LANCOM 1781VA
## Quick Reference Guide

Cloud-ready
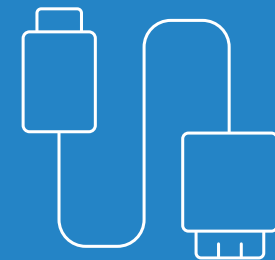
LANCOM
Systems

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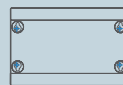
> Rack installation with the optional LANCOM Rack Mount (not supplied)

| VDSL | ETH 4 | ETH 3 | ETH 2 | ETH 1 | Config (Com) | USB | ISDN-S0 | Reset | DC 12 V |

① ② ③ ④ ⑤ ⑥
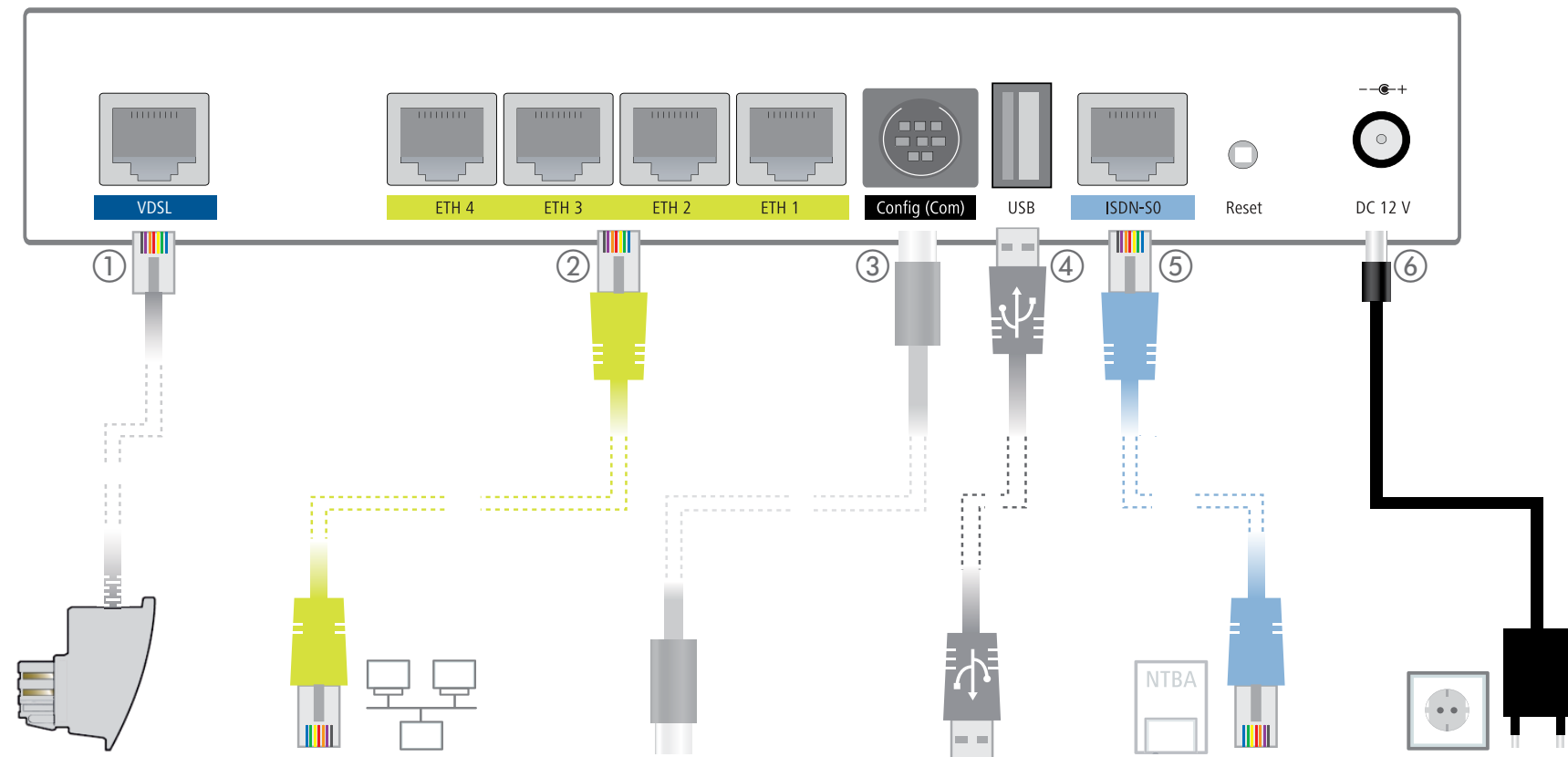
① VDSL interface
Use the supplied DSL cable for the IP-based line to connect the VDSL interface and the provider's telephone socket.
For more information, please contact your Internet service provider.

