



Type Approval Certificate

[Hardware Platform for Dynamic Positioning Control System]

Initial Approval 24 December 2025
Manufacturer Kongsberg Maritime AS
 Kirkegardsveien 45, Carpus P.O.Box 483 N-3601 3616 Kongsberg
Product Description Type : Hardware Platform for K-Pos Dynamic Positioning Control Systems

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 23 December 2030

Issued at Busan, Korea on 24 December 2025



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME25056510533) and certificate No.(CPH03795-AC012).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 24 December 2025

A. Product Description

1. Product Specification

1) Product Description :

This Type Approval covers the hardware platform for KONGSBERG Maritime K-Pos Dynamic Positioning Control Systems, comprising the modules listed below (see the individual system certificates for required configurations).

Module Type	Item No.	Document No.	Product Description	Compass Safe Distance (mm)
Operator Terminals	110-0010765	110-0018781 Rev. C	cJoy Operator Terminal, Mk4	500
	484758	486670 Rev. A	cWing Mk3 Built-in	700
	484760	486670 Rev. A	cWing Mk3 Portable	700
Displays	469945	435492 Rev. F	Display 15" FHD XT MK1	1100
	469948	110-0007831 Rev. A	Display 22" FHD X MK1	1850
	469971	110-0067604 Rev. A	Display 24" FHD XE MK1	2050
	110-0002528	(EU RO MR CERT: MRA0000016)	Display 27" FHD XE MK2	1900
	469973	(KR CERT: CPH46109-AC001)	Display 32" Full HD 16:9 ECDIS	2400
	472402	(KR CERT: CPH46001-AC005)	Display 55" Ultra HD 16:9 ECDIS	2400
Computers	477549	483089 Rev. A1 (KR CERT: GZU41200-AC002)	Computer MC340 i3 LAN	150
	110-0016256	110-0047724 Rev. A (KR CERT: NYK47060-AC001)	Computer MC360 i3 LAN +C13:P13	722
Acc.	110-0021928	110-0043970 Rev. A	USB Extender VL66298 Receiver	300
	110-0021927	110-0043970 Rev. A	USB Extender VL66298 Transmitter	30
	452181	463286 Rev. A (EU RO MR CERT: MRA000002D)	Rev. A Adapter USB to 4 x RS232 DB9M	-
	457971	463482 Rev. A	Adapter USB to 1 serial RS232	100
	459962	463483 Rev. A	Adapter USB to 1 serial RS422	100
	404654	409453 Rev. D	L2C module	100
Panel Modules	603526	300977 Rev. B	Panel ALC	300
	603530	300983 Rev. B	Panel BU DP	250
	110-0049940	300984 Rev. E	Panel Input Mk3 COP 05	200
	603550	300985 Rev. B	Heading Wheel COP 05	200
	304849	307003 Rev. B	Joystick KC 06-K	700
	334092	338386 Rev. A	Tracker Ball Stand alone Panel	470
Junction Box	400320	400360 Rev. C	cJoy OT JB MK3 w/5m cable	-
	400359	400360 Rev. C	cJoy OT JB MK3 w/15m cable	-
	603206	178007 Rev. F	cWing Junction Box for WT	-
Network Modules	343608	343879 Rev. E	Switch DIN EDS-205A	700
	463211	470973 Rev. C	Switch DIN EDS-208A	700
	702485	178001 Rev. F	Switch DIN EDS-308	700
	110-0061800	110-006180 Rev. A (KR CERT: KA034239-AC001)	Router DIN EDR-8010-2GSFP	400
	110-0113920	110-0114013 Rev. A	Router DIN EDR-G9010-VPN -2MGSFP	450

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Module Type	Item No.	Document No.	Product Description	Compass Safe Distance (mm)
Network Modules	467615	472200 Rev. B	Switch DIN EDS-408A	700
	467617	472202 Rev. B	Switch DIN EDS-518E-4GTXSFP	600
	469125	489196 Rev. D	Switch Cisco C1000-24T-4G-L	240
	382427	439059 Rev. B	Switch IKS-6728A	500
	110-0037724	110-0037765 Rev. A	Switch IKS-6726A	500
	486643	489196 Rev. D	Router Cisco C1121X-8P	1700
Power Modules	472571	110-0020567 Rev. B01	Power PRO TOPI 120W 24V 5A	700
	472572	110-0020568 Rev. B01	Power PRO TOPI 240W 24V 10A	700
	326396	110-0058557 Rev. A	Power QUINT-PS/1AC/24DC/10A	1250
	436708	449192 Rev. A	Power, TRIO-PS-2G/1AC/24DC /5/B+D	300
Remote I/O Modules	477601	110-0022770 Rev. B	RCU601 Module	300
	383962	418371 Rev. C	RCU602 Module	300
	603442	312740 Rev. C	RHUB200-5 Module	1400
	324400	351489 Rev. A	RMP201-8 Module	150
	603444	312741 Rev. C	RSER200-4 Module	150
	Printers	110-0000324	110-0000794 Rev. D (KR CERT: NYK47060-AC001, GZU41200-AC002, CPH46109-AC001)	Digital Printer

