

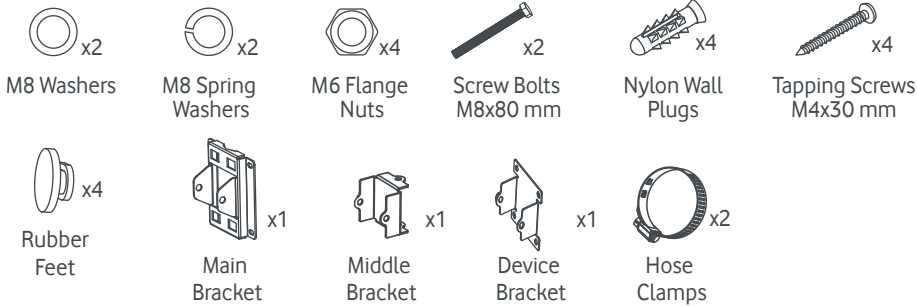
Vodafone MachineLink 5G
Quick Start Guide



Package Contents

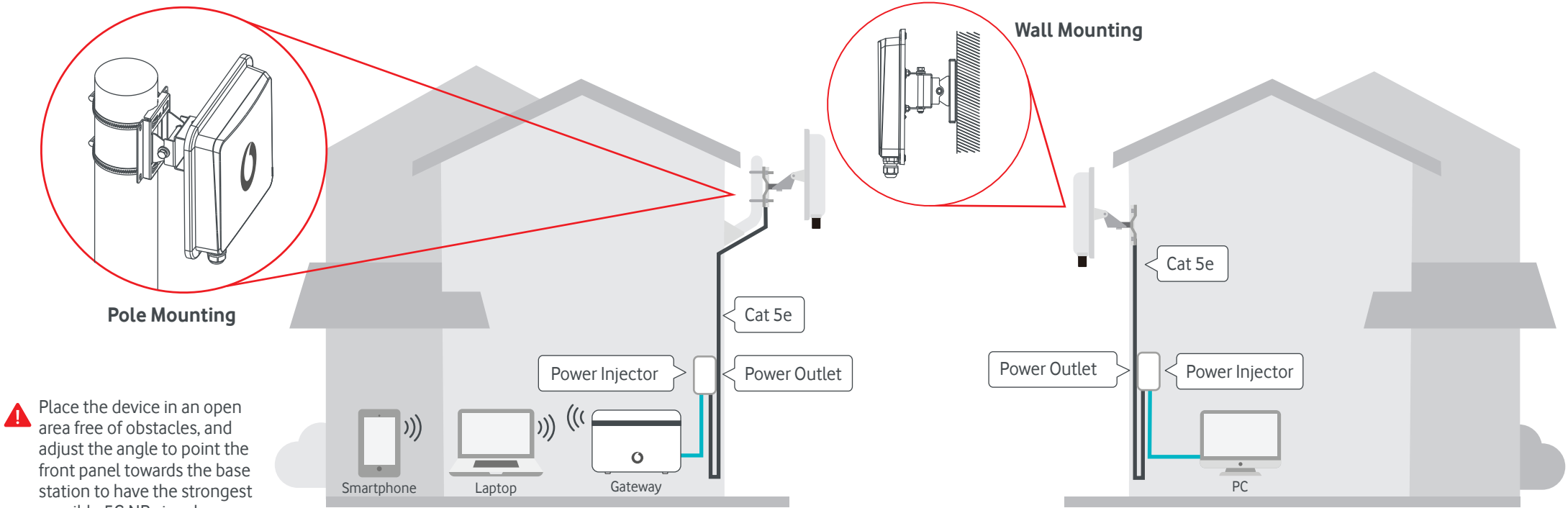


Mounting Kit

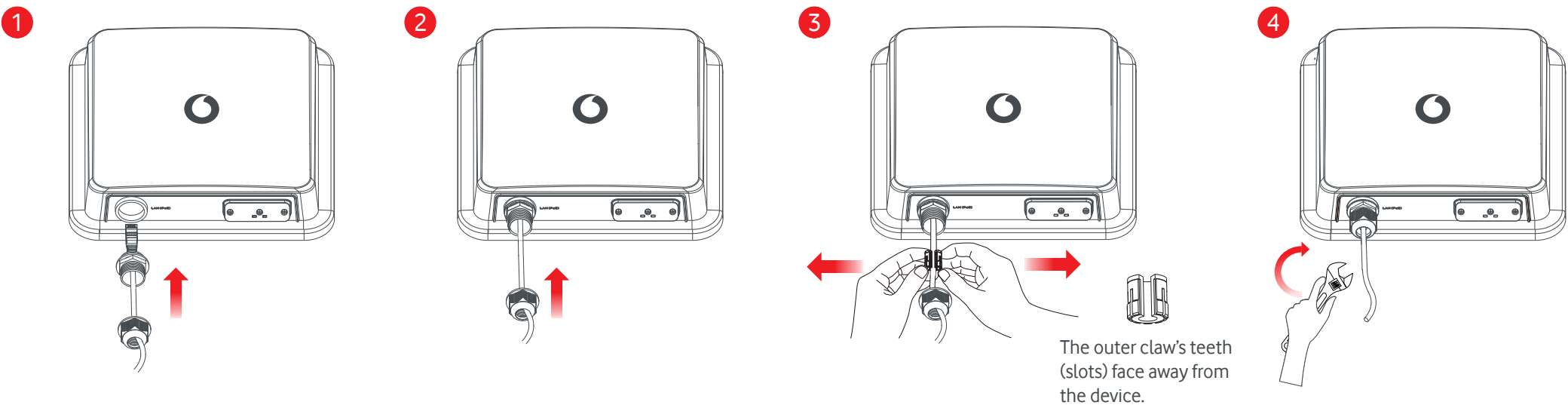


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Location Examples

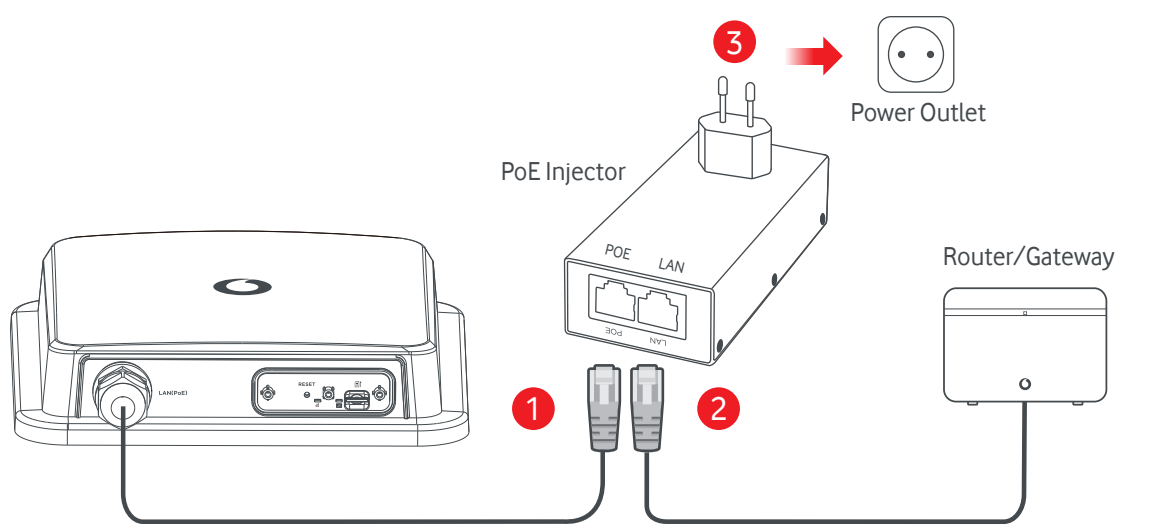


Step 1 Cable Connections



1-4 Follow steps 1 to 4 in the drawing to connect an 8-pin Cat 5e Ethernet cable to the device's LAN port.

Step 2 Cable Connections



1

2

3

4

PoE Injector

Power Outlet

Router/Gateway

	Green	Off - Power is off
		Blinking - Connecting to the Internet
		Steady - Connected to the Internet
