SECURE. NETWORKS

LANCOM 1781AW
Quick Reference Guide

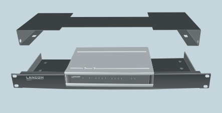
LANCOM
Systems

Please observe the following when setting up the device

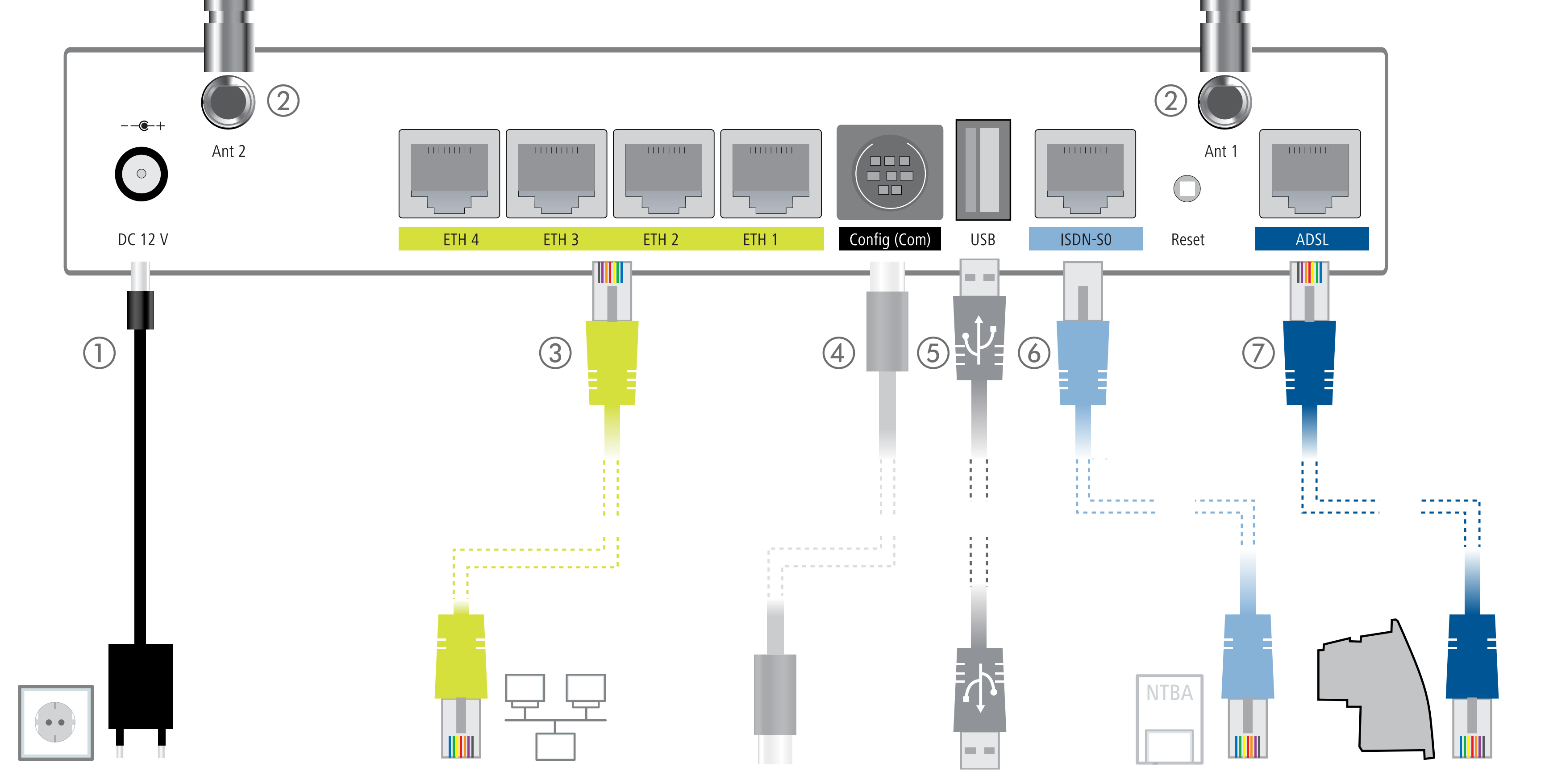
- For devices to be operated on the desktop, please attach the adhesive rubber footpads
- Do not rest any objects on top of the device

- 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)

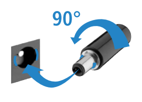


MOUNTING AND CONNECTING THE DEVICE



①

Power
When connecting the cable to the device, turn the bayonet connector 90° clockwise until it clicks into place.



Use only the supplied power adapter.

②

WLAN Antennas
Screw the WLAN antennas supplied to the connectors Ant 1 and Ant 2. 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.

③

Ethernet Interface
UUse the cable with the Ethernet connectors to connect interface ETH 1 to ETH 4 to your PC or a LAN switch.

④

Serial Interface
You can connect the device to a PC with a configuration cable (available separately).

