vodafone

Vodafone MachineLink 4G Lite

Quick Start Guide
and Safety Manual

Welcome

to the world of mobile communications

Thank you for choosing a Vodafone MachineLink 4G Lite IoT router. This guide will help you set up, connect and configure your device quickly and easily.

Chapters

Package contents

This package includes

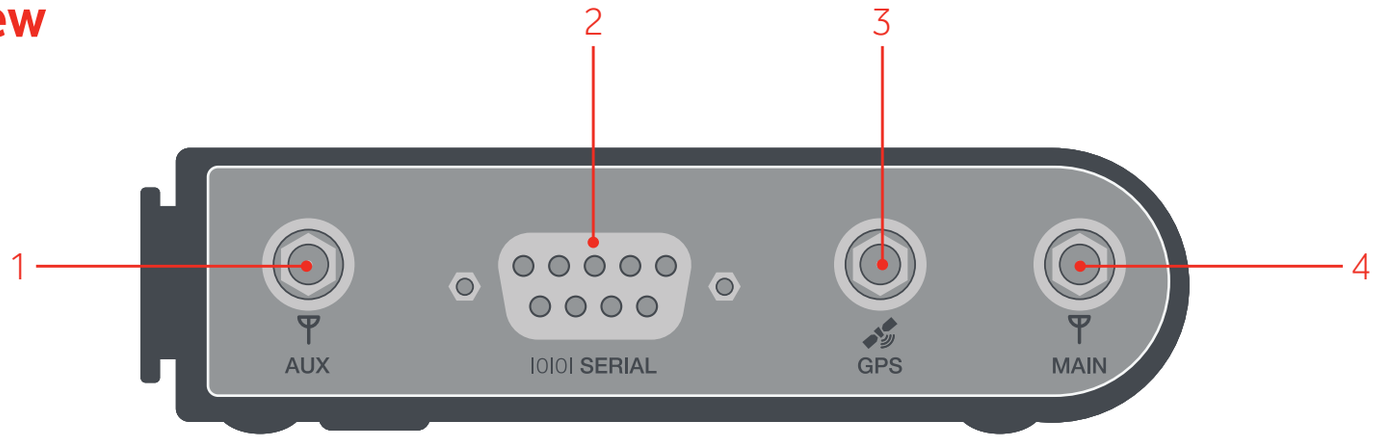
- 1x Vodafone MachineLink 4G Lite IoT router
- 2 x LTE Tube Antennas
- 1 x Six-way terminal block
- 1 x 1.5m Yellow Ethernet cable 8P8C
- 1 x DIN rail mounting bracket
- 1 x Quick start guide

Getting started

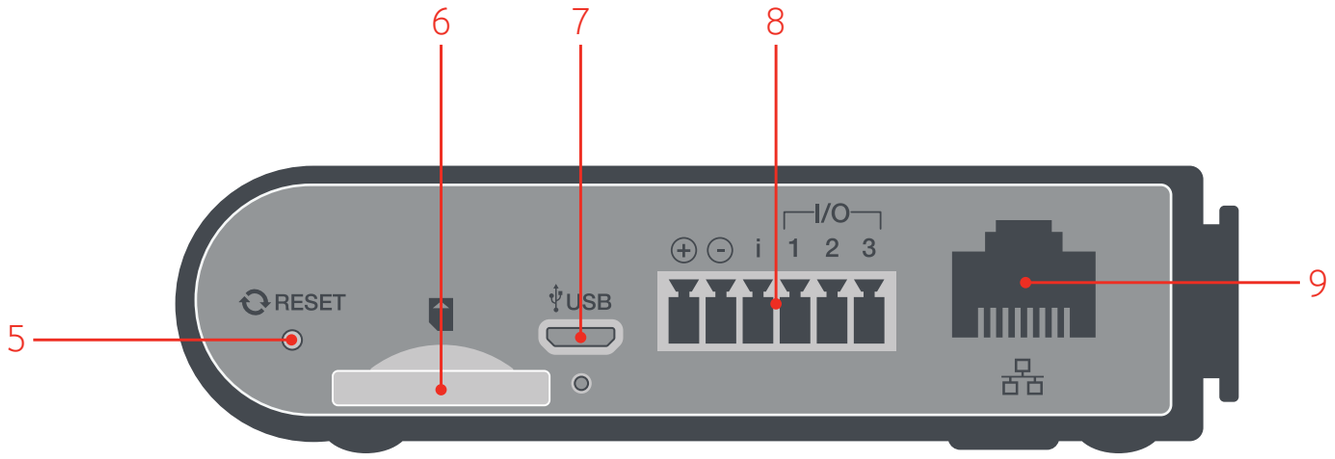
Depending on your individual setup, you may need certain components to configure your device correctly.

- External power supply unit for the Vodafone MachineLink 4G Lite router (not included).
- Flathead screwdriver for terminating power input wires.
- Laptop or PC for advanced configuration.
- Additional fasteners and screwdrivers for specific wall or rail mounting.

Device overview



ITEM		DESCRIPTION
1	Aux antenna socket	SMA female connector for auxiliary antenna (receive diversity).
2	Serial port	Female DE-9 port supporting 9-wire RS-232, RS-485 or RS-422 (software selectable).
3	GPS antenna socket	SMA female connector for GPS antenna.
4	Main antenna socket	SMA female connector for main antenna.

