Radio Equipment Directive 2014/53/EU Notified Body No. 0889

EU Type Examination Certificate No: UL/11785084

Issued under the authority of
UL VS Ltd, UK

CERTIFICATE HOLDER	ZINWAVE LTD. HARSTON MILL, HARSTON CAMBRIDGE, CB22 7GG UNITED KINGDOM
TRADE NAME AND MODEL	UNITIVITY WIDEBAND DAS
VARIANTS (if applicable)	HUB: 302-1001 (AC POWERED) or 302-1101 (DC POWERED)
TYPE OF EQUIPMENT	WIDEBAND DISTRIBUTED ANTENNA SYSTEM
CERTIFICATION PROCEDURE	BASED ON NOTIFIED BODY ASSESSMENT OF TECHNICAL DOCUMENTATION
CERTIFICATE EXPIRY DATE	09 July 2020

TECHNOLOGY	**FREQUENCY RANGE (MHz)**	**OUTPUT POWER ([1]Conducted)**	**APPLIED ARTICLE 3.2 STANDARD & VERSION**
TETRA	Uplink: 390 to 470; Downlink: 380 to 460	18.0 dBm	EN 302 561 V2.1.1
GSM E-GSM 900 band	Uplink: 880 to 915; Downlink: 925 to 960	18.0 dBm	EN 303 609 V12.5.1
GSM DCS 1800 band	Uplink: 1710 to 1785; Downlink: 1805 to 1880	18.0 dBm	EN 303 609 V12.5.1
UMTS Band 1 2100 MHz	Uplink: 1920 to 1980; Downlink: 2110 to 2170	18.0 dBm	EN 301 908-01 V11.1.1 EN 301 908-11 V11.1.2
E-UTRA Band 20 800 MHz	Uplink: 832 to 862; Downlink: 791 to 821	18.0 dBm	EN 301 908-01 V11.1.1 EN 301 908-15 V11.1.2
E-UTRA Band 8 E-GSM 900 MHz	Uplink: 880 to 915; Downlink: 925 to 960	18.0 dBm	EN 301 908-01 V11.1.1 EN 301 908-15 V11.1.2
E-UTRA Band 3 DCS 1800 MHz	Uplink: 1710 to 1785; Downlink: 1805 to 1880	18.0 dBm	EN 301 908-01 V11.1.1 EN 301 908-15 V11.1.2
E-UTRA Band 1 2100 MHz	Uplink: 1920 to 1980; Downlink: 2110 to 2170	18.0 dBm	EN 301 908-01 V11.1.1 EN 301 908-15 V11.1.2
E-UTRA Band 7 2600 MHz	Uplink: 2500 to 2570; Downlink: 2620 to 2690	18.0 dBm	EN 301 908-01 V11.1.1 EN 301 908-15 V11.1.2
E-UTRA Band 38 2600 MHz	Uplink: 2570 to 2620; Downlink: 2570 to 2620	18.0 dBm	EN 301 908-01 V11.1.1 EN 301 908-15 V11.1.2

[1]*This is the rated output power.*

Certification of equipment means only that the equipment has met the requirements of the Radio Equipment Directive 2014/53/EU. Licence applications, where applicable, to use certified equipment, are acted on accordingly by the European Union and countries who implement this Directive and will depend on the existing radio environment, service, country and location of operation. This certificate is issued on condition that the holder complies and will continue to comply with all the requirements and procedures mandate by the EU. The equipment for which this certificate is issued shall not be manufactured, imported, distributed, leased, offered for sale or sold unless the equipment complies with the applicable technical standards and is fully represented by the Technical Documentation supplied to UL VS Ltd as a basis for this EU Type Examination Certificate. The certificate shall only be reproduced in full. Accessories included in this assessment are detailed in the attached Annex.

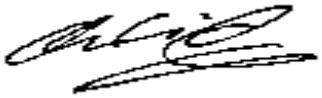
Validity

This certificate will become invalid when:

The equipment is modified (hardware, firmware or software) and the Notified Body (NB) is not informed of the changes. The NB assessment of the changes may require a new EU type Examination certificate
or
The validity date detailed on this certificate is exceeded
or
The certificate holder is informed by the certificate issuer (UL VS Ltd.) that it is no longer valid

I hereby attest that the technical documentation for the subject equipment was assessed by this Notified Body and found in compliance with the requirements of the Radio Equipment Directive 2014/53/EU articles as follows:

Article 3.1(a) EMF	✓
Article 3.1(b) EMC	✓
Article 3.2 Radio Performance	✓

ISSUED BY: 

Tony Henriques, Principal Engineer, UL VS Notified Body

ISSUED ON: 10 July 2017

Annex

EU Type Examination Certificate Summary Report

SCOPE OF THE EU TYPE EXAMINATION CERTIFICATE

Article	✓/×	Applied standard(s) (and version) or reference.
Article 3.1a (EMF):	✓	EN 62311:2008
Article 3.1b (EMC)	✓	EN 301 489-1 V2.1.1; EN 301 489-50 V2.1.1
Article 3.2 (Radio Spectrum use)	✓	EN 302 561 V2.1.1; EN 303 609 V12.5.1; EN 301 908-1 V11.1.1; EN 301 908-11 V11.1.2; EN 301 908-15 V11.1.2

