



UK – TYPE EXAMINATION CERTIFICATE
RADIO EQUIPMENT REGULATIONS 2017 (SI 2017/1206)
Schedule 3 Module B

MANUFACTURER

Name	: Zyxel Communications Corporation
Address	: No.2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan, R.O.C
Contact Name & Title	: Emma Bao, Manager
Email	: Emma.bao@zyxel.com.tw
Phone number	: 886 3 578-3942 # 88582

PRODUCT DESCRIPTION

Trademark/Trade Name	: ZYXEL
Model Number	: NR5101
Product Description	: 5G NR Router IAD

APPROVED BODY

Certificate issued by	: Approved Body 1177, TIMCO Engineering, Inc.
Certificate number	: U1177-211043
Name and Signature	: Bruno Clavier <i>Bruno Clavier</i> Date: December 29, 2021

The device shall be marked as follows:



Based on the evidence presented in the Technical Documentation, TIMCO Engineering, Inc., as appointed Approved Body, has issued this UK-Type Examination Certificate in accordance with Schedule 3, Module B. The product described appears to be in conformity with the essential requirements Regulation 6.1(a), 6.1(b), and 6.2 of RER 2017 (SI 2017/1206). This certificate relates only to the documents as provided to Timco Engineering, Inc. and is valid up to (1) the date of cessation of presumption of conformity of any of the superseded standards which were used for testing this product and assessed by Approved Body or (2) the date of modifications to the approved type that may affect the conformity of the apparatus with the essential requirements of SI 2017/1206 or the conditions for validity of that certificate, whichever comes first.

<p>TIMCO Engineering, Inc. 849 NW State Road 45 Newberry, FL 32669 www.timcoengr.com A2LA Accredited (Certificate No. 0955.02)</p>	<p>This Certificate is issued under the provision that TIMCO Engineering, Inc. nor its subsidiary companies accept any liability concerning the contents of this document other than forced by law. Reproduction of the Certificate (with Annex) in full is allowed. Reproduction of parts of this certificate may only be allowed by written permission of TIMCO Engineering, Inc.</p>
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U1177-211043

Date: December 29, 2021

PRODUCT SPECIFICATIONS

Intended Use / Category :	LTE
RF output power :	LTE Band 1: 23.40 dBm, Conducted LTE Band 3: 23.40 dBm, Conducted LTE Band 7: 23.55 dBm, Conducted LTE Band 8: 23.89 dBm, Conducted LTE Band 20: 23.96 dBm, Conducted LTE Band 28: 23.71 dBm, Conducted LTE Band 32: N/A LTE Band 34: 23.64 dBm, Conducted LTE Band 38: 23.78 dBm, Conducted LTE Band 40: 23.86 dBm, Conducted LTE Band 42: 24.85 dBm, Conducted LTE Band 43: 23.64 dBm, Conducted
Frequency range (MHz) :	LTE Band 1: 1920 MHz – 1980 MHz LTE Band 3: 1710 MHz – 1785 MHz LTE Band 7: 2500 MHz – 2570 MHz LTE Band 8: 880 MHz – 915 MHz LTE Band 20: 832 MHz – 862 MHz LTE Band 28: 703 MHz – 748 MHz LTE Band 32: 1452 MHz – 1496 MHz (support DL CA only) LTE Band 34: 2010 MHz – 2025 MHz LTE Band 38: 2570 MHz – 2620 MHz LTE Band 40: 2300 MHz – 2400 MHz LTE Band 42: 3400 MHz – 3600 MHz LTE Band 43: 3600 MHz – 3800 MHz
Modulation :	QPSK, 16QAM, 64QAM, 256QAM (Uplink) QPSK, 16QAM, 64QAM, 256QAM (Downlink)
Antenna type :	Dipole UFL

Intended Use / Category :	WCDMA
RF output power :	WCDMA Band I: 22.73dBm, Conducted WCDMA Band III: 22.74dBm, Conducted WCDMA Band VIII: 22.74dBm, Conducted
Frequency range (MHz) :	WCDMA Band I: 1920 MHz – 1980 MHz WCDMA Band III: 1710 MHz – 1785 MHz WCDMA Band VIII: 880 MHz – 915 MHz
Modulation :	BPSK, QPSK
Antenna type :	Dipole UFL