		Amber
	Red	Blinking - WiFi is on
		Blinking - Booting
		Steady - Error
		Red Amber Green Looping - Upgrading the firmware
	Green	Steady - Good
		Amber
		Steady - Fair
		Red
	Red	Steady - Weak
		Blinking - Not connected to the Internet

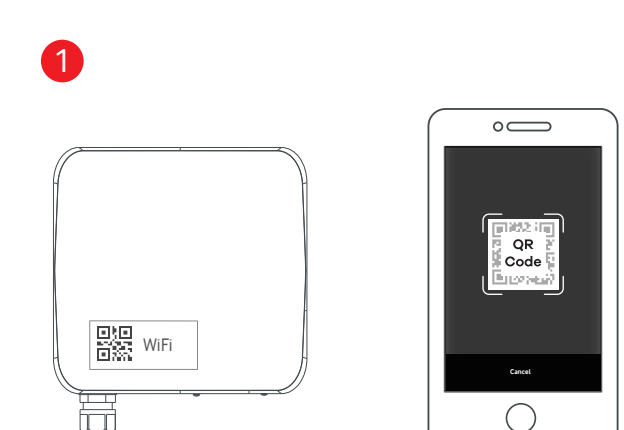
- ① Connect the other end of the Ethernet cable to the provided PoE injector's **POE** port.

② Use an Ethernet cable to connect the injector's **LAN** port to a router/gateway for initial configuration.
- ③ Connect the PoE injector to a power outlet.

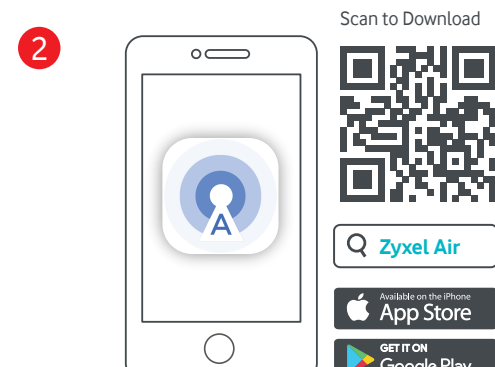
④ Check the LEDs next to the SIM card slot.

