennas, LANCOM AirLancer Extender antennas or for antennas from other vendors. Please respect the restrictions which apply in your country when setting up an antenna system. For information about calculating the correct antenna setup, please refer to www.lancom.eu.

WAN protocols	
Ethernet	PPPoE, Multi-PPPoE, ML-PPP, PPTP (PAC or PNS) and IPoE (with or without DHCP), RIP-1, RIP-2, VLAN, IP
ISDN	1TR6, DSS1 (Euro- ISDN), PPP, X75, HDLC, ML-PPP, V.110/GSM/HSCSD

Declaration of conformity	
CE	EN 301 489-1, EN 301 489-17, EN 60950-1
2.4-GHz WLAN	EN 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, Spain, Switzerland, UK, Italy, Portugal, Czech Republic, Denmark, France

Package content	
Manual	Quick Reference Guide (DE/EN), Installation Guide (DE/EN/FR/ES/IT/PT/NL)
CD/DVD	Data medium with firmware, management software (LANconfig, LANmonitor) and documentation
Cable	2 Ethernet cables, 3m (LAN: kiwi-colored connectors; WAN: green connectors)
Cable	1 ISDN cable, 3m (light-blue connectors)
Antennas	Two external 3-dBi dipole dualband antennas, one internal 3dBi dipole dualband antenna
Power adapter	External power adapter (230 V), NEST 12 V/1.5 A DC/5, coaxial power connector 2.1/5.5 mm bayonet, LANCOM item no. 110723 (EU), LANCOM item no 110829 (UK)

License information for the device firmware (LCOS) is available on the data medium supplied.

TECHNICAL DATA