Intended Use / Category	: 5G NR
RF output power	: n41: 26.08dBm, Conducted n77: 25.97dBm, Conducted n78: 26.18dBm, Conducted
Frequency range (MHz)	: n41: 2496 MHz – 2690 MHz n77: 3300 MHz – 4200 MHz n78: 3300 MHz – 3800 MHz
Modulation	: QPSK, 16QAM, 64QAM, 256QAM (Uplink) QPSK, 16QAM, 64QAM, 256QAM (Downlink)
Antenna type	: Dipole UFL

Intended Use / Category	: IEEE 802.11 b/g/n/ax
RF output power	: 19.55 dBm EIRP
Frequency range (MHz)	: 2412 – 2472 MHz
Modulation	: DSSS-DBPSK, DQPSK, CCK BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM
Antenna type	: Dipole UFL

Intended Use / Category	: IEEE 802.11 a/n/ac/ax
RF output power	: 5180 – 5240 MHz :22.38dBm 5260 – 5320 MHz:22.49dBm 5500 – 5700 MHz:26.55dBm
Frequency range (MHz)	: 5180 – 5240 MHz 5260 – 5320 MHz 5500 – 5700 MHz
Modulation	: BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM
Antenna type	: Dipole UFL

According to the Technical Documentation compiled by the Manufacturer, the following standards were used:

ESSENTIAL REQUIREMENTS

Essential Requirement	Standard Number & Version
Radio (Regulation 6.2)	: EN 301 908-1 V13.1.1 EN 301 908-2 V13.1.1 EN 301 908-13 V13.1.1 Draft EN 301 908-25 V15.1.1_15.0.2 EN 300 328 V2.2.2 EN 301 893 V2.1.1
EMC (Regulation 6.1b)	: EN 301 489-1 V 2.2.3 EN 301 489-17 V3.2.4 Draft EN 301 489-52 V1.1.0
Health (Regulation 6.1a)	: EN IEC 62311:2020 EN 50665:2017 EN 50385:2017
Safety (Regulation 6.1a)	: EN 62368-1:2014 EN 62368-1/AC:2015 EN 62368-1/AC:2017 BS EN 62368-1:2014+A11:2017

TECHNICAL DOCUMENTATION

Item	Exhibit Description	
1.	Copy of the Declaration of Conformity (Draft is acceptable)	<input checked="" type="checkbox"/>
2.	Regulation 14: Pictogram exhibit of the packaging or a Letter of Attestation and/or exhibits explaining compliance with Regulations 14. A draft pictogram is acceptable.	<input checked="" type="checkbox"/>

Item	Exhibit Description (Cont.)		
3.	Operational Description and Circuit Description of the product/device, where applicable.		<input checked="" type="checkbox"/>
4.	External Photos of the device		<input checked="" type="checkbox"/>
5.	Internal Photos of the device		<input checked="" type="checkbox"/>
6.	User manual and information and installation instructions		<input checked="" type="checkbox"/>
7.	Schematic drawings		<input checked="" type="checkbox"/>
8.	Block Diagrams		<input checked="" type="checkbox"/>
9.	Risk Assessment. RER Schedule 3 module B - Analysis and assessment of the risk(s) (See TGN 30 for guidance)		<input checked="" type="checkbox"/>
10.	If Applicable: Modification/Standard Update/Applicant or Manufacturer info change letter explaining the changes to the existing version of the product along with supporting exhibits (e.g., photos, schematics, new applicant details, etc.) Applicable for Product Modifications, Applicant Name Change, Add Model, and Standard Update.		<input type="checkbox"/>
11.	If Applicable: Previous Copy of the EU/UK-type examination certificate and annexes as delivered by other notified bodies involved in the conformity assessment (e.g., original certificates in case of product modifications, modules certificates, etc.) Where applicable.		<input type="checkbox"/>
12.	Test Reports		<input checked="" type="checkbox"/>
	Radio / EMC / Health / Safety	Test Report Number	Issue Date/ Rev. No
	Radio	EM0N0401AA	Jun. 16, 2021 / 02
	Radio	EM0N0401NR	Mar. 26, 2021 / 01
	Radio	ER0N0401AC	Mar. 26, 2021 / 01
	Radio	ER0N0401AN	Mar. 26, 2021 / 01
	Radio	EY0N0401	Mar. 26, 2021 / 01
	Radio (module)	2004RSU055-E1	Jul. 23, 2020 / 01
	Radio (module)	2004RSU055-E2	Aug. 05, 2020 / 02
	EMC	EW0N0401	Mar. 26, 2021 / 01
	Health	EA0N0401	Jun. 25, 2021 / 03
	Safety	WL20J2206-L0	Feb. 26, 2021