Step 3 Connecting to Your Device's WiFi for Easy Setup

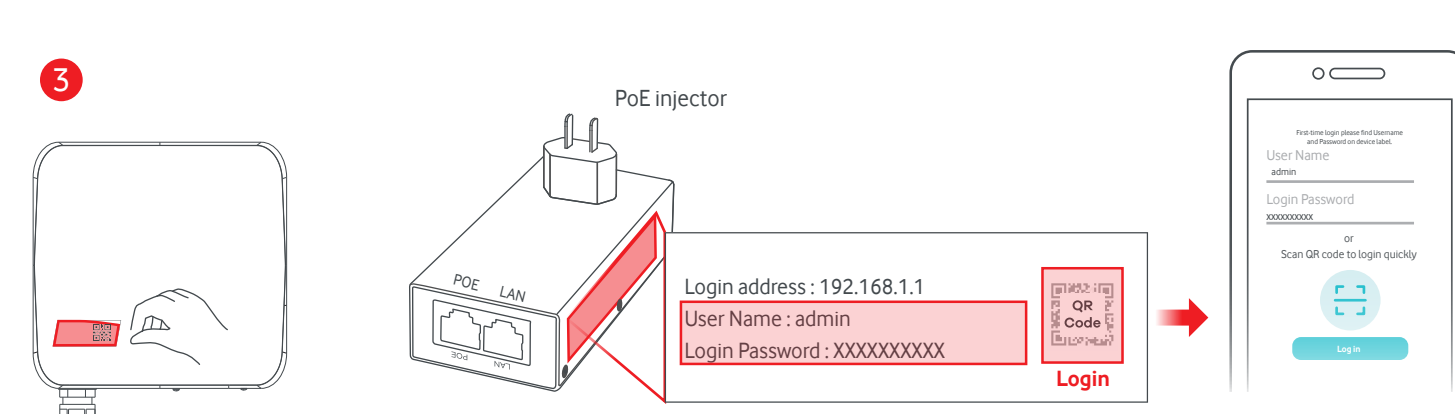
1



2



3



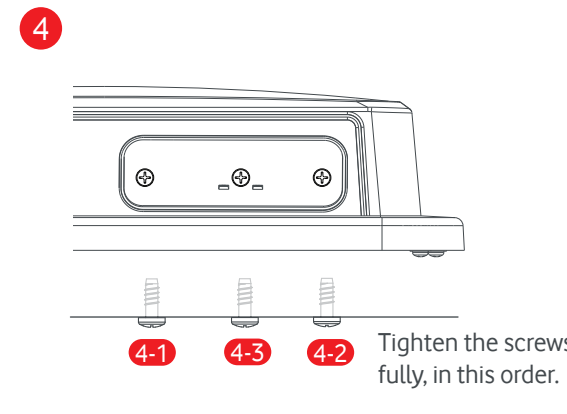
PoE injector

Login address : 192.168.1.1
User Name : admin
Login Password : XXXXXXXXXX

QR Code

Login

4



Status

Amber Blinking - WiFi is on

- ① Scan the WiFi QR code on the device label then follow the prompts to connect to the WLAN on your mobile device. If you cannot connect to the device WiFi, check if WiFi is on (**Status** LED is amber). If not, press the **RESET** button for 2 seconds to reboot the device to enable WiFi.

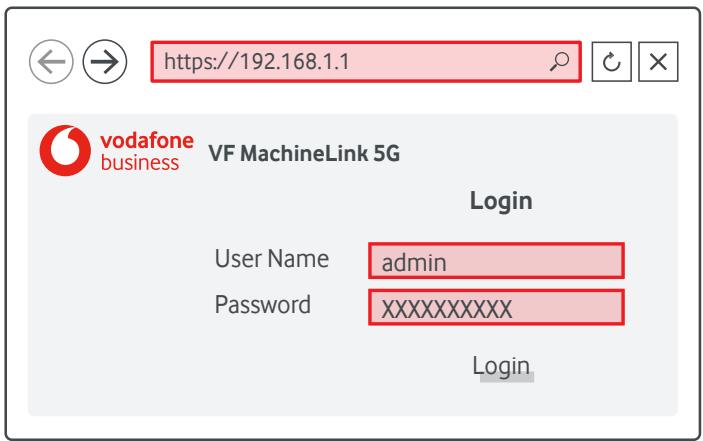
② Scan the QR code to download the Zyxel Air app or use the Web Configurator (see next) to manage the device.
- ③ Remove the label from the back of the device and put it on the injector. Scan the Login QR code to use the default user name and password to log in the Zyxel Air app for the first time.

④ Make sure the cover is in the correct position and tightly screwed to the device.

Configuring Your Device (Optional)