② Ethernet interface
Use the cable with the kiwi-colored connectors to connect one of the interfaces ETH 1 to ETH 4 to your PC or a LAN switch.

③ Serial interface
You can connect the device to a PC with a configuration cable (available separately).

④ USB interface
Connect a USB storage device or a USB printer to the USB interface.
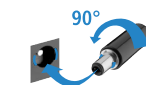USB cable not included in the package.

⑤ 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.
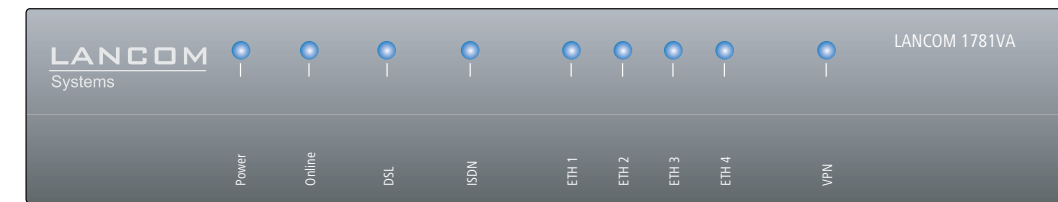
⑥ Power
When connecting the cable to the device, turn the bayonet connector 90° clockwise until it clicks into place.

90°

Use only the supplied power adapter.

SETTING UP AND CONNECTING THE DEVICE

LANCOM 1781VA

| Power | Online | DSL | ISDN | ETH 1 | ETH 2 | ETH 3 | ETH 4 | VPN |

① ② ③ ④ ⑤ ⑥

① Power

Off	Device switched off
Green, permanently*	Device operational, resp. device paired / claimed and LANCOM Management Cloud (LMC) accessible
Green/orange, blinking	Configuration password not set. Without a configuration password, the configuration data in the device is unprotected.
Red, blinking	Charge or time limit reached
1x green inverse blinking*	Connection to the LMC active, pairing OK, device not claimed
2x green inverse blinking*	Pairing error, resp. LMC activation code not available
3x green inverse blinking*	LMC not accessible, resp. communication error

② Online

Off	WAN connection inactive
Green, permanently	WAN connection active
Red, permanently	WAN connection error

③ DSL

Off	interface deactivated
Green, permanently	DSL connection active
Green, flickering	DSL data transmission
Red, flickering	DSL transmission error
Red/orange, blinking	DSL hardware error

④ ISDN

Off	interface deactivated
Green, permanently	D-channel active
Orange, permanently	B-channel active
Green, flickering	ISDN data transmission
Red, flickering	ISDN transmission error
Red/orange, blinking	ISDN hardware error

⑤ ETH

Off	No networking device attached
Green, permanently	Connection to network device operational, no data traffic
Green, flickering	Data transmission

⑥ VPN

Off	VPN connection inactive
Green, permanently	VPN connection active
Green, blinking	Establishing VPN connections

*) The additional power LED statuses are displayed in 5-seconds rotation if the device is configured to be managed by the LANCOM Management Cloud.

TECHNICAL DATA

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 – 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

Interfaces	LANCOM 1781VA over ISDN	LANCOM 1781VA over POTS
WAN: VDSL2	> Automatic detection of Deutsche Telekom VDSL lines with VLAN ID 7 > Compatible to Deutsche Telekom VDSL2 > VDSL2 as per ITU G.993.2; profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a > VDSL2 Vectoring as per ITU G.993.5 > ADSL conformity according to: ADSL2+ over ISDN as per ITU G.992.5 Annex B/J with DPBO; ADSL2 over ISDN as per ITU G.992.3 Annex B, ADSL over ISDN as per ITU G.992.1 Annex B > Compatible to Deutsche Telekom U-R2 lines (1TR112) > Supports one virtual connection at a time in ATM (VPI-VCI pair)	> VDSL2 as per ITU G.993.2; profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a > VDSL2 Vectoring as per ITU G.993.5 > 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/I, ADSL over POTS as per ITU G.992.1 Annex A > 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 S₀ bus	
Serial Interface	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.	

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, GRE, 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
Hereby, LANCOM Systems declares that this device is in compliance with Directives 2014/30/EU and 2014/35/EU. The full text of the EU declaration of conformity is available at the following internet address: www.lancom-systems.com/ce/

Package content	
Manual	Hardware Quick Reference (DE/EN), Installation Guide (DE/EN)
Cable	1 Ethernet cable, 3 m (kiwi-colored connectors); 1 DSL cable for an IP-based line, 4.25 m; ISDN cable, 3 m (light-blue connectors)
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. 111301 (EU, 230V); LANCOM item no. 111302 (UK, 230V)

This product contains separate open-source software components which are subject to their own licenses, in particular the General Public License (GPL). The license information for the device firmware (LCOS) is available on the device's WEBconfig interface under "Extras > License information". If the respective license demands, the source files for the corresponding software components will be made available on a download server upon request.