CERTIFICATE

Number: 232340007/AA/06

Issue Date: 29 January 2025

Expiration Date: -

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UKCA TYPE EXAMINATION CERTIFICATE (Module B)

In compliance with the procedure specified in M009, Kiwa Ltd. declares as approved body for UKCA 0558 for the Radio Equipment Regulations 2017, that the stated product, complies with the essential requirements, in accordance with part 2 (chapter 1) of Radio Equipment Regulations, as indicated under Annex 1 of this certificate, based on the applicable Technical Standards and Specifications as listed under Annex 2 of this Certificate.

Product description:	**Non-IMO RADAR equipment**
Trademark:	**FURUNO**
Family name:	**NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-8/10/12**
Type designation:	**DRS2D-NXT**
Variants:	**See Annex 3**

This certificate is granted to manufacturer:

Name:	**Furuno Electric Co., Ltd.**
Address:	**9-52 Ashihara cho**
City:	**662-8580 Nishinomiya**
Country:	**JAPAN**

This certificate remains valid as long as the stated product stays in compliance with the essential requirements of the Radio Equipment Regulations 2017.

This certificate has THREE Annexes.

Signed on behalf of Kiwa Ltd.
(UK Approved Body Number 0558)

Ramy Nabod
Product Assessor

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Chamber of commerce
3473056

UKCA

UKAS PRODUCT CERTIFICATION
0217

Annex 1 to certificate 232340007/AA/06

General Conditions

For each product to which this type examination relates, it has complied to the essential requirements as follows:

Article 6.1

Radio equipment shall be constructed so as to ensure:

C	(a)	the protection of health and safety of persons and of domestic animals and the protection of property, including the objectives with respect to safety requirements set out in the Electrical Equipment (Safety) Regulations 2016,
C	(b)	an adequate level of electromagnetic compatibility as set out in the Electromagnetic Compatibility Regulations 2016.

Article 6.2

C	Radio equipment must be constructed so that it both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference.

Legend

C	=	Conform
NC	=	Not Conform
NA	=	Not applicable (for this equipment)
NP	=	Not performed (in this statement)

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- This UKCA-type examination certificate is limited to the Radio Equipment Regulations.
- This UKCA-type examination certificate is part of the Conformity Assessment procedure Modules B and C, as described in annex III of the Radio Equipment Regulations.
- The validity of this UKCA type examination certificate is limited to products, which are equal to the one(s) assessed for this type Examination.
- The manufacturer has to draw up and issue a self Declaration of Conformity, declaring that the product(s) described in this UKCA-type examination certificate, are in compliance with Radio Equipment Regulations 2017 and any other applicable harmonization legislation.
- Each product shall be identified by means of type, batch and/or serial numbers and the name of the manufacturer and/or importer.
- If the equipment is to be modified, Kiwa Ltd. shall be notified immediately. Depending on the modifications, Kiwa Ltd. may have additional examinations carried out in consultation with the applicant.
- Enforcement of a new amending regulation voids the validity of this UKCA-type examination certificate.
- In case any referenced standard in this UKCA-type examination certificate is withdrawn or superseded and the presumption of conformity with the essential requirements has ceased, investigation by Kiwa Ltd. is needed to determine the validity of this type examination.

Remarks and observations

The following conditions are applicable:

AA/01: Built -in Wireless LAN module for Multi function display TZT2BB, TZT9F, TZT12F, TZT16F, and TZT19F is changed.
AA/02: The magnetron "MAF1562R" for the radar sensor DRS6A X-Class is added.
AA/03: 1) Add Multifunction Displays TZT22X and TZT24X. , 2) The standard EN303 413 V1.1.1 is updated to EN 303 413 V1.2.1, 3) Model name RTR-112A has been added. ,4) The family name has been amended to NavNet TZtouch2, NavNet TZtouch3
AA/04: Add MULTI FUNCTION DISPLAY: TZT10X, TZT13X and TZT16X (Family name: NavNet TZtouchXL)
AA/05: Add MARINE RADAR FR-8 and MULTI FUNCTION DISPLAY TZTBBX. Delete MULTI FUNCTION DISPLAY TZTL12F/L15F
AA/06: MULTI FUNCTION DISPLAY TZT10X, TZT13X, TZT16X, TZT22X, TZT24X and TZTBBX change to activate Bluetooth function with the same Wireless LAN/Bluetooth module, and add the optional unit Gesture Controller GC-001.