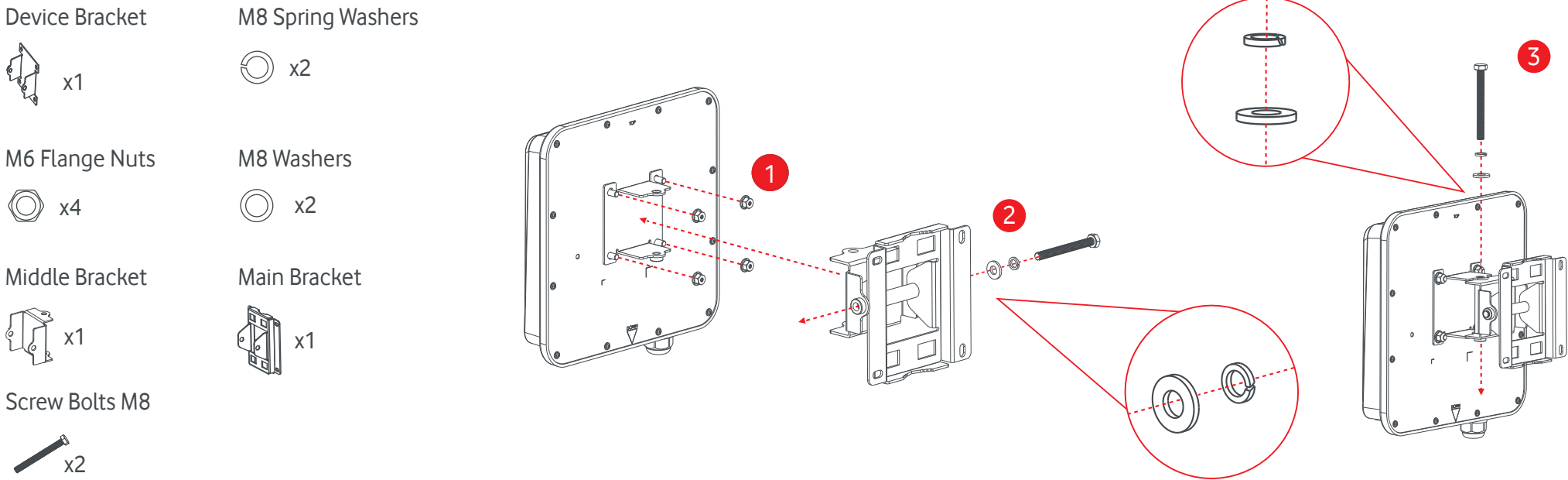
<https://192.168.1.1>

User Name: **admin**
Login Password: **XXXXXXXXXX**



Open a web browser and go to <https://192.168.1.1>. Enter the default user name (admin) and password (see label), and then click **Login**.
Note: After configuring the device, turn its WiFi off.

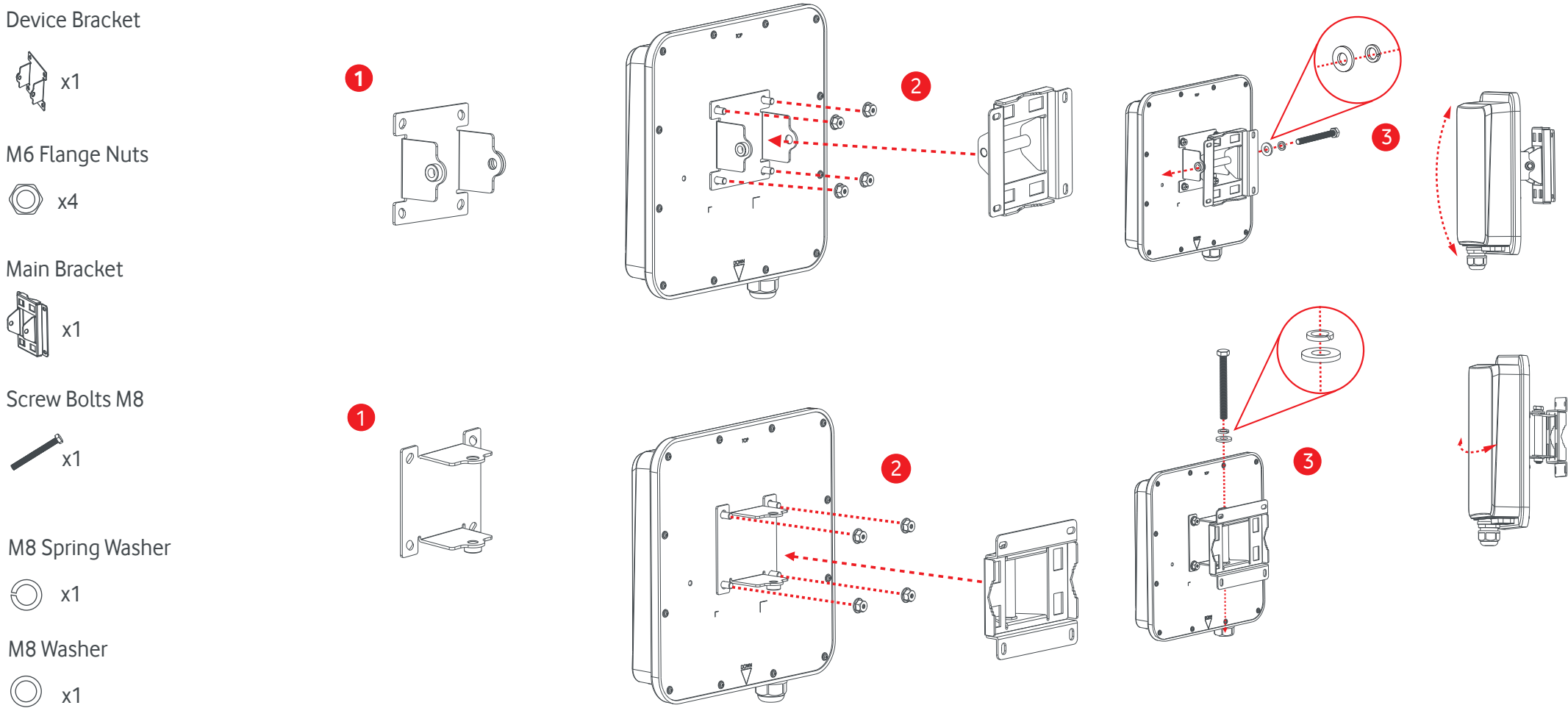
Step 4 Pole / Wall Mounting (Option 1): Supports Tilt and Turn



- ① Use flange nuts to attach the device bracket to the back of the device.

