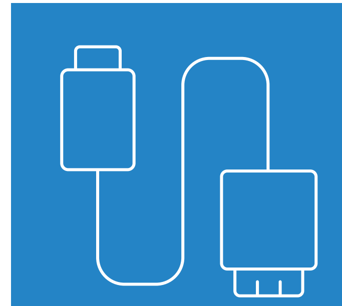
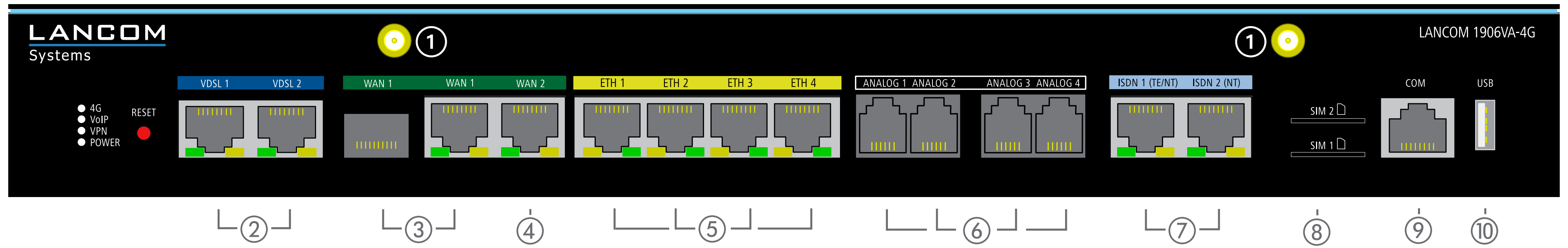
SECURE. **NETWORKS.**

LANCOM 1906VA-4G
Quick Reference Guide



Cloud-ready

LANCOM Systems



① **4G / LTE antenna connectors**
Connect the supplied cellular antennas to the connectors at the front of the device.

② **VDSL / ADSL interfaces***
If required, use the supplied DSL cables for the IP-based line to connect each VDSL / ADSL interface to a separate provider's telephone socket. For more information, please contact your Internet service provider.

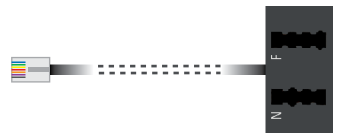
*For operation with over POTS devices please use the enclosed DSL cables with the dark blue plugs.

③ **WAN 1 interfaces (SFP / TP combo port)**
Insert a suitable SFP module (e.g. 1000Base-SX or 1000Base-LX) into the SFP port. Choose a cable compatible with the SFP module and connect it as described in the module's documentation. SFP modulel and cable are not included.
If desired, alternatively connect the WAN 1 TP interface to a WAN modem using an ethernet cable.

④ **WAN 2 interface (TP)**
Connect the WAN 2 interface to a WAN modem using an Ethernet cable.

⑤ **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.

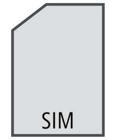
⑥ **Analog interfaces**
Connect analog terminal devices to the analog interfaces either directly via RJ11 or with the help of the enclosed TAE adapters.



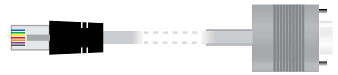
⑦ **ISDN interfaces**
ISDN 1: Internal (NT) or external (TE) ISDN bus.
This feature is controlled by LCOS.
ISDN 2: Internal (NT) ISDN-bus.

A 100-Ohm resistor for line termination is switchable in LCOS.

⑧ **SIM card slots**
Slide the SIM card(s) into slot SIM1 or SIM2 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, press the card lightly into the device.
Let go to release the SIM card from the slot.

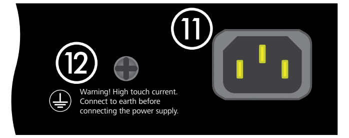


⑨ **Configuration interface**
Use the included serial configuration cable to connect the serial interface (COM) to the serial interface of the device you want to use for configuring / monitoring.



⑩ **USB interface**
You can use the USB interface to connect a USB printer or a USB storage device.

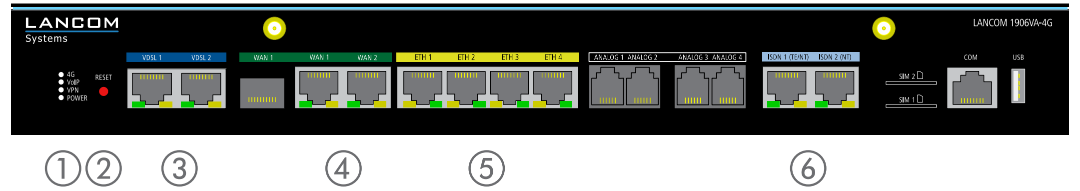
⑪ **Power connector and grounding point (device back side)**
Supply power to the device via the power connector. Please use the IEC power cable supplied (separately available for WW devices).



⑫ **ATTENTION:** High touch current possible! Connect to earth before connecting the power supply.

Please observe the following when setting up the device
- The mains plug of the device must be freely accessible.
- For devices to be operated on the desktop, please attach the adhesive rubber footpads
- Do not rest any objects on top of the device and do not stack multiple devices
- Keep the ventilation slots on the side of the device clear of obstruction
- Mount the device into a 19" unit in a server cabinet using the provided screws and mounting brackets. Pay attention to the "R" and "L" marks on the brackets for accurate mounting.

