



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00003VG
Revision No:
1

This is to certify:

that the **Personal Computer**

with type designation(s)
IPC 6010, IPC 7010, IPC 8010

issued to

ICC Intelligent Platforms GmbH
Augsburg, Bayern, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Location classes:

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	A

Issued at **Høvik** on **2026-05-07**

This Certificate is valid until **2031-04-22**.

DNV local unit: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

PACSystems IPC Series 6010, 7010 or 8010 with following configurations:

Standard features for all versions (by order code):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Description	Comment
R ¹	P ¹	B ¹														Product Line	
			6													6010 - Low Power, Slim (15W)	
			7													7010 - Advanced (28W)	
			8													8010 - High End (45W)	
																Processor	
			6*	A												U300E 1xPC, 4xEC, CT	15W Commercial Temp
			6*	B												i3-1315UE 2xPC, 4xEC, CT	15W Commercial Temp
			6*	C												i5-1335UE 2xPC, 8xEC, Non-vPro, CT	15W Commercial Temp
			6*	D												i5-1345UE 2xPC, 8xEC, CT	15W Commercial Temp
			6*	E												i7-1365UE 2xPC, 8xEC, CT	15W Commercial Temp
			6*	F												U300RE 1xPC, 4xEC, CT	15W Commercial Temp
			6*	G												i3-1315URE 2xPC, 4xEC, ET	15W Extended Temp
			6*	H												i5-1345URE 2xPC, 8xEC, ET	15W Extended Temp
			6*	I												i7-1365URE 2xPC, 8xEC, ET	15W Extended Temp
			7	J												i3-1320PE 4xPC, 4xEC, CT	28W Commercial Temp
			7	K												i5-1340PE 4xPC, 8xEC, Non-vPro, CT	28W Commercial Temp
			7	L												i5-1350PE 4xPC, 8xEC, CT	28W Commercial Temp
			7	M												i7-1370PE 6xPC, 8xEC, CT	28W Commercial Temp
			7	N												i3-1320PRE 4xPC, 4xEC, ET	28W Extended Temp
			7	P												i5-1350PRE 4xPC, 8xEC, ET	28W Extended Temp
			7	Q												i7-1370PRE 6xPC, 8xEC, ET	28W Extended Temp
			8	R												i3-13300HE 4xPC, 4xEC, CT	45W Commercial Temp
			8	S												i5-13600HE 4xPC, 8xEC, CT	45W Commercial Temp
			8	T												i7-13800HE 6xPC, 8xEC, CT	45W Commercial Temp
			8	U												i3-13300HRE 4xPC, 4xEC, ET	45W Extended Temp
			8	V												i5-13600HRE 4xPC, 8xEC, ET	45W Extended Temp
			8	W												i7-13800HRE 6xPC, 8xEC, ET	45W Extended Temp
																RAM Size	
																4 GB LPDDR5	2x 512M32 (512Mx16 x 2Ch x 1R) / 6400 MT / 8Gb
																8 GB LPDDR5	2x 1G32 (1Gx16 x 2Ch x 1R) / 6400 MT / 16Gb
																16 GB LPDDR5	4x 1G32 (1Gx16 x 2Ch x 1R) / 6400 MT / 32Gb
																32 GB LPDDR5	4x 2G32 (1Gx16 x 2Ch x 2R) / 6000 MT / 64Gb
																64 GB LPDDR5	4x 4G32 (2Gx8 x 2Ch x 2R) / 6000MT / 128Gb
																MRAM	
																No MRAM	
																8Mb MRAM populated (PCI12000 connection)	
																SSD Size	
																no SSD	
																64 GB SSD M.2	
																128 GB SSD M.2	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Description	Comment
								3								256 GB SSD M.2	
								4								512 GB SSD M.2	
								5								1 TB SSD M.2	
								6								2 TB SSD M.2	
								7								4 TB SSD M.2	
																Operating System	
								x								Any operating system and/or software solution (qualified by maker)	
								0								Reserved	
																Add in Modules	
										N						no add-ins	
										D						AI	ML (machine learning) 3rd party plug in cards
										E						NVRAM	
										H						AI + NVRAM	
																Extension Slots	
										0						no extension slots	15W, 28W & 45W
										1						1 PCIe slot extension	15W, 28W & 45W, PERC41
										2						2 PCIe slot extension	28W & 45W only, PERC42
										3						3 PCIe slot extension	28W & 45W only, PERC43
										4						4 PCIe slot extension	45W only, PERC44
										7						2 PCIe slot extension	45W only, PERC47
																Ambient Class	
										A						0°C up to 60°C – standard temperature	
										F						-40°C up to 70°C - extended temperature	
																Customization Options	
													X	X	X	Project No.	
*15W CPUs can also be used with the 7010/8010 housing																	
1) RPB can be replaced by other designations, such as: 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 342, 355																	