② Follow step 2 in the drawing to align the main bracket with the middle bracket. Place the spring washer and washer on the screw bolt and insert the screw bolt through the holes to secure it.
- ③ Follow step 3 in the drawing to align the middle bracket with the device bracket. Place the spring washer and washer on the screw bolt and insert the screw bolt through the holes to secure it. Tighten the bolt from the top.

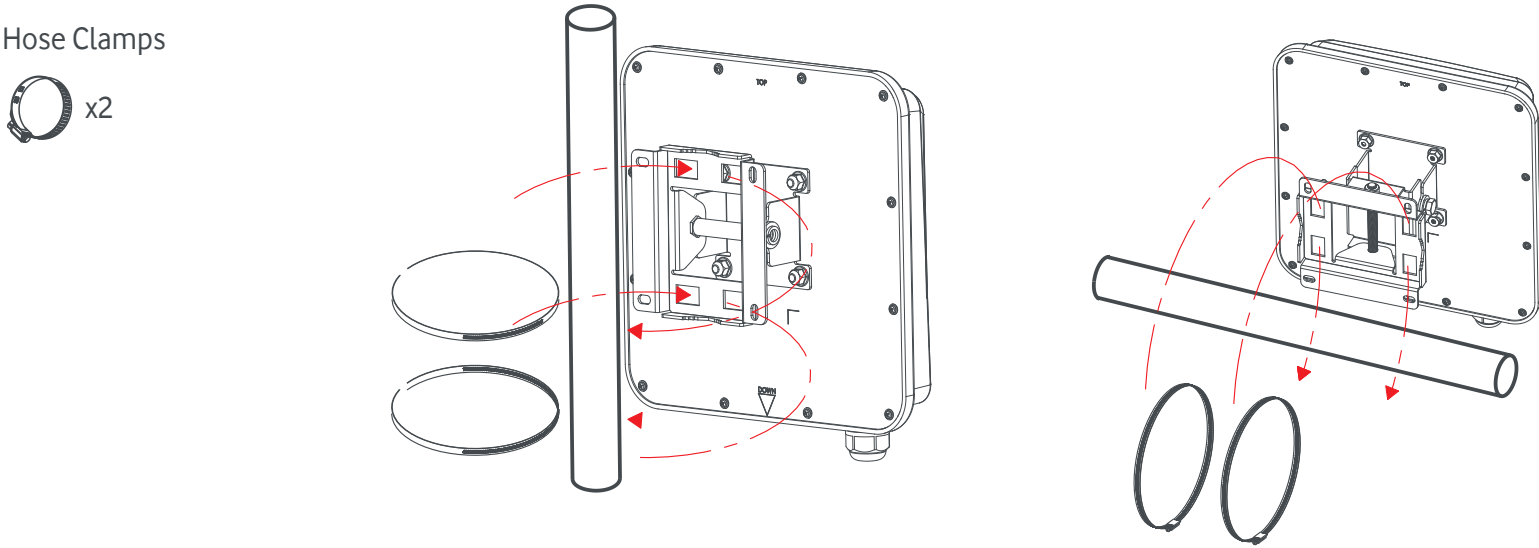
Pole / Wall Mounting (Option 2): Supports Tilt or Turn Only



- ① Select the wall / pole mounting direction (horizontal or vertical).

② Use flange nuts to attach the device bracket to the back of the device.
- ③ Follow step 3 in the drawing to align the main bracket with the device bracket. Place the spring washer and washer on the screw bolt and insert the screw bolt through the holes to secure it. Tighten the bolt from the top.

Pole Mounting (Optional)