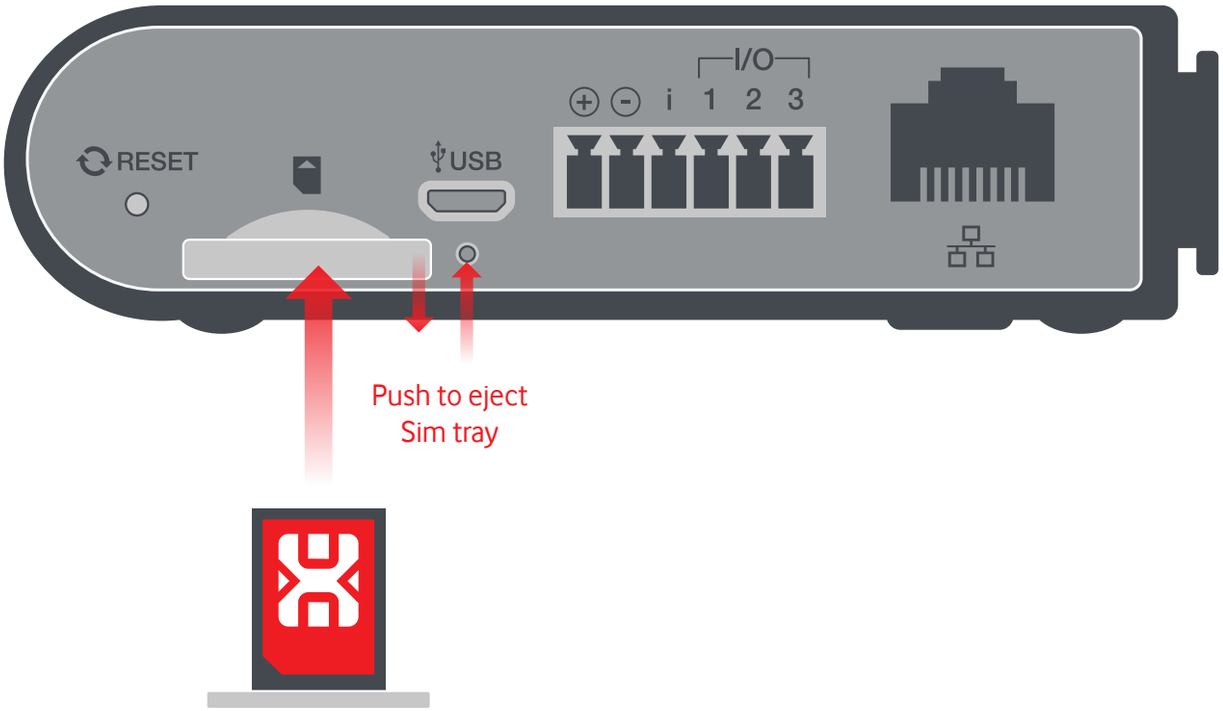


ITEM		DESCRIPTION
5	Reset button	• Press and hold for less than 5 seconds to reboot to normal mode. The LEDs are green and extinguish in sequence to indicate that the router will reboot normally if the button is released during this period. • Press and hold for 5 to 15 seconds to reboot to recovery mode. The LEDs are amber and extinguish in sequence to indicate that the router will reboot to recovery mode if the button is released during this period. • Press and hold for 15 to 20 seconds to reset the router to factory default settings. The LEDs are red and extinguish in sequence to indicate that the router will reset to factory default settings if the button is released during this period.
6	SIM card slot	Insert SIM card here.
7	Micro USB 2.0 OTG port	Provides connectivity for optional external storage or a USB Ethernet dongle. Supplies up to 0.5A to connected device.
8	Six-way terminal block connector	Connect power source, ignition and I/O wires here. Power, ignition and I/O wires may be terminated on the supplied terminal block and connected to a power source. Refer to the diagram and table under Step 5 of the Installing your device section for correct wiring of the terminal block. Operates in the 8-40V DC range.
9	RJ45 Fast Ethernet port	Connect one or several devices via a network switch here.

Installing your device

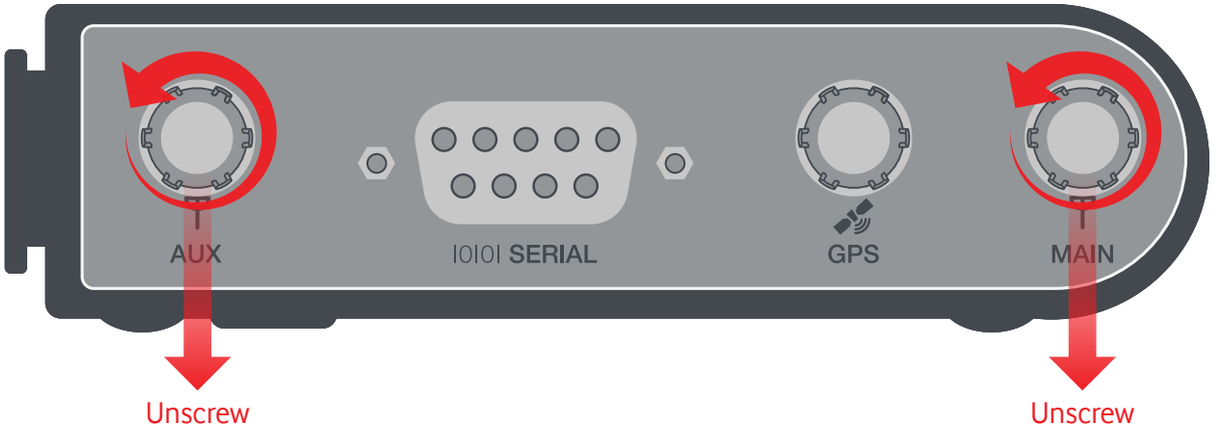
Step 1

The Vodafone MachineLink 4G Lite router comes equipped with an internal soldered-down GDSP SIM which is ready for use. If you have an additional SIM card that you would like to use, you can insert it in the SIM card tray. To eject the SIM card tray, use the end of a paper clip to press the SIM Eject button. Place the SIM card in the tray and then insert the loaded tray into the SIM slot with the gold side facing up, as shown below.



Step 2

The MachineLink 4G Lite router is shipped with caps on the Main, Auxiliary and GPS antenna sockets. To attach the supplied antennas, first remove the antenna socket caps from the Main and Auxiliary antenna sockets by turning them in an anti-clockwise direction.



Then screw the antennas onto the sockets, turning them by the collar in a clockwise direction. When the collar has been sufficiently tightened, turn the antenna in a clockwise direction until it has reached the desired orientation.

Please refer to the Device overview section for the antenna socket layout. If you have purchased a GPS antenna, remove the socket cap from the GPS antenna socket and attach the antenna to the socket in the same manner.

Step 3

Mount your router in a suitable location using the options listed in the Mounting options section.

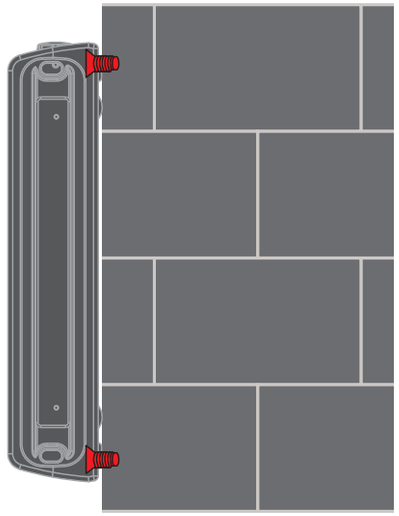
When selecting a location to mount the MachineLink 4G Lite router, keep in mind that it features high performance antennas designed to provide optimum signal strength in a wide range of environments. You can check the signal strength by observing the colour and number of LEDs illuminated on the front of the device. For a precise reading of the signal strength, refer to the Status page on the web user interface. If you find the signal strength is weak, try moving the router to a different place, mounting it differently or changing the orientation of the antennas.

The signal strength LEDs update within a few seconds with a rolling average signal strength reading. When selecting a location for the router, please allow up to 20 seconds for the signal strength LEDs to update before repositioning.