Annex 2 to certificate 232340007/AA/06

Documentation lodged for this type examination

Test Reports:

- Furuno Labotech International Co. Ltd.: FLI 12-14-090, 23 January 2015
- Furuno Labotech International Co. Ltd.: FLI 12-14-091, 22 January 2015
- Furuno Labotech International Co. Ltd.: FLI 12-14-092, 22 January 2015
- Furuno Labotech International Co. Ltd.: FLI 12-14-093, 22 January 2015
- Furuno Labotech International Co. Ltd.: FLI 12-14-094, 23 January 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-072, 30 September 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-073, 30 September 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-074, 30 September 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-075, 30 September 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-076, 30 September 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-077, 30 September 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-078, 30 September 2015
- Furuno Labotech International Co. Ltd.: LIC 12-15-079, 30 September 2015
- Furuno Labotech International Co. Ltd.: K03-17-2274, 22 January 2016
- NorthwestEMC, INC.: ETHE0008.9, 29 August 2014
- NorthwestEMC, INC.: ETHE0018.2, 24 April 2015
- NorthwestEMC, INC.: ETHE0008.8, 05 September 2014
- Labotech International Co., Ltd.: LIC 12-16-088, 31 August 2016
- Labotech International Co., Ltd.: LIC 12-16-089, 31 August 2016
- NorthwestEMC, INC.: ETHE0018.3, 10 December 2014
- Labotech International Co., Ltd.: LIC 12-16-090, 31 August 2016
- NorthwestEMC, INC.: ETHE0018.14, 02 February 2015
- Labotech International Co., Ltd.: LIC 12-16-091, 31 August 2016
- Labotech International Co., Ltd.: LIC 12-16-092, 31 August 2016
- Labotech International Co., Ltd.: LIC 12-16-093, 31 August 2016
- Labotech International Co., Ltd.: LIC 12-16-094, 31 August 2016
- Labotech International Co., Ltd.: LIC 12-16-095, 31 August 2016
- Labotech International Co., Ltd.: LIC 12-16-115, 22 December 2016
- Labotech International Co., Ltd.: LIC 12-16-116, 22 December 2016
- Labotech International Co., Ltd.: LIC 12-16-117, 22 December 2016
- Labotech International Co., Ltd.: LIC 12-16-118, 22 December 2016
- Labotech International Co., Ltd.: LIC 12-16-159, 27 February 2017
- Labotech International Co., Ltd.: LIC 12-16-160, 27 February 2017
- Labotech International Co., Ltd.: LIC 12-16-161, 27 February 2017
- Labotech International Co., Ltd.: LIC 12-16-162, 27 February 2017
- Furuno Electric Co., Ltd.: K03-17-2554, 01 March 2017
- Furuno Electric Co., Ltd.: K03-17-2555, 27 February 2017
- Labotech International Co., Ltd.: LIC 12-17-080, 29 September 2017
- Labotech International Co., Ltd.: LIC 12-17-081, 29 September 2017
- Labotech International Co., Ltd.: LIC 12-17-082, 29 September 2017
- Labotech International Co., Ltd.: LIC 12-17-084, 29 September 2017
- Labotech International Co., Ltd.: LIC 12-17-083, 29 September 2017
- MiCOM Labs: DIGI68-E2 Rev A BT, 21 July 2017
- MiCOM Labs: DIGI68-E4 Rev A Wifi , 21 July 2017
- MiCOM Labs: DIGI68-E6 Rev A , 21 July 2017
- MiCOM Labs: DIGI68-E8 Rev A , 21 July 2017
- Verkotan Oy: ETSI EN 303 413 Conformance Test Report, 16 June 2017
- Labotech International Co., Ltd.: LIC 12-19-131, 26 September 2019
- Labotech International Co., Ltd.: LIC 12-19-132, 26 September 2019
- Labotech International Co., Ltd.: LIC 12-19-134, 26 September 2019
- Labotech International Co., Ltd.: LIC 12-19-135, 26 September 2019
- Labotech International Co., Ltd.: LIC 12-19-136, 26 September 2019
- Labotech International Co., Ltd.: LIC 12-19-137, 26 September 2019
- Labotech International Co., Ltd.: LIC 12-19-138, 26 September 2019