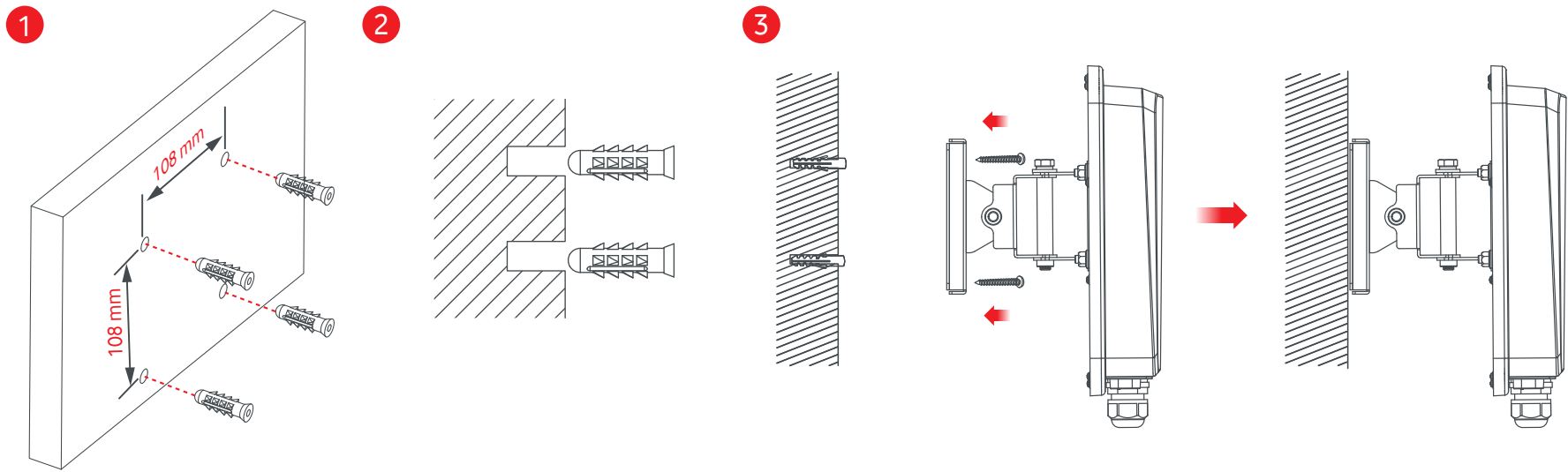
Insert the hose clamps into the holes on the main bracket. Use a screwdriver to tighten the hose clamps and secure the main bracket to the pole.

Wall Mounting (Optional)

Nylon Wall Plugs



M4 Tapping Screws



- ① Use the four corner holes of the main bracket to mark holes on a wall. Drill four holes in the wall.
- ② Insert the nylon wall plugs into the holes.
- ③ Use mounting screws to secure the main bracket to the wall through the nylon wall plugs.

Table Stand (Optional)