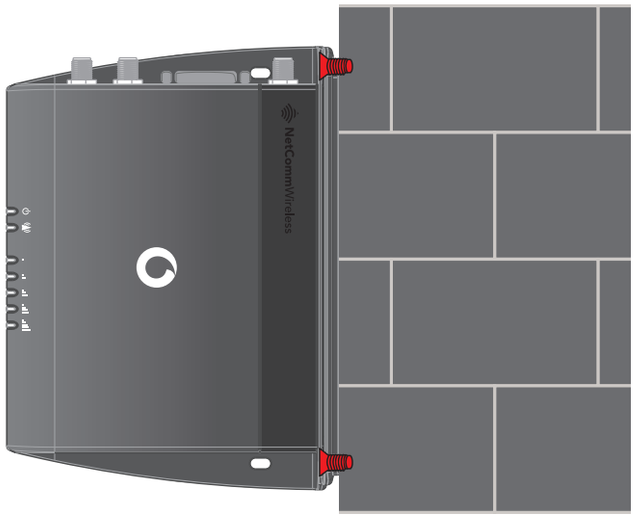
Wall mount

1. Flat against the wall

Use a minimum of 2 screws (3.5mm diameter) through the holes on the side of the device.

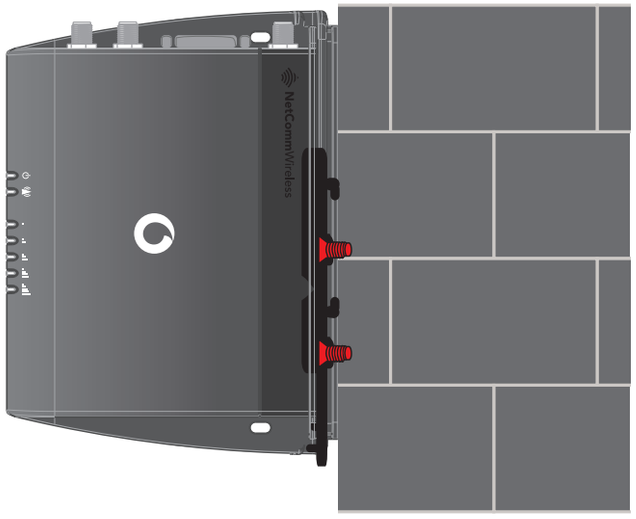


2. Perpendicular to the wall

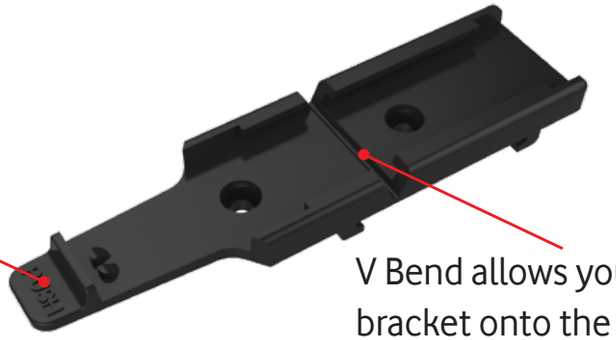


3. Mounted via DIN Rail Bracket

Use a minimum of 2 screws (3.5mm diameter) through the holes on the DIN rail bracket.

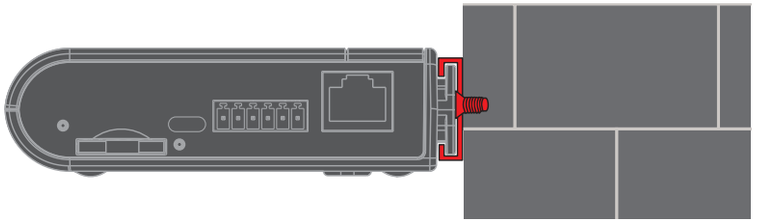


DIN Rail mounting bracket

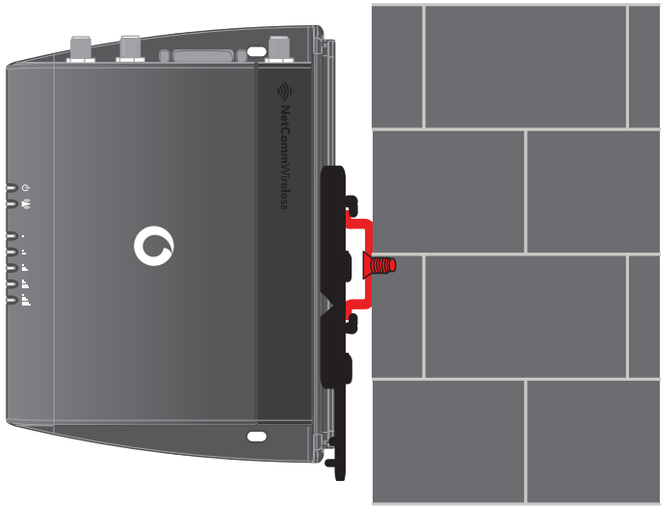


V Bend allows you to snap the DIN bracket onto the middle of a DIN rail, rather than sliding it onto the end

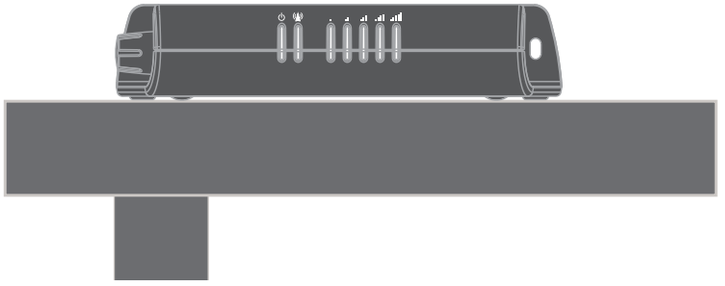
C Section DIN rail mount



Top hat DIN rail mount



Desk mount



Step 4

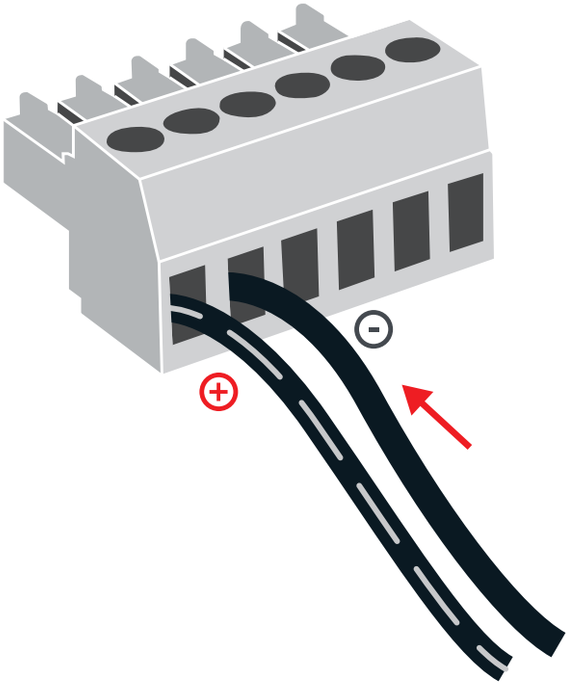
Connect power to your router using one of the following options.

