



... connecting your business

## LANCOM 1780EW-3G

### Hardware Quick Reference

**LANCOM**  
Systems

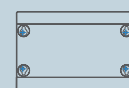


Please observe the following when setting up the device

- 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

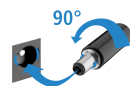
#### Optional: 3G antennas or GPS antenna

Screw the two supplied cellular antennas onto the connectors 3G Aux and 3G Main. Alternatively screw the free available GPS antenna onto the connectors 3G Aux (see included voucher).

②

#### 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.

③

#### Optional: Wireless LAN antennas

Screw the two supplied WLAN antennas onto the connectors WLAN1 and WLAN2. Depending on how the antennas are to be used, 'Antenna Grouping' may need to be configured in order to provide the desired MIMO behavior.

④

#### Optional: Serial configuration cable

Connect the device to a PC with a configuration cable (available as accessory).

⑤

#### Optional: WAN

Use a cable with the green-colored connectors to connect the interfaces ETH2 to your WAN modem.

⑥

#### Optional: LAN

Use a cable with the kiwi-colored connectors to connect the interfaces ETH1 to your PC or a LAN switch.

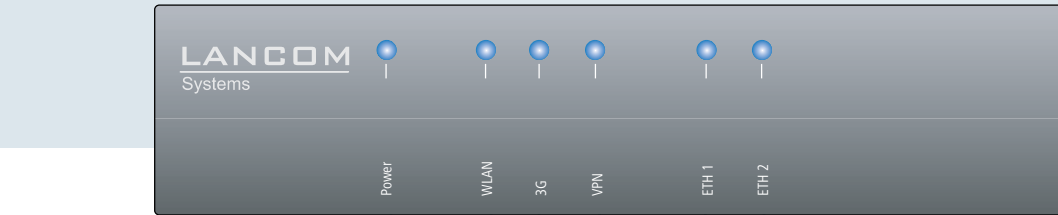
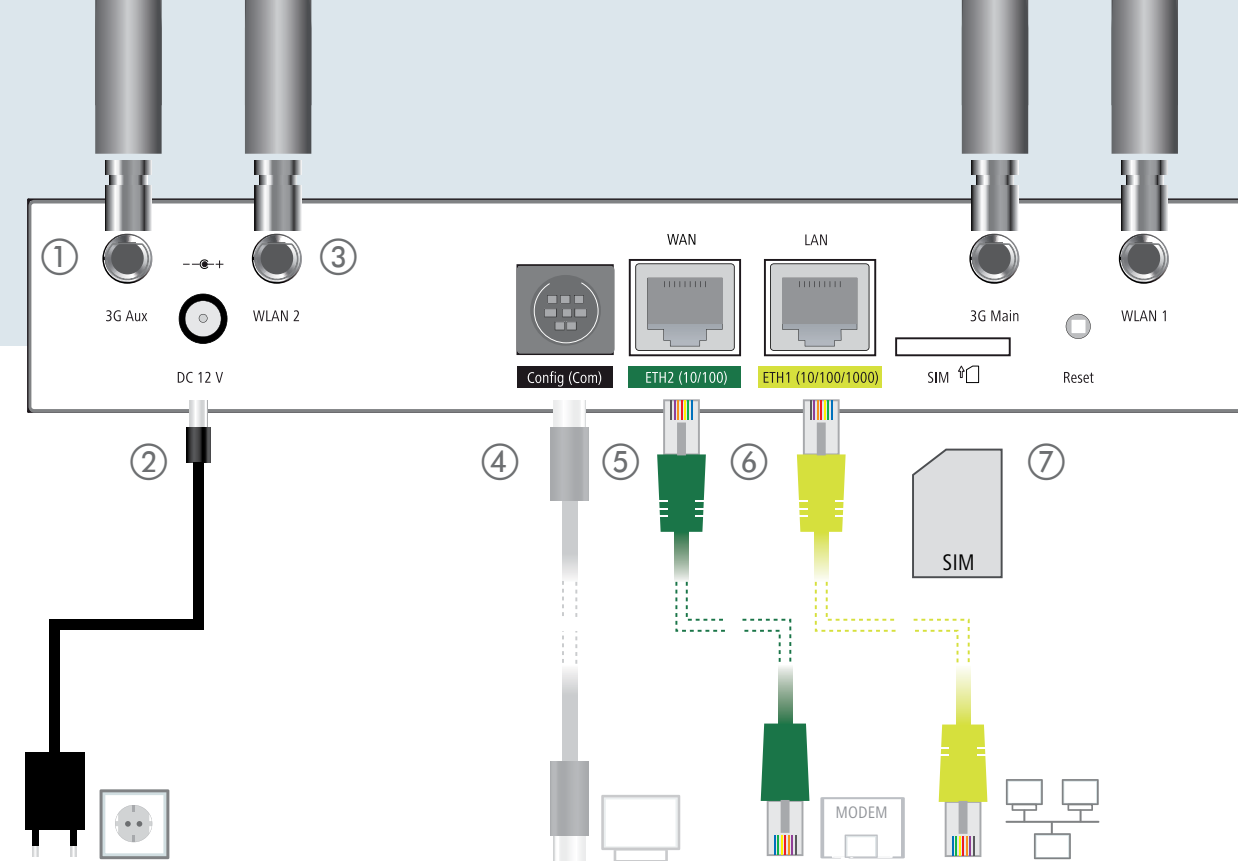
⑦