Main Bracket



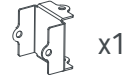
M8 Screw Bolts



M6 Flange Nuts



Middle Bracket



M8 Spring Washers



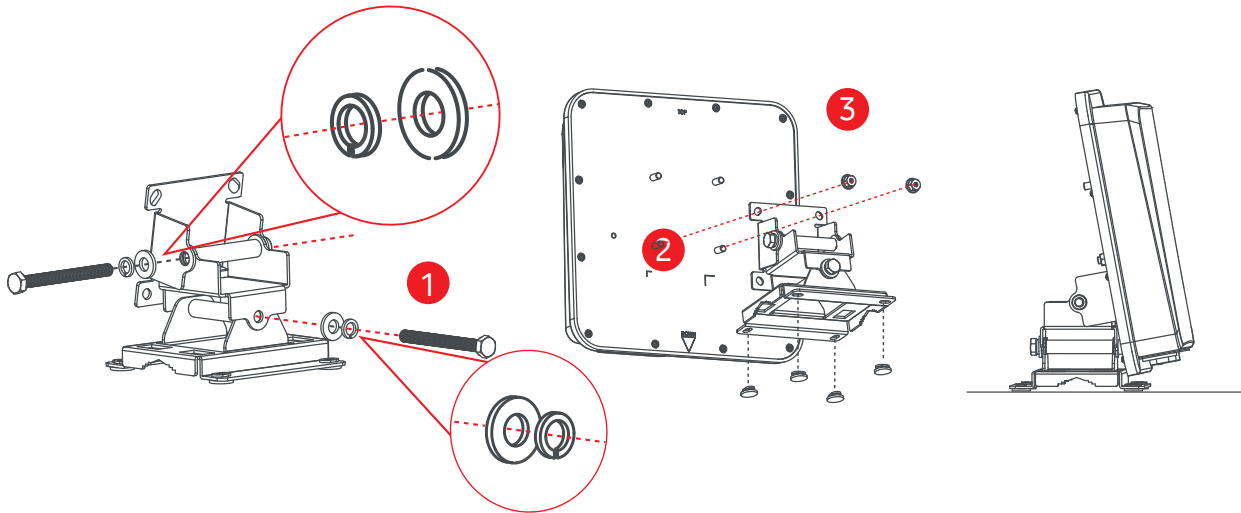
Rubber Feet



Device Bracket

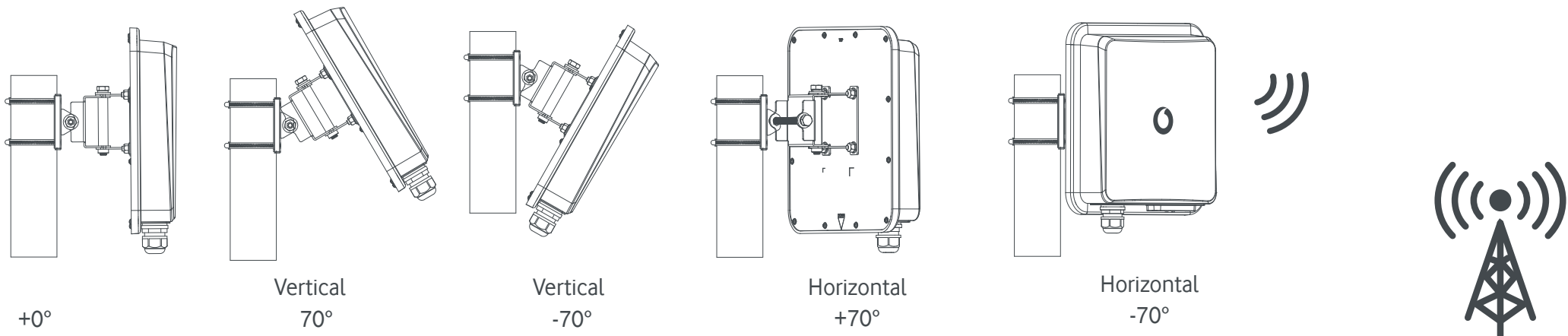


M8 Washers



- ① Follow step 1 in the drawing to align the middle bracket with the main bracket. Place the spring washer and washer on the screw bolt and insert the screw bolt through the holes to secure it.
- ② Follow step 2 in the drawing to align the middle bracket with the device bracket. Place the spring washer and washer on the screw bolt and insert the screw bolt through the holes to secure it.
- ③ Use two M6 flange nuts to attach the back of the device to the device bracket. Attach the four rubber feet to the main bracket.

Step 5 Pole / Wall Mounting Angle Adjustment



Use the Zyxel Air app to find the optimal 5G NR signal strength and manage your device.

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.

Distraction

Operating machinery

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

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 +60°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.

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.

FCC statement

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.

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 of 20 cm separation from the body. Failure to observe these instructions could result in your RF exposure exceeding the relevant guideline limits.

CE and UKCA statement



The following information applies if you use the product within the European Union and United Kingdom.

Declaration of Conformity with Regard to EU Directive 2014/53/EU (Radio Equipment Directive, RED) and UK regulation.

- Compliance information for wireless products relevant to the EU, United Kingdom and other Countries following the EU Directive 2014/53/EU (RED) and UK regulation. And this product may be used in all EU countries (and other countries following the EU Directive 2014/53/EU) and United Kingdom without any limitation except as mentioned in the below table:

Български (Bulgarian)	С настоящото Zyxel декларира, че това оборудване е в съответствие със съществените изисквания и другите приложими разпоредбите на Директива 2014/53/ЕС.
Belgium	National Restrictions ➤ The Belgian Institute for Postal Services and Telecommunications (BIPT) must be notified of any outdoor wireless link having a range exceeding 300 meters. Please check http://www.bipt.be for more details. ➤ Draadloze verbindingen voor buitengebruik en met een reikwijdte van meer dan 300 meter dienen aangemeld te worden bij het Belgisch Instituut voor postdiensten en telecommunicatie (BIPT). Zie http://www.bipt.be voor meer gegevens. ➤ Les liaisons sans fil pour une utilisation en extérieur d’une distance supérieure à 300 mètres doivent être notifiées à l’Institut Belge des services Postaux et des Télécommunications (IBPT). Visitez http://www.ibpt.be pour de plus amples détails.
Español (Spanish)	Por medio de la presente Zyxel declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/UE.
Čeština (Czech)	Zyxel tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2014/53/EU.
Dansk (Danish)	Undertegnede Zyxel erklærer herved, at følgende udstyr overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU. National Restrictions ➤ In Denmark, the band 5150 - 5350 MHz is also allowed for outdoor usage. ➤ I Danmark må frekvensbåndet 5150 - 5350 også anvendes udendørs.
Deutsch (German)	Hiermit erklärt Zyxel, dass sich das Gerät Ausstattung in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2014/53/EU befindet.
Eesti keel (Estonian)	Käesolevaga kinnitab Zyxel seadme seadmed vastavust direktiivi 2014/53/EL põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
Ελληνικά (Greek)	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Zyxel ΔΗΛΩΝΕΙ ΟΤΙ ΕΞΟΠΛΙΣΜΟΣ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/ΕΕ.
English	Hereby, Zyxel declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
Français (French)	Par la présente Zyxel déclare que l'appareil équipements est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/UE.
Hrvatski (Croatian)	Zyxel ovime izjavljuje da je radijska oprema tipa u skladu s Direktivom 2014/53/UE.
Íslenska (Icelandic)	Hér með lýsir, Zyxel því yfir að þessi búnaður er í samræmi við grunnkröfur og önnur viðeigandi ákvæði tilskipunar 2014/53/UE.

