



LANCOM 1781VAW

Quick Reference Guide

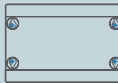


Please observe the following when setting up the device

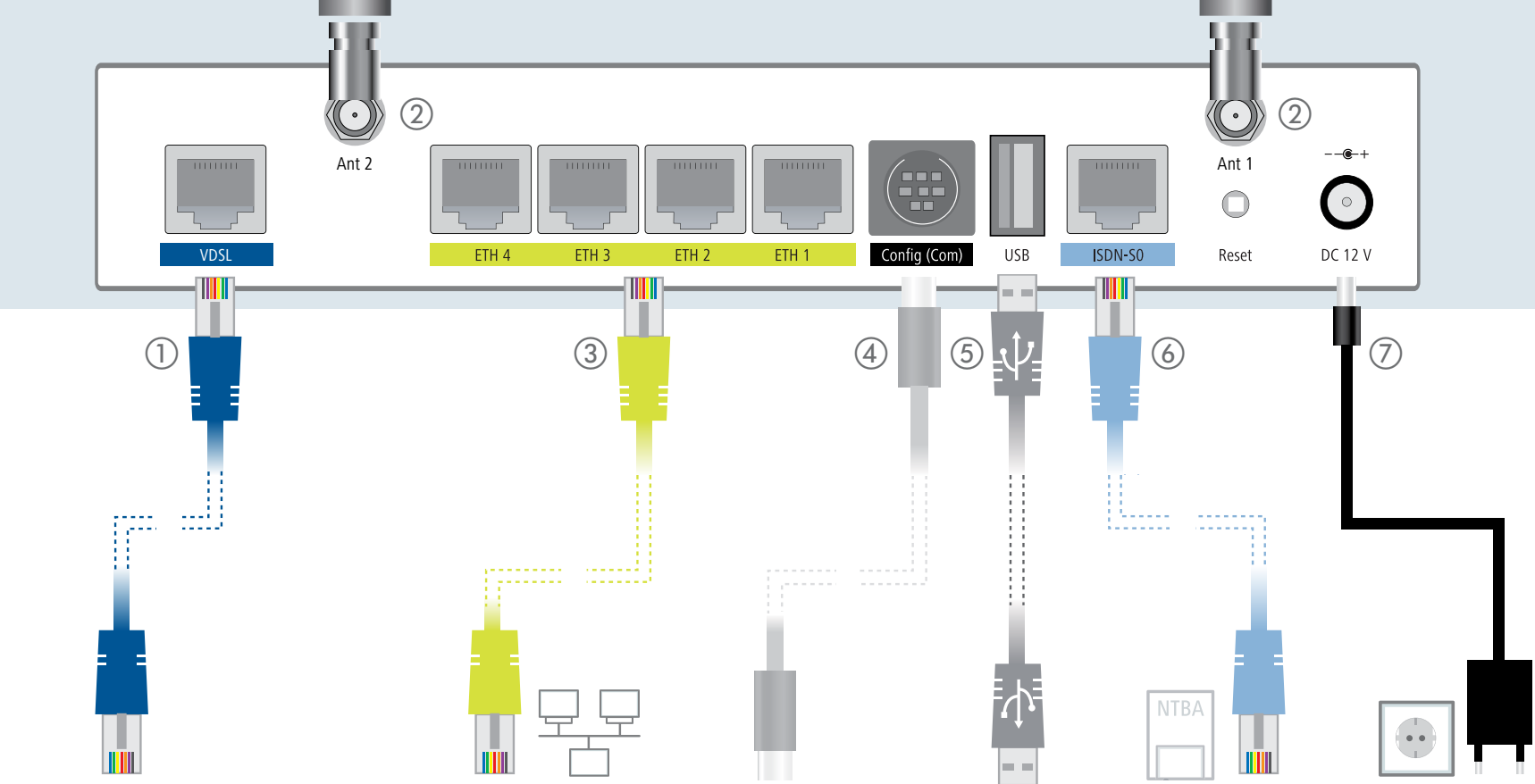
- For devices to be operated on the desktop, please attach the adhesive rubber footpads
- Do not rest any objects on top of the device



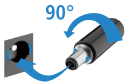
- Keep the ventilation slots on the side of the device clear of obstruction
- In case of wall mounting, use the drilling template as supplied