TECHNICAL DOCUMENTATION DETAILS

Title:	Radio Equipment Directive Technical Document June 2017 UNItivity Wideband DAS
Reference Number:	ZP400428_C
Issue Date:	06 July 2017
Contact Name:	John Prentice

GENERAL PRODUCT DETAILS

Trade Name:	Zinwave
Model Number(s) / Type Number (s):	UNItivity DAS consisting of: Primary / Secondary Hub part number: 302-1001 (AC power) or Primary / Secondary Hub part number: 302-1101 (DC power) Optical RU part number: 302-1107 Optical Module: 302-0002 Service Module: 302-0003
Hardware / Build Version:	Primary / Secondary Hub 302-1001 (AC power): 4.04 Primary / Secondary Hub 302-1101 (DC power): 1.0 Optical Remote Unit: 4.2.1
Software / Firmware Version:	Primary / Secondary Hub 302-1001 (AC power): 4.70 Primary / Secondary Hub 302-1101 (DC power): 4.70 Optical Remote Unit: v4.70
Additional Information (modulation)	GMSK & 8PSK (GSM900 / DCS1800); QPSK (UMTS); Π/4 QPSK (TETRA); QPSK, 16QAM, 64QAM (LTE)
Description of Use / Function:	Wideband Distributed Antenna System
Contract Manufacturers Company Name (if applicable):	Plexus Corporation Ltd.
Contract Manufacturers Address (if applicable):	Pinnaclehill Industrial Estate, Kelso, Roxburghshire, TD5 8XX, United Kingdom

PRODUCT VARIANT DETAILS

Details of Product Variant(s) covered by this EU Type Examination Certificate:	Primary / Secondary Hub 302-1001 (AC powered); Primary / Secondary Hub 302-1101 (DC powered)

DETAILS OF ACCESSORIES IF APPLICABLE

Details of Product accessories covered by this EU Type Examination Certificate:	None

CRITERIA SATISFIED TO DEMONSTRATE COMPLIANCE

Article 3.2 – compliance demonstrated to harmonised standards

Article 3.1b - compliance demonstrated to standards that are published and not yet listed in the OJEU

Article 3.1a EMF - other supplied technical justification which was accepted by this Notified Body

REMARKS, RESTRICTIONS AND OBSERVATIONS

Remarks:

To demonstrate compliance with article 3.2 of the RE Directive, harmonised standards, as listed in OJ C 180/5, 08/06/2017, were used. All the standards referenced are current as of the date of this certificate and none are subject to a date of cessation of presumption of conformity.

To demonstrate compliance with article 3.1a EMF of the RE Directive, EN 62311:2008 which is listed as a harmonised standard in Low Voltage Directive 2014/35/EU OJEU C 249/62 dated 08/07/2016, was used. No Article 3.1a standards are currently listed in the latest RED OJEU.

To demonstrate compliance with article 3.1b EMC of the RE Directive, candidate harmonised standards were used. No Article 3.1b standards are currently listed in the latest RED OJEU.

Compliance with Article 3.2 was demonstrated over a -5°C to 50°C temperature range and, therefore, this opinion is only valid for this temperature range. Zinwave should ensure that operation outside of the temperature range -5°C to 50°C for all services does not occur to ensure continued compliance with the Article 3.2 of the directive.

It is the responsibility to the manufacturer to ensure the ongoing compliance of this equipment.

The equipment operates in harmonised frequency bands that are under the control of a licensed network and is therefore a Class 1 equipment that can be used in all Member States without restriction.

The manufacturer's Declaration of Conformity appropriately lists the standards used. The declaration of conformity is missing the a reference to the date of issue (Annex VI point 9). The manufacturer is reminded that this is required to be on the declaration of conformity in accordance with Annex VI of the Radio Equipment Directive.

The Notified Body number, 0889, should be included in the DoC (See RE Directive Annex VI, item 7) and should not be included on the host label.

The user manual supplied with the equipment (document *UNItivity In-Building Wireless Solution Detailed Datasheet*) is required to include details of the appropriate link to the internet address where the full DoC can be found.

Section 2.1 *Regulatory Information* section of the user manual, specifically Sections 2.1.3, 2.2.3 and 2.2.4, refers to R&TTE Directive and needs to be updated to reflect the RED. Furthermore section 2.2.4. *R&TTE Approved Services* needs to be updated to reflect the latest Article 3.2 standards that the equipment was assessed against.

Compliance with RF exposure requirements is based on a minimum device-to-user separation distance of 20 cm. This is consistent with the anticipated use of the device.

The equipment is typically used to expand indoor coverage due to limited coverage from normal outdoor base stations.

Restrictions:

The manufacturer shall inform the notified body that holds the technical documentation relating to the EU-type examination certificate of all modifications to the approved type that may affect the conformity of the radio equipment with the essential requirements of this Directive or the conditions for validity of that certificate. Such modifications shall require additional approval in the form of an addition to the original EU-type examination certificate.

UNItivity DAS systems shall not be connected to a mains supply where this is shared, or may be shared, with a domestic environment. The equipment shall be fed from a local sub-station that does not also feed domestic environments. The manufacturer is aware and understands that, as a class A product, radio interference may be caused to other systems including users of the HF bands.

UNItivity DAS systems shall be installed at a distance of, at least, 10 metres from any residential premises. The manufacturer is aware and understands that, as a class A product, radio interference may be caused to other systems including users of the HF and VHF bands.

REVISION HISTORY

10/07/2017	Original version (1) released.