

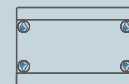


Please observe the following when setting up the device

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



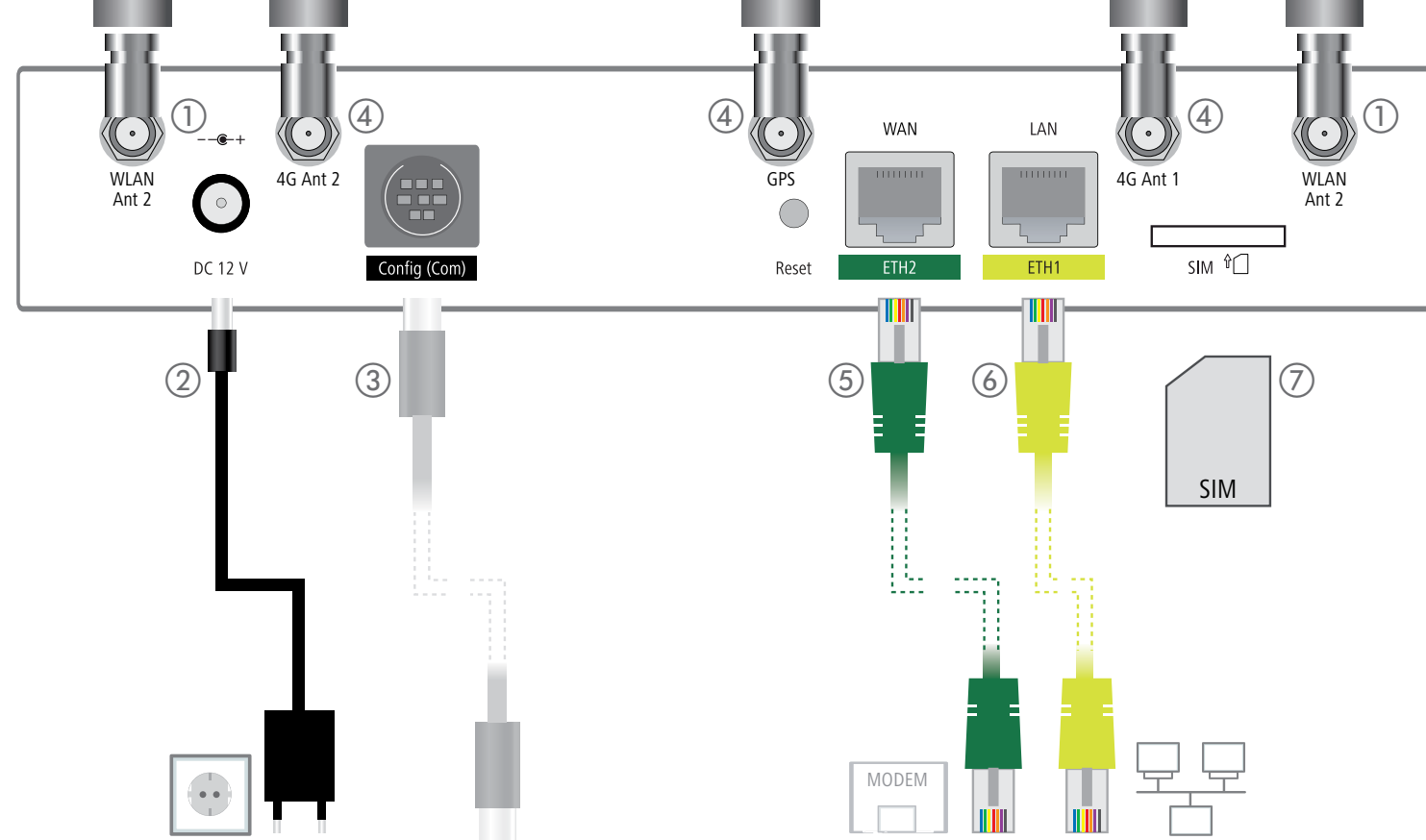
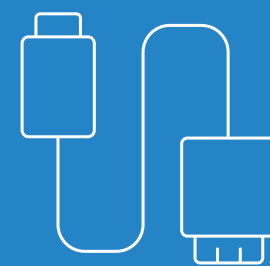
- Keep the ventilation slots on the side of the device clear of obstruction
- In case of wall mounting, use the drilling template as supplied