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



- 1 VDSL/ADSL cable***
Connect the cable with the dark-blue connector to the DSL splitter from your provider. Please ensure that you carefully follow any instructions regarding the installation of the DSL splitter and NTBA (if applicable).
- 2 WLAN antennas**
Screw the two supplied WLAN antennas onto the connectors Ant1 and Ant2. Depending on how the antennas are to be used, 'Antenna Grouping' may need to be configured in order to provide the desired MIMO behavior.
- 3 LAN cable**
Use the cable with the kiwi-colored connectors to connect one of the interfaces ETH1 to ETH4 to your PC or a LAN switch.
- 4 Optional: Serial configuration cable**
You can connect the device to a PC with a configuration cable (available separately).
- 5 Optional: USB cable**
Connect a USB storage device or a USB printer to the USB interface. USB cable not included in the package.
- 6 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.
- 7 Power cable**
When connecting the cable to the device, turn the bayonet connector 90° clockwise until it clicks into place.



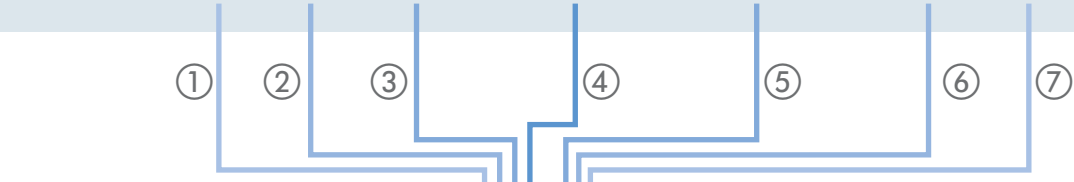
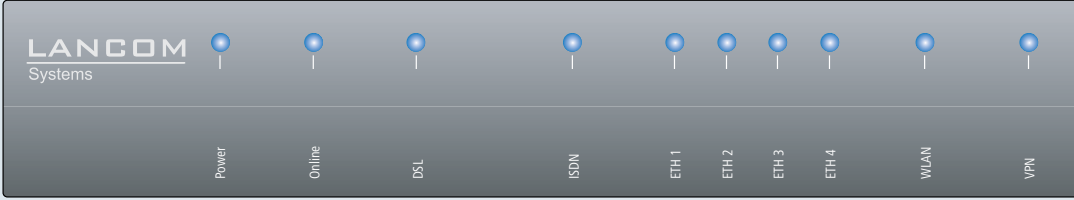
Use only the supplied power adapter.

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



When working with separately purchased antennas, please ensure you do not exceed the maximum permissible transmission power. 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 with the device switched on may cause the destruction of the WLAN module!