This certificate is issued under the following additional and non-exhaustive list of provisions of the Radio Equipment Regulations 2017 (SI 2017/1206) of the Statutory Instruments of the UK:

1. **Regulation 7:** Before placing radio equipment on the market, a manufacturer must ensure that it has been designed and manufactured in accordance with the essential requirements
2. **Regulation 8:** Before placing radio equipment on the market, a manufacturer must ensure it has been constructed so that the radio equipment can be operated without causing an infringement of the applicable requirements on the use of the radio spectrum.
3. **Regulation 11:** A manufacturer must, for a period of 10 years beginning on the day on which the radio equipment is placed on the market, keep and, upon request, make available to an enforcing authority the following in relation to radio equipment—
 - (a) a copy of the declaration of conformity, and
 - (b) the technical documentation.
4. **Regulation 15:**
 - (1) A manufacturer who considers, or has reason to believe, that radio equipment which they have placed on the market is not in conformity with Part 2, if appropriate, must immediately take the corrective measures necessary to—
 - (a) bring the radio equipment into conformity,
 - (b) withdraw the radio equipment, or
 - (c) recall the radio equipment.
 - (2) Where the radio equipment presents a risk, the manufacturer must immediately inform the market surveillance authority, of the risk, giving details of—
 - (a) the respect in which the radio equipment is considered not to be in conformity with Part 2, and
 - (b) any corrective measures taken and the results of those measures.
5. **Regulation 12:**
 - (1) Before placing radio equipment on the market, a manufacturer must ensure that the radio equipment bears—
 - (a) a type, batch or serial number, or
 - (b) another element which allows the radio equipment to be identified.
 - (2) Before placing radio equipment on the market, a manufacturer must indicate on the radio equipment—
 - (a) the name, registered trade name or registered trade mark of the manufacturer,
 - (b) a postal address at which the manufacturer can be contacted.
 - (3) The information specified in paragraph (2) must be in a language which can be easily understood by end-users and the enforcing authority.
 - (4) Where the size or nature of the radio equipment prohibits a manufacturer from complying with the requirement in paragraph (1) or paragraph (2), the manufacturer must provide the required information either on the radio equipment's packaging or in a document which accompanies the radio equipment.
 - (5) The manufacturer's postal address must indicate a single point at which the manufacturer can be contacted.
6. **Regulation 23:**
 - (1) Before placing radio equipment on the market, an importer must indicate on the radio equipment—
 - (a) the name, registered trade name or registered trade mark of the importer, and
 - (b) a postal address at which the importer can be contacted.
 - (2) The information specified in paragraph (1) must be in a language which can be easily understood by end-users and the enforcement authority.
 - (3) Paragraph (1) does not apply where—
 - (a) either—
 - (i) it is not possible to set out the information referred to in paragraph (1) on the radio equipment, or
 - (ii) the importer has imported the radio equipment from an EEA state and places it on the market within the period of 18 months beginning with exit day, and
 - (b) before placing the radio equipment on the market, the importer sets out the information referred to in paragraph (1)-
 - (i) on the packaging; or
 - (ii) in a document accompanying the safety component.

7. Regulation 13:

(1) When placing radio equipment on the market, a manufacturer must ensure that radio equipment is accompanied with instructions and safety information which—

- (a) are clear, legible and in easily understandable English
- (b) include information required to use the radio equipment in accordance with its intended use and
- (c) include a description of accessories and components, including software, which allow the radio equipment to operate as intended.

(2) In the case of radio equipment which can intentionally emit radio waves, the manufacturer must also include information about—

- (a) the frequency band or bands in which the radio equipment can operate, and
- (b) the maximum radio-frequency power transmitted in the frequency band or bands in which the radio equipment operates.

(3) When placing radio equipment on the market, a manufacturer must ensure that each item of radio equipment is accompanied by either a copy of the declaration of conformity or a simplified declaration of conformity drawn up in accordance with regulation 43 (simplified declaration of conformity).

