LANCOM 1781-4G

Quick Reference Guide

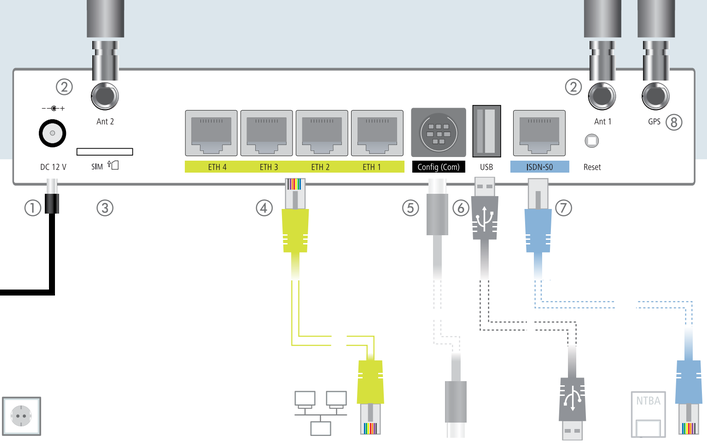
LANCOM
Systems

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)



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 4G antennas
Screw the supplied cellular antennas to the terminals Ant. 1 and Ant. 2.
Alternatively, screw the GPS antenna (available at no charge) to the connector GPS (see voucher supplied).

③ SIM card
Slide the SIM card into the slot using the marking to ensure that the card is the right way round. Ensure that the SIM card clicks into place. To remove the card from the device again, press the card lightly into the device. Let go to release the SIM card from the slot.

④ 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.

⑤ Optional: Serial configuration cable
You can connect the device to a PC with a configuration cable (available separately).

⑥ Optional: USB
You can use the USB interface to connect a USB printer or a USB flash drive for device configuration.

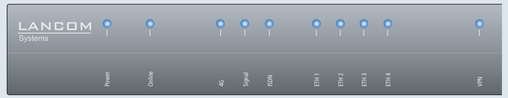
⑦ ISDN cable
Use the ISDN cable with the light-blue connectors to connect the ISDN interface to the NTBA if you wish to use ISDN.

⑧ Optional: GPS antenna
Screw the GPS antenna (available at no charge with the voucher supplied) to the connector marked "GPS".

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 4G module!

The SIM may only be inserted or removed with the device switched off. Inserting or removing the SIM card while the device is switched on could destroy the 4G 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 4G	
Off	Cellular interface disabled
Blinking red/orange	Uploading module firmware
Blinking red/green	SIM card error (PIN)
Blinking orange	Logging on to cellular network
Orange on (permanently)	Logon to cellular network successful
Green on (permanently)	Connection to cellular network active
Flickering green	Cellular data transmission
Red on (permanently)	Hardware error/module unavailable

⑦ VPN	
Off	No VPN connection active
Green on (permanently)	VPN connection active
Blinking green	Establishing VPN connections

⑥ ETH	
Off	No networking device attached
Green on (permanently)	Connection to network device operational, no data traffic
Flickering green	Data transmission

⑤ 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

④ Signal	
Off	No cellular reception
Blinking orange	Low signal strength, field strength less than -87 dB
Orange on (permanently)	Medium signal strength, field strength -86 – -71 dB
Green on (permanently)	Good signal strength, greater than or equal to -70 dB

TECHNICAL DATA

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
Data transmission in cellular networks	
Supported standards:	GPRS, EDGE, UMTS, HSxPA, HSPA+, LTE
LTE bands	Band 1 (2100 MHz), band 3 (1800 MHz), band 7 (2600 MHz), band 8 (900 MHz), band 20 (DD800 MHz) with MIMO
UMTS-/HSxPA-/HSPA+ bands	Band 1 (2100 MHz), band 8 (900 MHz) with diversity
EDGE-/GPRS bands	GSM 900 (900 MHz), DCS 1800 (1800 MHz), PCS 1900 (1900 MHz)
Maximum transmission power	+24 dBm
GPS	Positioning with the additional GSM antenna (optional); 1575.42 MHz
Interfaces	
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)
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.
Ant1, Ant2	Two SMA connectors for the supplied dipole rod antennas (LTE, UMTS, Edge), compatible LANCOM AirLancer Extender antennas for 4G or 3G, or from other manufacturers. Please respect the restrictions which apply in your country when setting up an antenna system (in particular the antenna gain and transmission power).
GPS	SMA jack for connecting an optionally available GPS antenna
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, X.75, HDLC, ML-PPP, V.110/GSM/HSCSD
Declaration of conformity	
CE	EN 60 950-1, EN 301 908-13, EN 301 908-2, EN 301 511
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	1 Ethernet cable, 3m (kiwi-colored connectors)
Cable	1 ISDN cable, 3m (light-blue connectors)
Antennas	Two 4G antennas for LTE/UMTS/EDGE
Power adapter	External power supply adapter (230V), NEST 12 V/1.5 A DC/S, barrel connector 2.1/5.5 mm bayonet, LANCOM item no. 110723

Specific device properties are not available to LANCOM CC devices operating in CC mode according to the "Operational User Guidance".

License information for the device firmware (LCOS) is available in the file LCOS-Licenses.txt on the data medium supplied.

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