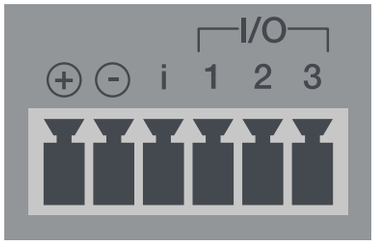
1. DC power via the the six-way connector

Remove the attached green terminal block from your router and connect to the router's power socket using a DC power supply, sold separately.

2. DC power via field terminated power source

If an 8-40V DC power supply is available, you can insert the wires into the supplied terminal block to power your router. Use a flathead screwdriver to tighten the terminal block screws and secure the power wires, making sure that you have correctly wired the terminal block as illustrated below.





TERMINAL	DESCRIPTION
⊕	Positive wire for power
⊖	Ground Wire
i	Dedicated terminal for ignition detection
I/O	Three terminals used for input/output detection. (Please refer to the User Guide and SDK Guide for more information).

The green power LED on the router lights up when a power source is connected. Attach the supplied yellow Ethernet cable 8P8C to the LAN Ethernet port on your router and the other end to your computer.

Step 5

Connect equipment that requires network access to the LAN port of your router. You can connect one device directly, or several devices using a network switch. Switch on your power supply and wait 2 minutes for your Vodafone MachineLink 4G Lite to start up and connect to the mobile network. Your router comes with preconfigured settings that should suit most customers.

Your router is now connected.

To check the status of your router, compare the LED indicators on the device with those listed opposite.

Overview of LED indicators

LED ICON	LED	COLOUR	STATE	DESCRIPTION
	Power		Off	Power off
			Double flash	Powering up
			On	Power on
			On	Power on in recovery mode
			Slow flashing	Hardware error
	Network		On	Connected via WWAN
			Blinking[1]	Traffic via WWAN
			Slow flashing	Connecting PDP
			On	Registered network
			Slow flashing	Registering network
			Slow flashing	SIM PIN locked
			Fast flashing	SIM PUK locked
			On	Can’t connect / Device in “Configuration mode”

LED ICON	LED	COLOUR	STATE	DESCRIPTION
	Signal strength		On	LTE signal
			On	WCDMA signal
			On	GSM signal

1 The term “blinking” means that the LED may pulse, with the intervals that the LED is on and off not being equal. The term “flashing” means that the LED turns on and off at equal intervals.

Advanced configuration and troubleshooting

Depending on what you're using your router for, you may need to log into it via the web based configuration interface for status monitoring, troubleshooting or advanced configuration.

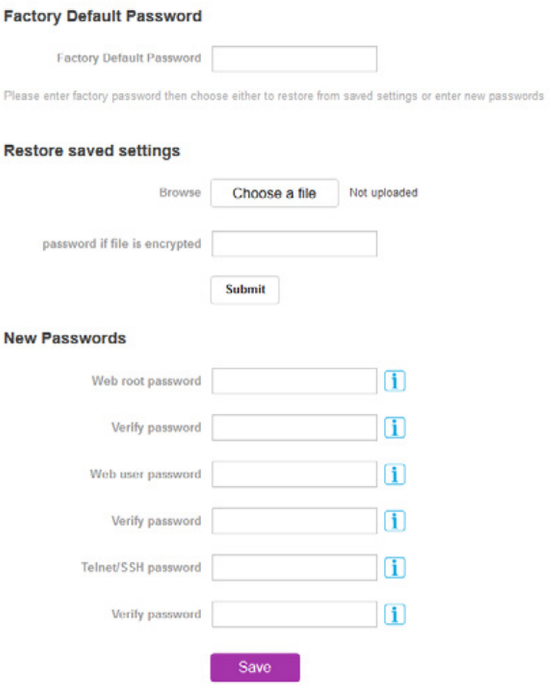
To access this interface, you'll need a computer with an Ethernet port and web browser (such as Internet Explorer, Chrome or Safari) installed.

Step 1

Make sure your Vodafone MachineLink 4G Lite is turned on and disconnect any Ethernet connections.

Step 2

Attach the supplied yellow Ethernet cable 8P8C to the LAN Ethernet port on your router and the other to your computer. Access the user interface by entering https://192.168.1.1 into your web browser. The landing page is displayed.



From this page, you must configure a secure administrator password for future access to the device or provide a configuration backup file to restore to a previous configuration.

Step 3

In the **Factory Default Password** field, enter the factory default password printed on the device label.

Restoring from a previous configuration

a) Click on the **Choose a file** button, select the file you want to restore from, then click **Open**. b) If the backup file is encrypted, enter the password then click **Submit**. The router reboots with the previously saved configuration.

Setting up the router as a new device

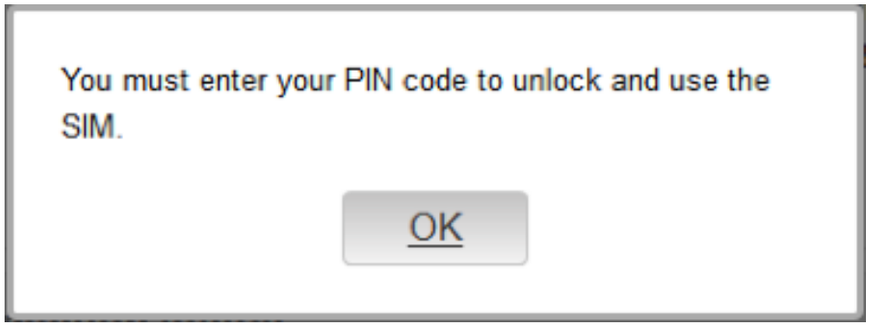
a) Enter secure passwords for the web root, web user and Telnet/SSH logins. Click on the ⓘ icon for the password requirements.

b) Click the **Save** button. The router is now operational. Click on the **Status** menu item to continue.

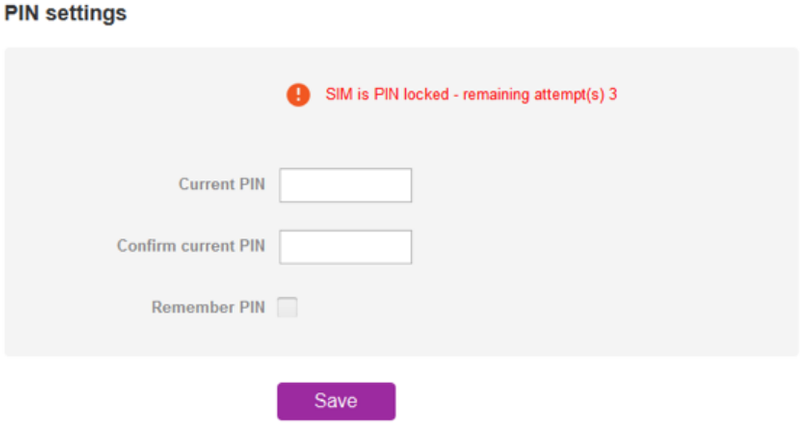
For more information on advanced configuration, refer to the full product User Guide available from the Help link in the web configuration interface or from the NetComm Wireless website at **http://vodafone.netcommwireless.com**

Step 4

If the inserted SIM card is PIN locked, a pop-up window is displayed informing you that you must unlock the SIM before use.