SETTING UP AND CONNECTING THE DEVICE



1 Power	<table><tr><td>Off</td><td>Device switched off</td></tr><tr><td>Green on, permanently</td><td>Device operational</td></tr><tr><td>Blinking green/orange</td><td>Configuration password not set. Without a configuration password, the configuration data in the device is unprotected.</td></tr><tr><td>Blinking red</td><td>Charge or time limit reached</td></tr></table>	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				
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2 Online	<table><tr><td>Off</td><td>WAN connection inactive</td></tr><tr><td>Green on, permanently</td><td>WAN connection active</td></tr><tr><td>Red on, permanently</td><td>WAN connection error</td></tr></table>	Off	WAN connection inactive	Green on, permanently	WAN connection active	Red on, permanently	WAN connection error						
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3 DSL	<table><tr><td>Off</td><td>interface deactivated</td></tr><tr><td>Green on, permanently</td><td>DSL connection active</td></tr><tr><td>Flickering green</td><td>DSL data transmission</td></tr><tr><td>Flickering red</td><td>DSL transmission error</td></tr><tr><td>Blinking red/orange</td><td>DSL hardware error</td></tr></table>	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		
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4 ISDN	<table><tr><td>Off</td><td>interface deactivated</td></tr><tr><td>Green on, permanently</td><td>D-channel active</td></tr><tr><td>Orange on, permanently</td><td>B-channel active</td></tr><tr><td>Flickering green</td><td>ISDN data transmission</td></tr><tr><td>Flickering red</td><td>ISDN transmission error</td></tr><tr><td>Blinking red/orange</td><td>ISDN hardware error</td></tr></table>	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
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5 ETH	<table><tr><td>Off</td><td>No networking device attached</td></tr><tr><td>Green on, permanently</td><td>Connection to network device operational, no data traffic</td></tr><tr><td>Flickering green</td><td>Data transmission</td></tr></table>	Off	No networking device attached	Green on, permanently	Connection to network device operational, no data traffic	Flickering green	Data transmission						
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6 WLAN	<table><tr><td>Off</td><td>No WLAN network defined or WLAN module deactivated. The WLAN module is not transmitting beacons.</td></tr><tr><td>Green on, permanently</td><td>At least one WLAN network is defined and WLAN module activated. The WLAN module is transmitting beacons.</td></tr><tr><td>Green inverse flashing</td><td>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.</td></tr><tr><td>Blinking green</td><td>DFS scanning or other scan procedure</td></tr></table>	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				
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7 VPN	<table><tr><td>Off</td><td>VPN connection inactive</td></tr><tr><td>Green on, permanently</td><td>VPN connection active</td></tr><tr><td>Blinking green</td><td>Establishing VPN connections</td></tr></table>	Off	VPN connection inactive	Green on, permanently	VPN connection active	Blinking green	Establishing VPN connections						
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Hardware							
Power supply	12 V DC, external power adapter (230 V); bayonet connector to secure against disconnection						
Power consumption	Max. ca. 14 W						
Environment	Temperature range 0–35 °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						
Interfaces							
LANCOM 1781VAW over ISDN							
LANCOM 1781VAW over POTS							
WAN: VDSL2	<table><tr><td>■ VDSL2 as per ITU G.993.2; profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a</td><td>■ VDSL2 as per ITU G.993.2; profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a</td></tr><tr><td>■ Compatible to VDSL2 from Deutsche Telekom</td><td>■ Compliant to: ADSL2+ over POTS as per ITU G.992.5 Annex A/Annex M with DPBO, ADSL2 over POTS as per ITU G.992.3 Annex A/ L, ADSL over POTS as per ITU G.992.1 Annex A</td></tr><tr><td>■ Compliant to: ADSL2+ over ISDN as per ITU G.992.5 Annex B with DPBO, ADSL2 over ISDN as per ITU G.992.3/5 Annex B/J, ADSL over ISDN as per ITU G.992.1 Annex B</td><td>■ Supports just one virtual connection at a time in ATM (VPI-VCI pair)</td></tr></table>	■ VDSL2 as per ITU G.993.2; profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a	■ VDSL2 as per ITU G.993.2; profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a	■ Compatible to VDSL2 from Deutsche Telekom	■ Compliant to: ADSL2+ over POTS as per ITU G.992.5 Annex A/Annex M with DPBO, ADSL2 over POTS as per ITU G.992.3 Annex A/ L, ADSL over POTS as per ITU G.992.1 Annex A	■ Compliant to: ADSL2+ over ISDN as per ITU G.992.5 Annex B with DPBO, ADSL2 over ISDN as per ITU G.992.3/5 Annex B/J, ADSL over ISDN as per ITU G.992.1 Annex B	■ Supports just one virtual connection at a time in ATM (VPI-VCI pair)
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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 and provides transparent asynchronous serial-data transfer via TCP.						
Ant1, Ant2	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							
VDSL, ADSL, Ethernet	PPPoE, PPPoA, IPoA, Multi-PPPoE, ML-PPP, PPTP (PAC or PNS) and IPoE (with or without DHCP), RIP-1, RIP-2, VLAN						
ISDN	1TR6, DSS1 (Euro-ISDN), PPP, X75, HDLC, ML-PPP, V.110/GSM/HSCSD						
Declaration of conformity							
CE	EN 60950-1, EN 301489-1, EN 301489-17						
2.4 GHz WLAN	EN 300 328						
5 GHz WLAN	EN 301 893						
Wi-Fi certification	802.11a/b/g/n						
Package content							
Manual	Hardware Quick Reference (DE/EN), Installation Guide (DE/EN/FR/ES/IT/PT/NL)						
CD/DVD	Management software (LANconfig, LANmonitor, LANCAPI) and LCOS documentation						
Cable	1 Ethernet cable, 3m (kiwi-colored connectors)						
Cable	1 VDSL/ADSL cable, 3m (dark blue connectors)						
Cable**	1 ISDN cable, 3m (light-blue connectors)						
Antennas	Two 3dBi dipole dualband antennas						
Power adapter	External power supply adapter (230 V), NEST 12 V/1.5 A DC/S, barrel connector 2.1/5.5 mm bayonet, LANCOM item no. 110723 (EU), LANCOM item no. 110829 (UK)						
**)	Included only in the "over ISDN" version						
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. If the respective license demands, the source files for the corresponding software components will be made available on a download server upon request. License information for the device firmware (LCOS) is available in the file LCOS-Licenses.txt on the data medium supplied.							