⑤

USB Interface
You can use the USB interface to connect a compatible USB cellular modem, a USB printer or a USB flash drive for device configuration.

⑥

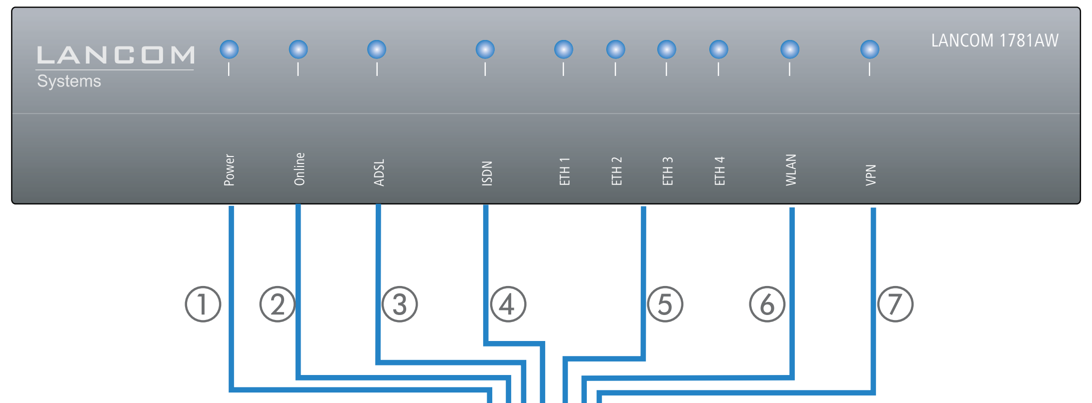
ISDN Interface**
Use the ISDN cable with the light-blue connectors to connect the ISDN interface to the NTBA if you wish to use ISDN additionally.

⑦

ADSL Interface*
Connect the cable with the dark-blue connectors to the DSL splitter. Please ensure that you carefully follow any instructions from your provider regarding the installation of the DSL splitter and NTBA (if applicable).

*) For operation without splitter please use the DSL cable supplied by your Internet provider. For further information please contact your Internet provider.

> 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!
> US version: Antennas not part of the delivery content are a strict violation of FCC rules and must not be used.



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 ADSL	
Off	interface deactivated
Green on, permanently	DSL connection active
Flickering green	DSL data transmission
Flickering red	DSL transmission error
Blinking red/orange	DSL hardware error

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 on, permanently	At least one WLAN network is defined and WLAN module 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 flashing can indicate signal strength over the defined P2P link or the signal strength between the access point and the device operating in client mode.
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

This product contains separate modem firmware with open-source software components. These are subject to their own licenses, in particular the General Public License (GPL). The license text for the modem firmware is available on the data medium supplied. License information for the device firmware (LCOS) is available on the data medium supplied as well.

TECHNICAL DATA

Hardware	
Power supply	12 V DC, external power adapter (110 or 230 V) 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)
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	
ADSL2***	> ADSL conformity according to: ADSL2+ as per ITU G.992.5 Annex A/Annex B/Annex J/Annex M, ADSL2 as per ITU G.992.3 Annex A/Annex B/Annex J/Annex M, ADSL as per ITU G.992.1 Annex A/Annex B > Supports just one virtual connection at a time in ATM (VPI-VCI pair).
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.
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**	ISDN S_0 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 internal COM-port server.
Ant 1, Ant 2	Two reverse SMA connectors for external 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	
ADSL, Ethernet	PPPoE, Multi-PPPoE, ML-PPP, PPTP (PAC or PNS), PPPoA, IPoA and IPoE (with or without DHCP), RIP-1, RIP-2, VLAN, GRE, EoGRE, L2TPv2 (LAC or LNS), IPv6 over PPP (IPv6 and IPv4/IPv6 dual stack session), IP(v6)oE (autoconfiguration, DHCPv6 or static)
ISDN**	1TR6, DSS1 (Euro-ISDN), PPP, X75, HDLC, ML-PPP, V.110/GSM/HSCSD
Declaration of conformity	
For the declaration of conformity, see the product page on our website www.lancom-systems.eu	
Package content	
Manual	Quick Reference Guide (DE/EN), Installation Guide (DE/EN), FCC leaflet (US version only)
CD/DVD	CD/DVD with magement software (LANconfig, LANmonitor) and LCOS documentation
Cable	Ethernet cable, 3m (kiwi-colored connectors); ADSL cable, 3m (dark-blue connectors); ISDN cable**, 3m (light-blue connectors)
Antennas	Two external 3-dBi dipole dualband antennas, one internal 3-dBi dipole dualband antenna
Power adapter	External power adapter; NEST 12 V/1.5 A DC/S; coaxial power connector 2.1/5.5 mm bayonet; LANCOM item no. 110723 or 111301 (EU, 230V); LANCOM item no. 110829 or 111302 (UK, 230V)

**) ISDN is not available in US version

***) US version supports only Annex A/M

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