Click the **OK** button. The SIM Security page is displayed.



In the Current PIN field, enter the SIM PIN and then enter it again in the Confirm current PIN field. If you do not want to enter the PIN code each time the SIM is inserted, select the Remember PIN option. Click the Save button. The router displays “Success! The SIM unlock was successful”.

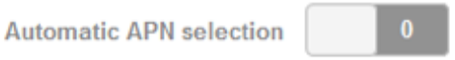
Step 5

If the SIM Status is OK, the Vodafone MachineLink 4G Lite router automatically attempts to connect to the Internet by detecting the correct APN and connection details.

If automatic configuration was unsuccessful, you must manually enter the connection details.

To manually configure the connection profile:

1. From the top menu bar, select the Networking option.
2. Next to Profile1, click the Edit button. The Data connection profile settings screen is displayed.
3. Ensure that the Automatic APN selection toggle key is set to the OFF position. (Not required when using a Vodafone GDSP SIM)

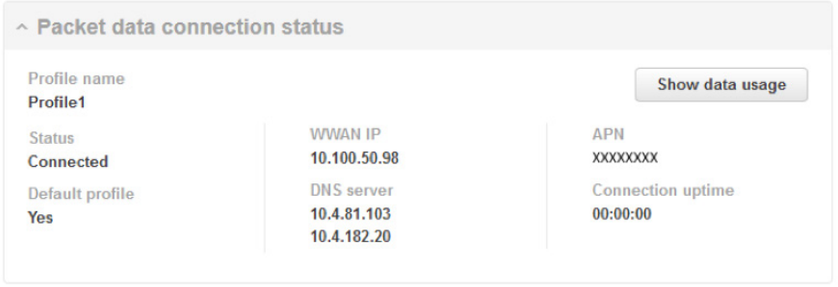


4. In the APN field, enter the APN name that your carrier requires for mobile broadband connection. If required, enter the Username and Password in the Username and Password fields. Click the Save button.

The connection profile is now configured.

Verifying the connection status

Click on the Status menu item from the top menu bar. The Status page is displayed. The mobile broadband connection is established successfully if the Status field in the Packet data connection status section displays Connected.



Safety and Product Care

Vodafone MachineLink 4G Lite

Please read this safety information before you use the device. Following the warnings will help prevent injury to yourself or others and damage to your device.

Additional safety warnings may be given for the operation of specific Apps on your device, you should also follow these instructions.

Table of contents

Open Source Disclaimer

This product contains Open Source software that has been released by the developers of that software under specific licensing requirements such as the “General Public License“ (GPL) Version 2 or 3, the “Lesser General Public License“ (LGPL), the “Apache License“ or similar licenses. For detailed information on the Open Source software, the copyright, the respective licensing requirements and ways of obtaining the source code, please log in to the web configuration interface and click on the Help section.

Safety and product care

Electrical safety

Accessories

Only use approved accessories.

Do not connect with incompatible products or accessories.

Connection to a car

Seek professional advice when connecting a device interface to the vehicle electrical system.

Distraction

Operating machinery

Full attention must be given to operating the machinery in order to reduce the risk of an accident.

Driving

Full attention must be given to driving at all times in order to reduce the risk of an accident. Using the device in a vehicle can cause distraction and can lead to an accident. You must comply with local laws and regulations restricting the use of mobile communication devices while driving.

Product handling

You alone are responsible for how you use your device and any consequences of its use.

You must always switch off your device wherever the use of a mobile phone is prohibited. Do not use the device without the clip-on covers attached, and do not remove or change the covers while using the device. Use of your device is subject to safety measures designed to protect users and their environment.

Always treat your device and its accessories with care and keep it in a clean and dust-free place.

Do not expose your device or its accessories to open flames or lit tobacco products.

Do not expose your device or its accessories to liquid, moisture or high humidity.

Do not drop, throw or try to bend your device or its accessories.

Do not use harsh chemicals, cleaning solvents, or aerosols to clean the device or its accessories.

Do not paint your device or its accessories.

Do not attempt to disassemble your device or its accessories, only authorised personnel must do so.

Do not expose your device or its accessories to extreme temperatures. Ensure that the device is installed in an area where the temperature is within the supported operating temperature range of -30°C to +70°C.

Do not use your device in an enclosed environment or where heat dissipation is poor. Prolonged use in such space may cause excessive heat and raise ambient temperature, which will lead to automatic shutdown of your device or the disconnection of the mobile network connection for your safety. To use your device normally again after such shutdown, cool it in a well-ventilated place before turning it on.

Please check local regulations for disposal of electronic products.

Do not operate the device where ventilation is restricted

Installation and configuration should be performed by trained personnel only.

Do not use or install this product near water to avoid fire or shock hazard. Avoid exposing the equipment to rain or damp areas.

Arrange power and Ethernet cables in a manner such that they are not likely to be stepped on or have items placed on them.

Ensure that the voltage and rated current of the power source match the requirements of the device. Do not connect the device to an inappropriate power source.

Small Children

Do not leave your device and its accessories within the reach of small children or allow them to play with it.

They could hurt themselves or others, or could accidentally damage the device.

Your device contains small parts with sharp edges that may cause an injury or which could become detached and create a choking hazard.

Demagnetisation

To avoid the risk of demagnetisation, do not allow electronic devices or magnetic media close to your device for a long time.

Avoid other magnetic sources as these may cause the internal magnetometer or other sensors to malfunction and provide incorrect data.

Electrostatic discharge (ESD)

Do not touch the SIM card's metal connectors.

Air Bags

Do not place the device in the area near or over an air bag or in the air bag deployment area

Mount the device safely before driving your vehicle.

Emergency & other situations requiring continuous connectivity

This device, like any wireless device, operates using radio signals, which cannot guarantee connection in all conditions. Therefore, you must never rely solely on any wireless device for emergency communications or otherwise use the device in situations where the interruption of data connectivity could lead to death, personal injury, property damage, data loss, or other loss.

Device heating

Your device may become warm during normal use.

Faulty and damaged products

Do not attempt to disassemble the device or its accessory.

Only qualified personnel should service or repair the device or its accessory.

If your device or its accessory has been submerged in water or other liquid, punctured, or subjected to a severe fall, do not use it until you have taken it to be checked at an authorised service centre

Interference

Care must be taken when using the device in close proximity to personal medical devices, such as pacemakers and hearing aids.

