



# Type Approval Certificate

[ Control & Safety System with Cyber Resilience ]

**Initial Approval** 20 September 2024  
**Manufacturer** Kongsberg Maritime AS, Horten  
 Bekkajordet 8, NO-3189 Horten, Norway

**Product Description** Electronic Ship Automation Equipment

Type : AutoChief C600, K-Steering  
 - Application : Trusted network only  
 - Manufacturing Place

- A) Kongsberg Maritime AS (HQ) / Kirkegardsveien 45, 3616 Kongsberg, Norway
- B) Kongsberg Maritime AS (Horten) / Bekkajordet 8A, NO-3189 Horten, Norway
- C) Kongsberg Maritime Korea / 9-7 Sandan 3-ro, Jeonggwan-eup, Gijang-gun, Busan, 46027, Republic of Korea
- D) Kongsberg Maritime China (Shanghai) / No. 136 North Fute Road, China (Shanghai), Pilot Free Trade Zone, 200131, China

" 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.

Ch. 3 of the Guidance for Cyber Resilience of Ships and Systems

This Certificate is valid until 19 September 2029

Issued at Busan, Korea on 20 September 2024



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(ME24046368061) and certificate No.(CPH27937-CS001).



**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 : 20 September 2024

### A. Product Description

#### 1. Product Specification

##### 1) Product Description

The AutoChief C600 system is designed for the following application functions:

- Main Engine remote control and monitoring
- Safety protection of main engine
- Speed governing of main engine
- Engine telegraph

The K-Steering system is designed for the following application functions:

- Steering gear remote control, monitoring, and alarm
- Interface to autopilot and (optional) dynamic positioning system and independent joystick system

##### 2) Hardware components

AutoChief C600 & K-Steering (Common modules)

Name	Description	TA Cert no.
MC340 i3 LAN	PC computer, Lenovo ThinkStation P340 Tiny	GZU41200-AC002
MC360 i3 LAN	PC computer, Lenovo ThinkStation P360 Tiny	NYK47060-AC001
CP12	OS panel computer 12"	CPH27937-AC001
SCU	Controller	CPH27937-AC001
L2C	LAN to CAN Gateway	CPH27937-AC001
RAi-10tc	10 analogue inputs	CPH27937-AC001
RAI-16xe	16 analogue inputs	CPH27937-AC001
MEI	Main Engine Interface	CPH27937-AC001
RPME	RPM Unit	CPH27937-AC001
RPMU	RPM Unit	CPH27937-AC001
ESS	Electric Shaft System	CPH27937-AC001
PSS	Process Segment Starcoup	CPH27937-AC001
MPP	Multi-Purpose Panel	CPH27937-AC001
MPD	Multi-Purpose Display	CPH27937-AC001
RDi-32xe	32 digital inputs	CPH27937-AC001
RDi-32Axe	32 digital inputs	CPH27937-AC001
RAo-08xe	8 analogue outputs	CPH27937-AC001
RDo-16xe	16 digital outputs	CPH27937-AC001
ESU	Engine Safety Unit	CPH27937-AC001
ESU-12	Engine Safety Unit	CPH27937-AC001
C2xe	Digital input/digital output	CPH27937-AC001
DGU	Digital Governor Unit	CPH27937-AC001
LTU 11	Lever Telegraph Unit 11	CPH27937-AC001
LTU 11 ME	Lever Telegraph Unit 11	CPH27937-AC001

## Product Description and/or Approval Condition

Date of Issue : 20 September 2024

Name	Description	TA Cert no.
BWU 21 right version	Bridge Wing Unit	CPH27937-AC001
BWU 21 left version	Bridge Wing Unit	CPH27937-AC001
Telegraph PBT	Push Button Telegraph	CPH27937-AC001
Lever K-Thrust Single w/display	Single Lever with display	CPH27937-AC001
Lever K-Thrust Dual w/display	Dual Lever with display	CPH27937-AC001
Lever K-Thrust Single	Single Lever	CPH27937-AC001
Lever K-Thrust Dual	Dual Lever	CPH27937-AC001
Lever display	Lever display	CPH27937-AC001
KBE 15	Button Extension	CPH27937-AC001
ABE 11	Button Extension	CPH27937-AC001
EDS 408A	Network Device	-
OPU-09 AC	Order Printer	-
15" FHD XT MK1	DuraMON, Marine Used LCD Display	CPH46109-AC001

### AutoChief C600

Name	Description	TA Cert no.
PB4	Push Button 4	CPH27937-AC001
ELACT 3812	Electrical Fuel Actuator	CPH27937-AC001
DSU 38	Electrical Fuel Actuator	CPH27937-AC001

### K-Steering

Name	Description	TA Cert no.
Mini Wheel K-Thrust	Mini Wheel K-Thrust	CPH27937-AC001
Mini Wheel K-Thrust w/Display	Mini Wheel K-Thrust with display	CPH27937-AC001

### 3) Software components AutoChief C600 & K-Steering (Common software)

Name	Description	Version
C600	Application Software	12.16.94

## Product Description and/or Approval Condition

Date of Issue : 20 September 2024

### 2. Approved Drawings and Documents

- 1) Approved documents
  - CBS asset inventory : 110-0051790 Rev. E
  - Topology diagrams : 110-0056695 Rev. B, 110-0062446 Rev. A
  - Description of security capabilities : 110-0056696 Rev. C
  - Test procedure for security capabilities : 110-0056698 Rev. B
  - Secure development lifecycle : KM-GUI-0118 Rev. A

### 3. Test Reports, etc.

- 1) Test Reports No.
  - 110-0056698 Rev. B dated 2020.05.22 witnessed by KR Surveyor
- 2) Etc.
  - Security configuration guidelines : 110-0056704 Rev. B, 110-0076351 Rev. B
  - Plans for maintenance and verification : KM-PROC-0057 Rev. E
  - Information supporting incident response and recovery plans : 110-0068347, 493996 Rev. E, KM-GUI-9504 Rev. 3, KM-GUI-9505 Rev. D
  - Management of change plan : KM-PROC-0080 Rev. A, KM-PRO-0120 Rev. A

## B. Approval Condition

### 1. Application & Limitation

- 1) This approval is granted on the basis of the approved documentation and the test reports (IACS UR E27 Rev. 1).
- 2) This system is not to be connected to the untrusted network.
- 3) The manufacturer is to inform this Society of all kinds of revisions of the equipment including 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.

### 2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is not required according to Ch. 3 of the Guidance for Cyber Resilience of Ships and Systems.
- 2) In the case where this system is installed on board, below documents for individual vessel are to be submitted to this Society according to Ch. 3 of the Guidance for Cyber Resilience of Ships and Systems.
  - Approved documents
    - CBS asset inventory
    - Topology diagrams
  - Reference documents
    - Cyber Resilience Test reports

### 3. Marking

N/A

### 4. Others

N/A

< End of Certificate >