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



LANCOM 1780EW-4G Quick Reference Guide

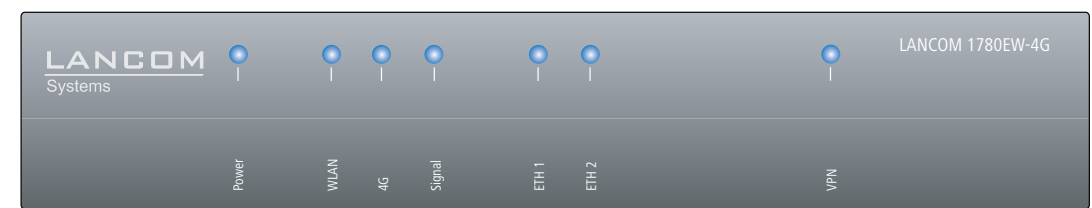


- WLAN antennas**
Screw the two supplied WLAN antennas onto the connectors WLAN Ant 1 and WLAN Ant 2. Depending on how the antennas are to be used, 'Antenna Grouping' may need to be configured in order to provide the desired MIMO behavior.
- Power**
When connecting the cable to the device, turn the bayonet connector 90° clockwise until it clicks into place.
 Use only the supplied power adapter.
- Serial Interface**
You can connect the device to a PC with a configuration cable (available separately).
- LTE/4G antennas or Optional: GPS antenna**
Screw the two supplied cellular antennas onto the connectors 4G Ant 2 and 4G Ant 1. Alternatively screw the freely available GPS antenna onto the connector GPS (see included voucher).
- WAN Interface**
Use the cable with the green-colored connectors to connect the interface ETH 2 to your WAN modem.
- Ethernet Interface**
Use the cable with the kiwi-colored connectors to connect the interface ETH 1 to your PC or a LAN switch.
- Optional: SIM card**
Slide the SIM card into the slot using the marker to ensure that the card is the right way round. Ensure that the SIM card clicks into place on insertion. 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.

! 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 4G or WLAN modules!

! The SIM card is only to be inserted or removed when the device is switched off. Inserting or removing the SIM card with the device switched on may cause the destruction of the 4G module!

SETTING UP AND CONNECTING THE DEVICE



1 Power	Off Green on, permanently Blinking green/orange	Device switched off Device operational Configuration password not set. Without a configuration password, the configuration data in the device is unprotected.
2 WLAN	Off Green on, permanently Green inverse flashing	No WLAN network defined or WLAN module deactivated. The WLAN module is not transmitting beacons. At least one WLAN network is defined and WLAN module activated. The WLAN module is transmitting beacons. 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.
3 4G	Off Green on, permanently Flickering green Orange on, permanently Blinking orange Red on, permanently Blinking red/green Blinking red/orange	Cellular interface disabled Connection to cellular network active Cellular data transmission Logon to cellular network successful Logging on to cellular network Hardware error/module unavailable SIM card error (PIN) Uploading module firmware
4 Signal	Off Green on, permanently Orange on, permanently Blinking orange	No cellular reception Good signal strength, greater than or equal to -70 dB Medium signal strength, field strength between -86 and -71 dB Low signal strength, field strength less than -87 dB
5 ETH	Off Green on, permanently Flickering green	No networking device attached Connection to network device operational, no data traffic Data transmission
6 VPN	Off Green on, permanently Blinking green	VPN connection inactive VPN connection active Establishing VPN connections

Hardware	Power supply: 12 V DC, external power adapter 230 V with bayonet connector to secure against disconnection Power consumption: Approx. 16,83 W via external power adapter (value refers to the overall power for the router and power adapter); about 19 W via PoE (IEEE 802.3at) Environment: Temperature range 0–35 °C; humidity 0–95 %, non-condensing. Temperature range 0–40 °C when mounted vertically on a LANCOM wall mount with cables running to the side. 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	WAN, LAN: 10/100/1000 Base-TX, autosensing, auto node hub 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. WLAN: Ant 1, Ant 2: Two reverse SMA connectors for external LANCOM AirLancer Extender antennas or for antennas from other vendors* 4G: Ant 1, Ant 2: 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* GPS: SMA jack for connecting an optionally available GPS antenna
WAN protocols	Ethernet: PPPoE, Multi-PPPoE, ML-PPP, PPTP (PAC or PNS) and plain Ethernet (with or without DHCP), RIP-1, RIP-2, VLAN, IP
Data transmission in cellular networks	Supported standards: GPRS, EDGE, UMTS, HSPA+, LTE LTE: Band 1 (2100 MHz), band 3 (1800 MHz), band 7 (2600 MHz), band 8 (900 MHz), band 20 (FDD800 MHz) with MIMO UMTS/HSPA+/HSPA+: Band 1 (2100 MHz), band 8 (900 MHz) with diversity EDGE/GPRS: 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
Declaration of conformity	The Declaration of Conformity is available from the product page on our website www.lancom.eu
Package content	Manual: Hardware Quick Reference (DE/EN), Installation Guide (DE/EN) CD/DVD: Management software (LANconfig, LANmonitor) and LCOS documentation Cable: 2 Ethernet cable, 3m (LAN: kiwi-colored connector; WAN: green connector) Antenna: Two 3dBi dipole dualband antennas; Two LTE/4G antennas for LTE/UMTS/EDGE Power adapter: External power supply adapter 230 V, NEST 12 V/1.5 A DC/5, barrel connector 2.1/5.5 mm bayonet, LANCOM item no. 110723 or 111301 (EU, 230 V); LANCOM item no. 110829 or 111302 (UK, 230 V)

*) Please respect the restrictions which apply in your country when setting up an antenna system (in particular the antenna gain and transmission power). For information about calculating the correct antenna setup, please refer to www.lancom.eu.

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