Pacemakers

Pacemaker manufacturers recommend that a minimum separation of 15cm be maintained between a device and a pacemaker to avoid potential interference with the pacemaker.

Hearing aids

People with hearing aids or other cochlear implants may experience interfering noises when using wireless devices or when one is nearby.

The level of interference will depend on the type of hearing device and the distance from the interference source, increasing the separation between them may reduce the interference. You may also consult your hearing aid manufacturer to discuss alternatives.

Medical devices

Please consult your doctor and the device manufacturer to determine if operation of your device may interfere with the operation of your medical device.

Hospitals

Switch off your wireless device when requested to do so in hospitals, clinics or health care facilities. These requests are designed to prevent possible interference with sensitive medical equipment.

Aircraft

Switch off your wireless device whenever you are instructed to do so by airport or airline staff.

Consult the airline staff about the use of wireless devices on board the aircraft, if your device offers a 'flight mode' this must be enabled prior to boarding an aircraft.

Interference in cars

Please note that because of possible interference to electronic equipment, some vehicle manufacturers forbid the use of devices in their vehicles unless an external antenna is included in the installation.

Explosive environments

Petrol stations and explosive atmospheres

In locations with potentially explosive atmospheres, obey all posted signs to turn off wireless devices such as your device or other radio equipment.

Areas with potentially explosive atmospheres include fuelling areas, below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles, such as grain, dust, or metal powders.

Blasting caps and areas

Turn off your device or wireless device when in a blasting area or in areas posted turn off "two-way radios" or "electronic devices" to avoid interfering with blasting operations.

Regulatory compliance

FCC statement (NWL-221, NWL-224, NWL-227)

FCC compliance

Federal Communications Commission Notice (United States): Before a wireless device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure.

FCC regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorientate or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user‘s authority to operate the equipment.

FCC RF exposure

Your device contains a transmitter and a receiver. When it is on, it receives and transmits RF energy. When you communicate with your device, the system handling your connection controls the power level at which your device transmits.

- This device meets the government’s requirements for exposure to radio waves.

- This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.
- This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. To ensure compliance with RF exposure guidelines the device must be used with a minimum separation from the body listed in the table below. Failure to observe these instructions could result in your RF exposure exceeding the relevant guideline limits.

FCC MINIMUM SEPARATION (CM)	
NWL-221	23
NWL-224	20
NWL-227	23

FCC External antenna

Any optional external antenna used for this transmitter must be installed to provide a separation distance of at least the minimum separation distance listed in the table above from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter. Please consult the health and safety guide of the chosen antenna for specific body separation guidelines as a greater distance of separation may be required for high-gain antennas.

Any external antenna gain must meet RF exposure and maximum radiated output power limits of the applicable rule section. The maximum antenna gain for this device as reported to the FCC is:

ANTENNA GAIN (DBI)		
Wireless Technology and Frequency Range (MHz)	**NANT-00001 (NWL-221/224/227)**	**NANT-00006 (NWL-221/227)**
GSM850: 824.2 MHz ~ 848.8 MHz	3.13	0.40

GSM1900: 1850.2 MHz ~ 1909.8 MHz	3.42	2.72
WCDMA Band II: 1850 MHz ~ 1910 MHz	3.42	2.72
WCDMA Band IV: 1710 MHz ~ 1755 MHz	3.28	2.09
WCDMA Band V: 824 MHz ~ 849 MHz	3.13	0.40
LTE Band 2: 1850 MHz ~ 1910 MHz	3.42	2.72
LTE Band 4: 1710 MHz ~ 1755 MHz	3.28	2.09
LTE Band 5: 824 MHz ~ 849 MHz	3.13	0.40
LTE Band 7: 2500 MHz ~ 2570 MHz	3.80	3.17
LTE Band 12: 699 MHz ~ 716 MHz	4.71	0.69
LTE Band 13: 777 MHz ~ 787 MHz	4.71	0.69
LTE Band 25: 1850 MHz ~ 1915 MHz	3.42	2.72
LTE Band 26: 814 MHz ~ 849 MHz	3.13	0.40
LTE Band 38: 2570 MHz ~ 2620 MHz	3.80	3.17
LTE Band 40: 2305 MHz ~ 2315 MHz	2.65	2.19
LTE Band 41: 2496 MHz ~ 2690 MHz	3.80	3.24

FCC Company contact details

Name: Casa Systems, Inc.

US address: 100 Old River Rd, Andover, MA 01810, USA

Website: https://www.casa-systems.com/contact-us/

IC regulations (NWL-224, NWL-227)

This Class B digital apparatus complies with Canadian ICES-003. /

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: /

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) this device may not cause interference, and /

(1) l'appareil ne doit pas produire de brouillage, et

(2) this device must accept any interference, including interference that may cause undesired operation of the device. /

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC RF exposure information (MPE):

This device has been tested and meets applicable limits for Radio Frequency (RF) exposure. /

Cet appareil a été testé et répond aux limites applicables en matière d'exposition aux radiofréquences (RF).

This equipment should be installed and operated with the minimum distance between the radiator & your body listed in the table below.

Cet équipement doit être installé et utilisé avec la distance minimale entre le radiateur et votre corps indiquée dans le tableau ci-dessous.

IC MINIMUM SEPARATION (CM)	
NWL-224	20
NWL-227	32

IC External antenna - RSS-Gen 8.3 (transmitters equipped with detachable antennas)

This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. /

Le présent émetteur radio a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne.

Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device. /

Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Antenna types / Types d'antennes: Dipole antenna

Antenna gain (in dBi) / Gain d'antenne (en dBi):

	ANTENNA GAIN (DBI)	
Wireless Technology and Frequency Range (MHz)	**NANT-00001 (NWL-221/224/227)**	**NANT-00006 (NWL-221/227)**
GSM850: 824.2 MHz ~ 848.8 MHz	3.13	0.40
GSM1900: 1850.2 MHz ~ 1909.8 MHz	3.42	2.72
WCDMA Band II: 1850 MHz ~ 1910 MHz	3.42	2.72
WCDMA Band IV: 1710 MHz ~ 1755 MHz	3.28	2.09
WCDMA Band V: 824 MHz ~ 849 MHz	3.13	0.40
LTE Band 2: 1850 MHz ~ 1910 MHz	3.42	2.72

LTE Band 4: 1710 MHz ~ 1755 MHz	3.28	2.09
LTE Band 5: 824 MHz ~ 849 MHz	3.13	0.40
LTE Band 7: 2500 MHz ~ 2570 MHz	3.80	3.17
LTE Band 12: 699 MHz ~ 716 MHz	4.71	0.69
LTE Band 13: 777 MHz ~ 787 MHz	4.71	0.69
LTE Band 25: 1850 MHz ~ 1915 MHz	3.42	2.72
LTE Band 26: 814 MHz ~ 849 MHz	3.13	0.40
LTE Band 38: 2570 MHz ~ 2620 MHz	3.80	3.17
LTE Band 40: 2305 MHz ~ 2315 MHz	2.65	2.19
LTE Band 41: 2496 MHz ~ 2690 MHz	3.80	3.24

CE regulation (NWL-221, NWL-222, NWL-227)

CE RF exposure information (MPE)

This device meets the EU requirements and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) on the limitation of exposure of the general public to electromagnetic fields by way of health protection. To comply with the RF exposure requirements, this equipment must be operated in a minimum separation distance to the user listed in the table below.