Italiano (Italian)	Con la presente Zyxel dichiara che questo attrezzatura è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/UE. National Restrictions ➤ This product meets the National Radio Interface and the requirements specified in the National Frequency Allocation Table for Italy. Unless this wireless LAN product is operating within the boundaries of the owner's property, its use requires a “general authorization.” Please check http://www.sviluppoeconomico.gov.it/ for more details. ➤ Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all 'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una “Autorizzazione Generale”. Consultare http://www.sviluppoeconomico.gov.it/ per maggiori dettagli.
Latviešu valoda (Latvian)	Ar šo Zyxel deklarē, ka iekārtas atbilst Direktīvas 2014/53/ES būtiskajām prasībām un citiem ar to saistītajiem noteikumiem National Restrictions ➤ The outdoor usage of the 2.4 GHz band requires an authorization from the Electronic Communications Office. Please check http://www.esd.lv for more details. ➤ 2.4 GHz frekvenču joslas izmantošanai ārpus telpām nepieciešama atļauja no Elektronisko sakaru direkcijas. Vairāk informācijas: http://www.esd.lv.
Lietuvių kalba (Lithuanian)	Šiuo Zyxel deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 2014/53/ES Direktyvos nuostatas.
Magyar (Hungarian)	Alulírott, Zyxel nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvető követelményeknek és az 2014/53/EU irányelv egyéb előírásainak.
Malti (Maltese)	Hawnhekk, Zyxel, jiddikjara li dan tagħmir jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 2014/53/UE.
Nederlands (Dutch)	Hierbij verklaart Zyxel dat het toestel uitrusting in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EU.
Polski (Polish)	Niniejszym Zyxel oświadcza, że sprzęt jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2014/53/UE.
Português (Portuguese)	Zyxel declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/UE.
Română (Romanian)	Prin prezenta, Zyxel declară că acest echipament este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 2014/53/UE.
Slovenčina (Slovak)	Zyxel týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2014/53/EÚ.
Slovenščina (Slovene)	Zyxel izjavlja, da je ta oprema v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2014/53/EU.
Suomi (Finnish)	Zyxel vakuuttaa täten että laitteet tyyppinen laite on direktiivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska (Swedish)	Härmed intygar Zyxel att denna utrustning står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EU.
Norsk (Norwegian)	Erklærer herved Zyxel at dette utstyret er i samsvar med de grunnleggende kravene og andre relevante bestemmelser i direktiv 2014/53/EU.

Notes:

1. Although Norway, Switzerland and Liechtenstein are not EU member states, the EU Directive 2014/53/EU has also been implemented in those countries.
2. The regulatory limits for maximum output power are specified in EIRP. The EIRP level (in dBm) of a device can be calculated by adding the gain of the antenna used(specified in dBi) to the output power available at the connector (specified in dBm).

List of national codes

Country	ISO 3166 2 letter code	Country	ISO 3166 2 letter code
Austria	AT	Liechtenstein	LI
Belgium	BE	Lithuania	LT
Bulgaria	BG	Luxembourg	LU
Croatia	HR	Malta	MT
Cyprus	CY	Netherlands	NL
Czech Republic	CZ	Norway	NO
Denmark	DK	Poland	PL
Estonia	EE	Portugal	PT
Finland	FI	Romania	RO
France	FR	Serbia	RS
Germany	DE	Slovakia	SK
Greece	GR	Slovenia	SI
Hungary	HU	Spain	ES
Iceland	IS	Switzerland	CH
Ireland	IE	Sweden	SE
Italy	IT	Turkey	TR
Latvia	LV	United Kingdom	GB

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 of 20 cm separation distance to the user.

RF general information

Evaluation Mode	Uplink Frequency Range (MHz)	Downlink Frequency (MHz)	Modulation Type
WCDMA	B1: 1920 - 1980 B3: 1710 - 1785 B8: 880 - 915	B1: 2110 - 2170 B3: 1805 - 1880 B8: 925 - 960	WCDMA: BPSK / QPSK HSDPA: 16QAM HSUPA: QPSK
LTE	B1: 1920 - 1980 B3: 1710 - 1785 B7: 2500 - 2570 B8: 880 - 915 B20: 832 -862 B28: 703 - 748 B38: 2570 - 2620 B40: 2300 - 2400 B42: 3400 - 3600 B43: 3600 - 3800	B1: 2110 - 2170 B3: 1805 - 1880 B7: 2620 - 2690 B8: 925 - 960 B20: 791 - 821 B28: 758 - 803 B38: 2570 - 2620 B40: 2300 - 2400 B42: 3400 - 3600 B43: 3600 - 3800	QPSK/ 16QAM/ 64QAM/ 256QAM
NR	NR n1: 1920 - 1980 NR n3: 1710 - 1785 NR n7: 2500 - 2570 NR n8: 880 - 915 NR n20: 832 -862 NR n28: 703 - 748 NR n38: 2570 - 2620 NR n40: 2300 - 2400 NR n41: 2496 - 2690 NR n77: 3300 - 4200 NR n78: 3300 - 3800	NR n1: 2110 - 2170 NR n3: 1805 - 1880 NR n7: 2620 - 2690 NR n8: 925 - 960 NR n20: 791 - 821 NR n28: 758 - 803 NR n38: 2570 - 2620 NR n40: 2300 - 2400 NR n41: 2496 - 2690 NR n77: 3300 - 4200 NR n78: 3300 - 3800	π /2-BPSK/ QPSK/ 16QAM/ 64QAM/ 256QAM
WiFi	2412 - 2472	2412 - 2472	DSSS-DBPSK/ DQPSK/ CCK/ OFDM-BPSK/ QPSK/ 16QAM/ 64QAM

Maximum RF power

Functions	Output power (dBm)
WCDMA Band 1	24.75
WCDMA Band 3	24.59
WCDMA Band 8	24.68
LTE Band 1	22.7
LTE Band 3	22.91
LTE Band 7	22.71
LTE Band 8	24.66
LTE Band 20	24.56
LTE Band 28	23.25
LTE Band 38	25.81
LTE Band 40	25.43
LTE Band 42	25.46
LTE Band 43	25.4
NR n1	23.99
NR n3	23.51
NR n7	24.05
NR n8	23.97
NR n20	23.47
NR n28	23.61
NR n38	23.99
NR n40	24.54
NR n41	26.92
NR n77	27.39
NR n78	26.75
WiFi 2.4G	19.15

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.