#### 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 3G or WLAN modules!



#### Power

No	Device switched off
Constant green	Device operational
Blinking green	Configuration password not set. Without a configuration password, the configuration data in the device is unprotected.

#### Wireless LAN

No	No WLAN network defined or WLAN module deactivated. The WLAN module is not transmitting beacons.
Green	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.

#### ETH 1 and ETH 2

No	No networking device attached
Constant green	Connection to network device operational, no data traffic
Flickering green	Data traffic

#### VPN

No	VPN connection inactive
Blinking green	Establishing VPN connections
green constantly	VPN connection active

#### 3G

No	UMTS interface switched off
Blinking red/green	SIM card error
Blinking orange	Logging on to cellular network
orange constantly on	Logon to cellular network successful
green constantly on or blinking	Cellular connection active; faster blinking indicates faster connection



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 3G module!

MOUNTING AND CONNECTING UP

Hardware	
Power supply	12 V DC, external power supply unit (230 V) with bayonet connector to prevent unplugging
Power consumption	Max. ca.13.5 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

Interfaces	
WAN	10/100Base-TX, autosensting, auto node hub
LAN	10/100/1000 Base-TX, autosensting, auto node hub
External antenna connectors	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.
External antenna connectors	Two SMA antenna connectors for external UMTS antennas (RX diversity) or for operating a GPS antenna at the AUX connector
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 protocols	
Ethernet	PPPoE, Multi-PPPoE, ML-PPP, PPTP (PAC or PNS) and plain Ethernet (with or without DHCP), RIP-1, RIP-2, VLAN, IP

UMTS modem	
Supported standards:	UMTS, HSPA+ (HSDPA with up to 21 Mbps, HSUPA with up to 5.76 Mbps), EDGE and GPRS support
UMTS HSxPA bands	850/900/1900/2100 MHz
EDGE GPRS bands	850/900/1800/1900 MHz (EDGE to max. 236 Kbps)

Declaration of conformity	
CE	EN 55022, EN 55024, EN 60950
2.4 GHz WLAN	ETS 300 328
5 GHz WLAN	EN 301 893 Version 1.5.1, EN 302 502 (BFWA)
Notifications	Certifications notified in Germany, Belgium, Netherlands, Luxembourg, Austria, Spain, Switzerland, UK, Italy, Portugal, Czech Republic, Denmark, Malta, France

Package content	
Manual	Hardware Quick Reference (DE/EN) Installation Guide (DE/EN/FR/ES/IT/PT/NL)
CD/DVD	CD/DVD with firmware, management software (LANconfig, LANmonitor, LANCAP) and documentation
Cable	2 Ethernet cable, 3m (LAN: kiwi-colored connector; WAN: green connector)
Antennas	Two 3dBi dipole dualband antennas
Antennas	Two 2-dBi dipole UMTS/GPRS antennas (850-960 Mhz and 1700-2220 Mhz)
Power adapter	External power supply adapter (230V), NEST 12 V/1.5 A DC/5, barrel connector 2.1/5.5 mm bayonet, LANCOM item no. 110723

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

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TECHNICAL DETAILS