CE MINIMUM SEPARATION (CM)	
NWL-221	23
NWL-224	20
NWL-227	25

Wireless Technology and Frequency Range (MHz)	MAXIMUM EIRP (DBM) INCLUDING ANTENNA GAIN		
	NWL-221	NWL-222	NWL-227
GSM900: 880.2 MHz ~ 914.8 MHz	36.14	36.11	38.13
GSM1800: 1710.2 MHz ~ 1784.8 MHz	32.97	32.57	35.10
WCDMA Band I: 1920 MHz ~ 1980 MHz	25.65	25.78	28.42
WCDMA Band VIII: 880 MHz ~ 915 MHz	26.48	26.25	28.13
LTE Band 1: 1920 MHz ~ 1980 MHz	25.72	25.78	28.42
LTE Band 3: 1710 MHz ~ 1785 MHz	25.59	25.48	28.10
LTE Band 7: 2500 MHz ~ 2570 MHz	24.82	25.48	28.24
LTE Band 8: 880 MHz ~ 915 MHz	25.91	26.10	28.13
LTE Band 20: 832 MHz ~ 862 MHz	N.A.	25.80	28.13
LTE Band 28: 703 MHz ~ 748 MHz	27.32	N.A.	29.71
LTE Band 38: 2570 MHz ~ 2620 MHz	N.A.	N.A.	28.80
LTE Band 40: 2300 MHz ~ 2400 MHz	23.87	N.A.	27.65

WEEE regulation

Waste Electrical and Electronic Equipment (WEEE)

This symbol means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Proper recycling of your product will protect human health and the environment.

NBTC statement (NWL-222)

เครื่องโทรคมนาคมและอุปกรณ์นี มีความสอดคล้อง ตามมาตรฐานหรือข้อกาหนดทางเทคนิคของ กสทช

เครื่องโทรคมนาคมและอุปกรณ์นี มีความสอดคล้อง ตามมาตรฐานหรือข้อกาหนดทางเทคนิคของ กสทช” เครื่องวิทยุคมนาคมนีมีระดับการแผ่คลืนแม่เหล็กไฟฟ้าสอดคล้อง

ตามมาตรฐานความปลอดภัยต่อสุขภาพของมนุษย์จากการใช้เครื่องวิทยุคมนาคม

ทีคณะกรรมการกิจการโทรคมนาคมแห่งชาติประกาศกำหนด

IFETEL statement (NWL-224)

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada

Russia FAC statement (NWL-222)

Подтверждение соответствия Минкомсвязи России:

Декларация соответствия № Д-МДРТ-12192 от (05.06.2019) года, действительна до (05.06.2025) года, зарегистрирована в Федеральном агенстве связи (10.06.2019) года

NCC statement (NWL-221)

NCC電信終端設備警語:「減少電磁波影響，請妥適使用」

Taiwan RoHS tables

限用物質含有情況標示聲明書

Declaration of the Presence Condition of the Restricted Substances Marking

證書號碼／受理編號：
Certificate No / Application No.

商品標籤及商品檢驗標識：(Picture)
Product Label and Commodity Inspection Mark.

樣張及其標示位置：(Description and Picture)
Sample and its location

設備名稱： Vodafone MachineLink 4G Lite　　型號（型式）： NWL-221
Equipment name　　Type designation (Type)

單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
線材模組	○	○	○	○	○	○
電子零件	○	○	○	○	○	○
電路板	—	○	○	○	○	○
外殼	○	○	○	○	○	○
天線	—	○	○	○	○	○
內部零件	—	○	○	○	○	○

備考1. 〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。

Note 1: "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2. 〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2: "○" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3. 〝—〞係指該項限用物質為排除項目。

Note 3: The "—" indicates that the restricted substance corresponds to the exemption.

附表：限用物質排除項目說明

單元	限用物質排除項目
天線	D.13
電路板	D.13
內部零件	D.13

UAE TRA (NWL-222)

TRA
REGISTERED No:
ER70165/19
DEALER No:
DA0051460/10

Hong Kong certification (NWL-222)

Certified for use in Hong Kong
經驗證可在香港使用
Certificate No. 證書號碼
US0021800046

通訊事務管理局
COMMUNICATIONS
AUTHORITY

Vietnam RoHS (Circular 30/2011/ TT-BCT) statement (NWL-222)

Vodafone products supplied by NetComm Wireless that are offered through authorized distributors in Vietnam on and after December 1, 2012 comply with the substance restrictions and permitted uses in Circular 30/2011/TT-BCT of the Vietnamese Ministry of Industry and Trade temporarily regulating the permissible content limitation of some hazardous chemicals in the electrical and electronic products, commonly referred to as Vietnam RoHS.

Pursuant to the requirements, we understand the permissible content limits of the restricted substances, which is listed in the below table*. Vodafone products are designed and manufactured in accordance with Vietnam RoHS.

No.	Chemicals	Permissable content limitation
1	Pb	0,1% volume
2	Hg	0,1% volume
3	Cd	0,01% volume
4	Cr6+	0,1% volume
5	PBB	0,1% volume
6	PBDE	0,1% volume

*Issuing together with the Circular No.30/2011/TT-BCT dated August 10, 2011 of the Ministry of Industry and Trade

Communications regulations

The following is a list of communications regulations that apply to the Vodafone MachineLink 4G Lite (NWL-222).