(4) Where the radio equipment is to be made available to consumers and other end-users in the United Kingdom, the language which can be easily understood is English.

8. Regulation 14:

(1) Where there are restrictions on putting into service or requirements for authorisation of use, a manufacturer must include information on the packaging of the radio equipment which identifies the geographical area in the United Kingdom where the restrictions on putting into service or the requirements for authorisation of use exist.

(2) The information referred to in paragraph (1) must—

- (a) be completed in the instructions required by regulation 13,
- (b) subject to paragraph (3), be presented in the manner and form specified in the Implementing Regulation how to present the information provided for in Article 10(10) of Directive 2014/53/EU of the European Parliament and the Council (EU) 2017/1354 (Regulation 14 of the 2017 Regulations).

(3) Paragraph (2)(b) of this Regulation applies to radio equipment placed on or after exit day.

9. Regulation 16:

(1) Following a request from the enforcing authority, the manufacturer must, within such reasonable period as the authority may specify, provide the authority concerned with all the information and documentation necessary to demonstrate that the radio equipment is in conformity with Part 2

(2) A request referred to in paragraph (1)—

- (a) is one that was made during the period of 10 years beginning on the day that the manufacturer places the radio equipment on the market, and
- (b) must be accompanied by the reasons for making the request.

(3) The information referred to in paragraph (1)—

- (a) may be provided in electronic form, and
- (b) must be in a language which can be easily understood by the authority concerned.

(4) A manufacturer must, at the request of the authority concerned, cooperate with that authority on any action taken to—

- (a) evaluate radio equipment in accordance with regulation 59 (evaluation of radio equipment presenting a risk),
- (b) eliminate the risks posed by radio equipment which the manufacturer has placed on the market.

10. Regulation 17:

(1) A manufacturer must ensure, before placing radio equipment on the market, that procedures are in place to ensure that series production remains in conformity with Part 2.

(2) In doing so, the manufacturer must take adequate account of—

- (a) any change in radio equipment design or characteristics, and
- (b) any change in a designated standard or in another technical specification by reference to which the declaration of conformity was drawn up.

11. Regulation 43:

(1) Where only a simplified declaration of conformity is provided pursuant to regulation 13(3), it must contain the elements specified and have the model structure set out in Schedule 7 (simplified declaration of conformity).

(2) The full text of the declaration of conformity must be made available at the internet address referred to in the simplified declaration of conformity.

Schedule 7:

1. The simplified declaration of conformity referred to in regulation 13(3) (instructions and information to be included with the radio equipment) must be provided as follows—

Hereby, [Name of manufacturer] declares that the radio equipment type [designation of type of radio equipment] is in compliance with the relevant statutory requirements.

The full text of the declaration of conformity is available at the following internet address:xxxxxx

12. Regulation 44:

(1) The UK marking must be affixed visibly, legibly and indelibly to the radio equipment or to its data plate, unless that is not possible or not warranted on account of the nature of the radio equipment.

(2) The UK marking must be affixed visibly and legibly to the radio equipment packaging.

(3) On account of the nature of the radio equipment, the height of the UK marking affixed to radio equipment may be lower than 5 mm, provided that the marking remains visible and legible.

(4) When the conformity assessment procedure in Schedule 4 (conformity assessment module H) has been applied, the UK marking must be followed by the identification number of the approved body which carried out the relevant conformity assessment procedure for the radio equipment.

(5) The identification number in paragraph (4) must have the same height as the UK marking and be affixed—

(a) by the approved body itself, or

(b) under the instructions of the approved body, by the manufacturer or the manufacturer's authorised representative.

13. Schedule 6 Declaration of Conformity, Paragraph 8: Where applicable, description of accessories and components, including software, which allow the radio equipment to operate as intended and covered by the Declaration of conformity

14. Schedule 3 Module B, Paragraph 7(2): The manufacturer must inform the approved body that holds the technical documentation relating to the Type examination certificate of all modifications to the approved type that may affect the conformity of the radio equipment with the essential requirements of these Regulations or the conditions for validity of that certificate. Such modifications require additional approval in the form of an addition to the original Type examination certificate.

15. Product Specifications: The antenna gain and any other data is provided by the applicant.