MOUNTING AND CONNECTING THE DEVICE



① POWER	
Off	Device switched off
Green, permanently*	Device operational, resp. device paired / claimed and LANCOM Management Cloud (LMC) accessible
Green / red, blinking	No password set. Without a 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

① VPN	
Off	VPN connection inactive
Green, permanently	VPN connection active
Green, flashing	VPN connecting

① VoIP	
Off	No SIP accounts defined or VCM is off
Green, permanently	All defined and active SIP accounts (outgoing) were successfully registered
Red, permanently	Not all of the defined and active SIP accounts were registered (possibly still in process)
Red or green, inverse flashing	Number of currently used lines (connecting or connected)

① 4G	
Off	Cellular interface disabled
Green,permanently	Connection to cellular network active
Green, flickering	Cellular data transmission
Orange, permanently	Logon to cellular network successful
Orange, blinking	Logging on to cellular network
Red, permanently	Hardware error / module unavailable
Red / green, blinking	SIM card error (PIN)
Red / orange, blinking	Uploading module firmware

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

② RESET	
Reset button	short press > Restart the device long press > Reset the device

③ VDSL 1 / VDSL 2	
Off	Interface deactivated
Green, blinking	DSL connecting
Green, pemanently	DSL connection active
Green, flickering	DSL data transmission
Green / orange, flickering	DSL transmission error
Green / orange, blinking synchronously	DSL hardware error
Orange, blinking	DSL training
Orange, permanently	DSL sync

④ WAN 1 / WAN 2	
Green, orange off	No networking device connected
Green, permanently	Connection to network device operational, no data traffic
Green, flickering	Data transmission
Orange off	1000 Mbps
Orange, permanently	10 / 100 Mbps

⑤ ETH 1 - ETH 4	
Green, orange off	No networking device connected
Green, permanently	Connection to network device operational, no data traffic
Green, flickering	Data transmission
Orange off	1000 Mbps
Orange, permanently	10 / 100 Mbps

⑥ ISDN 1 (TE/NT) / ISDN 2 (NT)	
Off	Interface deactivated
Green, permanently	D-channel active
Green, blinking	ISDN connection active
Orange, blinking	ISDN connecting
Green / orange, blinking synchronously	ISDN hardware error
Orange, permanently	Connection inactive

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.

Hardware	
Power supply	Internal power supply unit (100–240 V, 50-60 Hz)
Power consumption	Max. 23 W
Environment	Temperature range 0–40 °C, humidity 0–95 %; non-condensing
Housing	Robust metal housing, 1 HU with mounting brackets for 19" installation, W 345 x H 44 x D 253 mm)
Number of fans	None; fanless design, no rotating parts, high MTBF
Interfaces	
VDSL 1 / VDSL 2	> VDSL2 as per ITU G.993.2; profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a > Compatible to VDSL2 from Deutsche Telekom AG > 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 (over POTS: Annex A/Annex M), ADSL2 over ISDN as per ITU G.992.3 Annex B (over POTS: Annex A/L), ADSL over ISDN as per ITU G.992.1 Annex B (over POTS: Annex A) > Supports just one virtual connection at a time in ATM (VPI-VCI pair) per modem
WAN 1 / WAN 2	WAN 1 SFP: Compatible with optional LANCOM SFP modules. Set as a WAN port ex-factory, can be configured as a LAN port. WAN 1 / WAN 2 TP: 10 / 100 / 1000 Base-TX, autosensing full duplex (WAN 1) / autosensing (WAN 2), auto node hub
ETH1 - ETH 4	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.
Analog 1 - Analog 4	Use the cables of your analog devices to connect them with the analog interfaces. If necessary, use the enclosed adapters.
ISDN 1 / ISDN 2	ISDN 1: Internal (NT) or external (TE) ISDN bus. This feature is controlled by LCOS. According to the settings, connect the light-blue ISDN cable either to the NTBA or the ISDN terminal device. ISDN 2: Internal (NT) ISDN bus. Use the light-blue ISDN cable to connect the ISDN device to the ISDN interface.
Config (Com) / V.24	Serial configuration interface / COM-port: 9,600 - 115,200 baud
USB	USB 2.0 hi-speed host port for connecting USB printers (USB print server), serial devices (COM-port server) or USB drives (FAT file system)
4G	Two SMA connectors for the supplied dipole rod antennas (LTE, UMTS), compatible LANCOM AirLancer antennas for 4G, 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).
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, EoGRE, L2TPv2 (LAC or LNS), IPv6 over PPP (IPv6 and IPv4/IPv6 dual stack session), IP(v6)oE (autoconfiguration, DHCPv6 or static)
ISDN	DSS1 (Euro-ISDN), PPP, X75, HDLC, ML-PPP, V.110/GSM/HSCSD
Data transmission in cellular networks	
Supported standards	UMTS, HSxPA, HSPA+, LTE, LTE Advanced
Supported cellular network bands	Band 1 (2100 MHz), band 2 (1900 MHz), band 3 (1800 MHz), band 4 (2100 MHz), band 5 (800 MHz), band 7 (2600 MHz), band 8 (900 MHz), band 12 (700 MHz), band 13 (700 MHz), band 20 (800 MHz), band 25 (1900 MHz), band 26 (800 MHz), band 29 (700 MHz), band 30 (2300 MHz), band 41 (2500 MHz)
Max. transmission power	+23 dBm
Declaration of Conformity	
Hereby, LANCOM Systems declares that this radio equipment is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.lancom-systems.com/ce/	
Package content	
Documentation	Quick Reference Guide (DE/EN), Installation Guide (DE/EN)
Cables	for over ISDN: 2 DSL cables for an IP-based line, 4.25 m; 1 ISDN cable, 3 m (light-blue connectors); for over POTS: 2 DSL cables, 3 m (dark-blue connectors); 1 Ethernet cable, 3 m (kiwi colored connectors); 1 IEC power cord 230 V (not for WW devices)
Antennas	Two LTE / 4G antennas for LTE / UMTS
Adapters	4 TAE adapters (RJ11 - TAE)
Mounting brackets	Two 19" brackets for rack mounting

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TECHNICAL DETAILS