EN

Conformité Européenne (European Conformity)

Hereby, Vodafone declares that MachineLink 4G Lite (NWL-222) is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

BG

Conformité Européenne (Европейско съответствие)

С настоящото Vodafone декларира, че MachineLink 4G Lite (NWL-222) е в съответствие с Директива 2014/53/ЕС. Пълният текст на ЕС декларацията за съответствие е на разположение на следния интернет адрес: http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

CS

Conformité Européenne (Evropská shoda)

Společnost Vodafone tímto prohlašuje, že zařízení MachineLink 4G Lite (NWL-222) odpovídá požadavkům směrnice 2014/53/EU. Úplný text EU prohlášení o shodě je k dispozici na následující internetové adrese: http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

DA

Conformité Européenne (Europæisk standard)

Vodafone erklærer hermed, at MachineLink 4G Lite (NWL-222) er i overensstemmelse med direktivet 2014/53/EU. Den fulde tekst i EU-overensstemmelseserklæringen kan læses på følgende internetadresse: http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

DE

Conformité Européenne (Europäische Konformität)

Hiermit erklärt Vodafone, dass MachineLink 4G Lite (NWL-222) der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung steht unter der folgenden Internetadresse zur Verfügung: http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

EL

Conformité Européenne (Ευρωπαϊκή Συμμόρφωση)

Η Vodafone δηλώνει, διά του παρόντος, ότι το MachineLink 4G Lite (NWL-222) βρίσκεται σε συμμόρφωση με την Οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης για την Ευρωπαϊκή Ένωση είναι διαθέσιμο στην ακόλουθη διαδικτυακή διεύθυνση: http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

ES

Conformité Européenne (Conformidad Europea)

Por la presente, Vodafone declara que MachineLink 4G Lite (NWL-222) cumple la Directiva 2014/53/UE. El texto completo de la Declaración de Conformidad UE está disponible en la siguiente dirección de Internet:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

ET

Conformité Européenne (Euroopa vastavusmärgis)

Käesolevaga kinnitab Vodafone, et seade MachineLink 4G Lite (NWL-222) vastab direktiivi 2014/53/EL nõuetele. EL-i vastavusdeklaratsiooni täistekst on saadaval järgmisel internetiaadressil:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

FI

Conformité Européenne (eurooppalainen vaatimustenmukaisuus)

Vodafone vakuuttaa täten, että tämän radiolaitteen USB-laite (MS2131) vastaa direktiivin 2014/53/EU vaatimuksia. EU vaatimustenmukaisuusvakuutuksen koko teksti on saatavissa seuraavasta Internet-osoitteesta:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

FR

Conformité Européenne

Par la présente, Vodafone déclare que MachineLink 4G Lite (NWL-222) est conforme à la directive 2014/53/UE. Le texte intégral de la déclaration UE de conformité est disponible à l'adresse Internet suivante:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

HR

Conformité Européenne (Sukladnost s europskim normama)

Tvrtka Vodafone ovime izjavljuje da je MachineLink 4G Lite (NWL-222) sukladan odredbama direktive 2014/53/EU. Cijeli tekst europske izjave o sukladnosti dostupan je na sljedećoj internetskoj stranici:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

HU

Conformité Européenne (Európai megfelelőség)

A Vodafone ezúton kijelenti, hogy ezek az MachineLink 4G Lite (NWL-222) típusú rádióberendezések megfelelnek a 2014/53/EU irányelvnek. Az EU megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

IT

Conformité Européenne (Conformità europea)
Con il presente documento, Vodafone dichiara che MachineLink 4G Lite (NWL-222) è conforme alla Direttiva 2014/53/EU. Il testo completo della dichiarazione UE di conformità è disponibile su Internet al seguente indirizzo:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

IS

Conformité Européenne (Evrópsk samræmisyfirlýsing)
Vodafone lýsir því hér með yfir að MachineLink 4G Lite (NWL-222) samræmist tilskipun 2014/53/ESB. Finna má ESB-samræmisyfirlýsinguna í heild sinni á eftirfarandi vefsvæði:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

LT

Conformité Européenne (Europos atitiktis)
„Vodafone“ pareiškia, kad įrenginys „USB Connect“ (MS2131) atitinka Direktyvos 2014/53/ES reikalavimus. Visas ES atitikties deklaracijos tekstas pateikiamas šiuo interneto adresu:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

LV

Conformité Européenne (atbilstība Eiropas Savienības prasībām)
Ar šo Vodafone paziņo, ka MachineLink 4G Lite (NWL-222) atbilst Direktīvas 2014/53/ES prasībām. Pilns ES atbilstības deklarācijas teksts ir pieejams tālāk norādītajā interneta adresē:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

MT

Conformité Européenne (Konformità Ewropea)
B’dan, Vodafone tiddikjara li l-Mudelli tat-Tagħmir tar-Radju MachineLink 4G Lite (NWL-222) huma konformi mad-Direttiva 2014/53/UE. It-test sħiħ tad-dikjarazzjoni ta’ konformità tal-UE hu disponibbli f’dan l-indirizz fuq l-Internet:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

NL

Conformité Européenne (Europese conformiteit)
Hierbij verklaart Vodafone dat MachineLink 4G Lite (NWL-222) in overeenstemming is met Richtlijn 2014/53/EU. De volledige tekst van de Europese conformiteitsverklaring is te vinden op de website:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

NO

Conformité Européenne (europeisk samsvar)

Vodafone erklærer herved at MachineLink 4G Lite (NWL-222) er i samsvar med direktiv 2014/53/EU. Den fullstendige teksten i EU-samsvarserklæringen er tilgjengelig på følgende internettadresse:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

PL

Conformité Européenne (zgodność z normami Unii Europejskiej)

Firma Vodafone deklaruje niniejszym, że to urządzenie radiowe, model MachineLink 4G Lite (NWL-222), spełnia wymogi określone w dyrektywie 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

PT

Conformité Européenne (Conformidade Europeia)

A Vodafone declara por este meio que o MachineLink 4G Lite (NWL-222) está em conformidade com a Diretiva 2014/53/UE. O texto completo da declaração de conformidade da UE está disponível no seguinte endereço:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

RO

Conformité Européenne (Conformitate europeană)

Prin prezenta, Vodafone declară că echipamentele radio modelele MachineLink 4G Lite (NWL-222) sunt în conformitate cu Directiva 2014/53/EU. Textul complet al declarației de conformitate UE poate fi găsit la următoarea adresă de internet:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

SE

Conformité Européenne (Europeisk standard)

Härmed intygar Vodafone att MachineLink 4G Lite (NWL-222) överensstämmer med direktiv 2014/53/EU. Den fullständiga texten för EU-försäkran om överensstämmelse finns på följande Internetadress:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

SI

Conformité Européenne (Evropska skladnost)

Družba Vodafone izjavlja, da je oprema MachineLink 4G Lite (NWL-222) v skladu z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na tem spletnem naslovu:
http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

SK

Conformité Européenne (Zhoda s požiadavkami EÚ)

Spoločnosť Vodafone týmto vyhlasuje, že rádiové zariadenia modelov MachineLink 4G Lite (NWL-222) sú v súlade so smernicou 2014/53/EÚ. Úplné znenie vyhlásenia o zhode so smernicami EÚ je k dispozícii na webovej stránke:

http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

TR

Conformité Européenne (Avrupa Uygunluğu))

Vodafone, MachineLink 4G Lite (NWL-222) ürününün 2014/53/AB Yönetmeliği'ne uygun olduğunu beyan eder. AB uygunluk beyanının tam metni aşağıdaki internet adresinde mevcuttur:

http://www.vodafone.com/business/VF_Media_C/Vodafone_MachineLink_4G_Lite_RED-DoC.pdf

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