2. Approved Drawings and Documents

1) Approved Documents

- 110-0018781 Rev. C, 486670 Rev. A, 435492 Rev. F, 110-0007831 Rev. A, 110-0067604 Rev. A, 483089 Rev. A1, 110-0047724 Rev. A, 110-0043970 Rev. A, 110-0043970 Rev. A, 463286 Rev. A, 463482 Rev. A, 463483 Rev. A, 409453 Rev. D, 300977 Rev. B, 300983 Rev. B, 300984 Rev. E, 300985 Rev. B, 307003 Rev. B, 338386 Rev. A, 400360 Rev. C, 400360 Rev. C, 178007 Rev. F, 343879 Rev. E, 470973 Rev. C, 178001 Rev. F, 110-006180 Rev. A, 110-0114013 Rev. A, 472200 Rev. B, 472202 Rev. B, 489196 Rev. D, 439059 Rev. B, 110-0037765 Rev. A, 489196 Rev. D, 110-0020567 Rev. B01, 110-0020568 Rev. B01, 110-0058557 Rev. A, 449192 Rev. A, 110-0022770 Rev. B, 418371 Rev. C, 312740 Rev. C, 351489 Rev. A, 312741 Rev. C, 110-0000794 Rev. D

3. Test Reports, etc.

1) Test Reports

- E171625E1, E101382E2, E161710E2, E21236.00, E15165.01, E20096.02, E18040.01, E21059.03, 0026-H0203-0000318206, 22-17887, D/22/4888/01, 110-0050157, 22A0686R-0E301230008-1, REP008558, REP014885, REP019643, TL15055 Issue 5, TL16124A, TL1316, DANAK-198508, E21088.03, E21229.00, E21240.01, Nr. 581, Nr. 1121, 482249 Rev. A1, 482250 Rev. A, DANAK-1910612 Rev. B, DANAK-198195 Rev. 1, DANAK-1910727, DANAK-19/16085 Rev. A, 17A0322R-ITCEP16V00, 1750281R-ITCEP16V00, 1750450R-ITCEP16V00, REP006135B, 2110118R-E3012100075, 2330521R-E3012100075-A, 2370018R-3012100075-A, 2110219R-E3012300001, 2090946R-E3012300003, 21C0426R-E3012300003-1, 2110223R-E3012300001, 2110224R-E3012300001, 2110234R-E3012300001, 22A0686R-0E3012300018-1, A19-001-WT, 9501-029-033XX-001

B. Approval Condition

1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation.
- 2) Degree of protection is to be complied with Rule Pt.6 Ch.1 Sec.2 201.2. (5).
- 3) The manufacturer is to inform this Society of all kinds of revisions of the equipment including the major changes of software. If the changes are recognized to affect the functionality of the approved equipment, a type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 4) This approval is only valid for hardware components listed on this certificate.

Product Description and/or Approval Condition

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2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is required.
- 2) In the case where this system is installed on board, the system drawings for individual vessel are to be approved by this Society.

3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

4. Others

- 1) Test condition

Test	Condition	Item No.
EMC	All locations including the bridge and deck zone	All
Temp.	-25 ~ +70°C	484758, 484760, 477549, 457971, 459962 404654, 343608, 463211, 702485, 467615 467617, 469125, 382427, 486643, 472571 472572, 326396, 436708, 110-0037724 110-0061800, 110-0113920
	-15 ~ +55°C	110-0002528, 469973, 472402
	-15 ~ +70°C	110-0010765, 110-0016256, 110-0021928 110-0021927, 603526, 603530, 110-0049940 603550, 334092, 477601, 383962, 603442 324400, 603444, 469945, 469948, 469971 452181, 110-0000324
	+5 ~ +70°C	304849
Vibration	Acceleration \pm 0.7g	All

< End of certificate >