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- Labotech International Co., Ltd.: LIC 12-19-139, 26 September 2019
- Labotech International Co., Ltd.: LIC 12-19-111, 23 August 2019
- Labotech International Co., Ltd.: LIC 12-19-112, 27 August 2019
- Labotech International Co., Ltd.: LIC 12-19-113, 27 August 2019
- Labotech International Co., Ltd.: LIC 12-19-114, 27 August 2019
- Labotech International Co., Ltd.: LIC 12-19-121, 23 August 2019
- Labotech International Co., Ltd.: LIC 12-19-122, 27 August 2019
- Labotech International Co., Ltd.: LIC 12-19-123, 27 August 2019
- Labotech International Co., Ltd.: LIC 12-19-124, 27 August 2019
- Labotech International Co., Ltd.: LIC 12-19-129, 30 September 2019
- Labotech International Co., Ltd.: LIC 12-19-130, 27 August 2019
- Furuno Electric Co., Ltd.: RET-19-026, 27 August 2019
- Furuno Electric Co., Ltd.: RET-19-027, 27 August 2019
- Furuno Electric Co., Ltd.: RET-19-012, 24 April 2019
- Furuno Electric Co., Ltd.: RET-19-011, 24 April 2019
- Furuno Electric Co., Ltd.: RET-19-013, 24 April 2019
- Labotech International Co., Ltd.: LIC 12-20-016, 11 March 2020
- Labotech International Co., Ltd.: LIC 12-20-044, 27 April 2020
- Labotech International Co., Ltd.: LIC 12-20-106, 27 July 2020
- Labotech International Co., Ltd.: LIC 12-20-109, 27 July 2020
- Labotech International Co., Ltd.: LIC 12-20-110, 27 July 2020
- Labotech International Co., Ltd.: LIC 12-20-111, 27 July 2020
- Labotech International Co., Ltd.: LIC 12-20-112, 27 July 2020
- Labotech International Co., Ltd.: LIC 12-20-113, 27 July 2020
- Labotech International Co., Ltd.: LIC 12-20-126, 16 September 2020
- Labotech International Co., Ltd.: LIC 12-20-132, 26 September 2020
- Labotech International Co., Ltd.: LIC 12-20-133, 26 September 2020
- Labotech International Co., Ltd.: LIC 12-20-134, 26 September 2020
- Labotech International Co., Ltd.: LIC 12-20-136, 26 September 2020
- Labotech International Co., Ltd.: LIC 12-21-030, 31 March 2021
- Labotech International Co., Ltd.: LIC 12-21-031 , 31 March 2021
- Labotech International Co., Ltd.: LIC 12-21-032, 19 April 2021
- Labotech International Co., Ltd.: LIC 12-21-033, 31 March 2021
- Furuno Electric Co., Ltd.: RET-20-002, 31 March 2021
- DT&C Co., Ltd.: DREKETC2104-0104(1), 26 November 2021
- DT&C Co., Ltd.: DREKETC2104-0105(1) , 26 November 2021
- DT&C Co., Ltd.: DRSETC2105-0002, 31 May 2021
- ICR Co., Ltd.: ICRT-TR-S210014-0A, 06 April 2021
- Labotech International Co., Ltd.: LIC 12-21-061, 04 June 2021
- Labotech International Co., Ltd.: LIC 12-21-062, 04 June 2021
- Labotech International Co., Ltd.: LIC 12-21-063, 04 June 2021
- Labotech International Co., Ltd.: LIC 12-21-088, 21 July 2021
- Furuno Electric Co., Ltd.: RET-21-005 , 06 April 2021
- Labotech International Co., Ltd.: LIC 12-22-196, 22 November 2022
- Labotech International Co., Ltd.: LIC 12-22-216, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-217, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-218, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-219, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-220, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-221, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-222, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-223, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-224, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-22-225, 26 December 2022
- Labotech International Co., Ltd.: LIC 12-23-043, 04 April 2023
- Labotech International Co., Ltd.: LIC 12-23-044, 04 April 2023
- Labotech International Co., Ltd.: LIC 12-23-045, 04 April 2023

- Labotech International Co., Ltd.: LIC 12-23-056, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-061, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-062, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-063, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-064, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-069, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-070, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-071, 29 May 2023
- Labotech International Co., Ltd.: LIC 12-23-156, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-157, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-158, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-160, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-162, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-163, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-164, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-165, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-167, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-169, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-170, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-171, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-172, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-174, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-23-176, 31 January 2024
- Labotech International Co., Ltd.: LIC 12-24-031, 13 May 2024
- Labotech International Co., Ltd.: LIC 12-24-035, 13 May 2024
- Labotech International Co., Ltd.: LIC 12-24-037, 13 May 2024
- Labotech International Co., Ltd.: LIC 12-24-038, 17 May 2024
- Labotech International Co., Ltd.: LIC 12-24-040, 17 May 2024
- Labotech International Co., Ltd.: LIC 12-24-042, 17 May 2024
- Labotech International Co., Ltd.: LIC 12-24-047, 20 May 2024
- Labotech International Co., Ltd.: LIC 12-24-121, 26 December 2024
- Labotech International Co., Ltd.: LIC 12-24-122, 26 December 2024
- Labotech International Co., Ltd.: LIC 12-24-123, 26 December 2024
- Labotech International Co., Ltd.: LIC 12-24-124, 26 December 2024
- Labotech International Co., Ltd.: LIC 12-24-125, 26 December 2024
- Labotech International Co., Ltd.: LIC 12-24-126, 26 December 2024

Product Documentation:

- Internal photos
- External photos
- Test setup photos
- Risk assessment

Technical Standards and Specifications

The product is compliant with:

EN 303 413	April, 2021	V1.2.1
EN 300 328	July, 2019	V2.2.2
EN 301 489-1	March, 2017	V2.2.0
EN 301 489-17	September , 2020	V3.2.4
EN 301 843-1	November , 2017	V2.2.1
EN 302 248	November, 2016	V2.1.1
EN 62233	2005	
IEC 60945	August, 2002	Edition 4

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IEC 60950-1	December, 2005	
IEC 60950-1/A1	December, 2009	
IEC 60950-1/A2	May, 2013	
IEC 62311	August, 2007	
IEC 62368-1	October, 2018	Ed. 3.0
ITU-R M.1177-4	April, 2011	
ITU-R SM.1539-1	November, 2002	
ITU-R SM.1541-6	August, 2015	
ITU-R SM.329-12	September, 2012	

Technical features and characteristics

The product includes the following features and characteristics:

Radar equipment
- Operating frequency range: 9410 MHz
- Maximum output power: 6 kW peak
- Transceiver RTR -112 and RTR-112A (DRS6A X-Class); Antenna type: XN10A; XN12A; XN13A (radar scanner)

Radar equipment
- Operating frequency range: 9410 MHz
- Maximum output power: 12 kW peak
- Transceiver RTR-113 (DRS12A X-Class); Antenna type: XN12A; XN13A (radar scanner)

Radar equipment
- Operating frequency range: 9410 MHz
- Maximum output power: 25 kW peak
- Transceiver RTR-114 (DRS25A X-Class); Antenna type: XN12A; XN13A (radar scanner)

Radar equipment
- Operating frequency range: 9380-9440 MHz
- Maximum output power: 25 W peak
- Transceiver RTR-115 (DRS4D-NXT); Antenna type: microstrip (in radome)

Radar equipment
- Operating frequency range: 9380-9440 MHz
- Maximum output power: 25 W peak
- Transceiver RTR-119 (DRS6A-NXT); Antenna type: XN10A; XN12A; XN13A (radar scanner)

Radar equipment
- Operating frequency range: 9380-9440 MHz
- Maximum output power: 100 W peak
- Transceiver RTR-125 (DRS12A-NXT); Antenna type: XN12A; XN13A (radar scanner)

Radar equipment
- Operating frequency range: 9380-9440 MHz
- Maximum output power: 200 W peak
- Transceiver RTR-126 (DRS25A-NXT); Antenna type: XN12A; XN13A (radar scanner)

Radar equipment
- Operating frequency range: 9410 MHz
- Maximum output power: 4 kW peak
- Transceiver RTR-120 (DRS4DL+); Antenna type: microstrip (in radome)

Radar equipment
- Operating frequency range: 9380-9440 MHz
- Maximum output power: 25 W peak
- Transceiver RTR-133 (DRS2D-NXT); Antenna type: microstrip (in radome)

Radar equipment
- Operating frequency range: 9410 MHz
- Maximum output power: 4 kW peak
- Transceiver RTR-128 (DRS4D X-class); Antenna type: microstrip (in radome)

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IEEE 802.11b/g/n
- Operating frequency range: 2412-2472 MHz (13 channels)
- Maximum output power: 19.95 dBm EIRP average
- Maximum antenna gain: 2.0 dBi

GPS receiver
- Operating frequency range: 1575.42 MHz

Annex 3 to certificate 232340007/AA/06

The product as described in this type examination includes the following type designations:

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-8/10/12
- Type designation: DRS2D-NXT

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-10/12
- Type designation: DRS6A X-Class

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-10/12
- Type designation: DRS12A X-Class

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-10/12
- Type designation: DRS25A X-Class

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-10/12
- Type designation: DRS6A-NXT

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-8/10/12
- Type designation: DRS4D-NXT

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-10/12
- Type designation: DRS12A-NXT

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-10/12
- Type designation: DRS25A-NXT

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, SFD-1010/1012, FR-10/12
- Type designation: DRS4DL+

- Product description: Non-IMO RADAR equipment
- Trademark: FURUNO
- Family name: NavNet TZtouch2, NavNet TZtouch3, NavNet TZtouchXL, FR-10/12
- Type designation: DRS4D X-Class

- Product description: MULTI FUNCTION DISPLAY
- Trademark: FURUNO
- Family name: NavNet TZtouch3
- Type designation: TZT9F/12F/16F/19F

- Product description: MULTI FUNCTION DISPLAY
- Trademark: FURUNO
- Family name: NavNet TZtouch2
- Type designation: TZT2BB

- Product description: SINGLE FUNCTION DISPLAY

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- Trademark:	FURUNO
- Type designation:	SFD-1010/1012
- Product description:	MARINE RADAR
- Trademark:	FURUNO
- Type designation:	FR-8/10/12
- Product description:	MULTI FUNCTION DISPLAY
- Trademark:	FURUNO
- Family name:	NavNet TZtouchXL
- Type designation:	TZT10X/13X/16X/22X/24X/BBX