Accessories:

Mounting kit:

R2B00ACCRM01 (2x)	DIN Rail Mounting Kit
R2B00ACCMP01 (2x)	Panel Mounting Kit
R2B00ACCMP03 (1x)	Panel Mounting Kit Wide
(Mounting options to be observed as specified in the Marine Mounting Matrix of the User Manual, Section 10: 'Marine Requirements')	

PCIe cards:

PCIESER16V3AF	PCIe Serial Card
ZCIFIREWALLPCIE	FL MGuard 4102 PCIe Router (PhoenixContact 1357842)
ZCEC-IPEH003027	PCAN-PCI Express Dual Channel galv. Isol (PEAK IPEH-003027)
ZCEC-CANPCIE4022	PCIe CAN 2Port card w/ 2xD-Sub (CAN-PCIe/402-2)

Memory card:

TS20GUSD240I	uSD
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Compass safe distance:

Standard compass:	500 mm
Steering compass:	250 mm

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the

application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After certification the clause for software control will be put into force.

Application/Limitation

The IPC 6010, IPC 7010, IPC 8010 must be installed and used with a DNV certified PSU such as Phoenix QUINT-PS/1AC/24DC/10 but not limited to.

Ferrites Würth Elektronik, Part Number 7427727 (2x) to be installed at power supply lines of IPC 7010 and IPC 8010. (Maker's User Manual, Section 10: 'Marine Requirements' to be observed)

Type Approval documentation

PACSystems™ IPC 6010/7010/8010 & 342 MARINE Test Specification, Rev. D

Test Report: MEC+EAS-25002-PR01-M01, dated 2025-12-12

Test Report: MEC+EAS-25002-PR01-M02, dated 2025-12-12

Test Report: MEC+EAS-25002-PR01-M03, dated 2025-12-16

Test Report: EAS-25002-PR01-E01-01, dated 2026-03-19

Test Report: EAS-25002-PR01-E02-01, dated 2026-03-19

Test Report: CLI+EAS-25002-PR01-K01, dated 2025-12-16

Test Report: ACU+EAS-25003-PR01-A01, dated 2025-12-23

Test Report: SGS Germany no. X0LP0001 SGS Germany, dated 2026-03-17

Test Report: SGS Germany no. X0LP0002 SGS Germany, dated 2026-03-17

Test Report: IABG no. TP-TR40-2245, dated 2026-02-13

Test Report: 'PACSystems™ IPC 6010/7010/8010 & 342 Marine Cold Test' Rev. B, dated 2026-05-05

PACSystems™ IPC 6010, IPC 7010, IPC 8010 Product Data Sheet 08/25

PACSystems™ IPC 6010/7010/8010, User Manual, doc. no. GFK-2206C (Mar 2026)

PCIESER Hardware Reference Manual, doc. no. GFK-32284A, Feb. 2024

Hailo-8TT M.2 ET Module, data sheet Rev. 2.04

CAN-PCle/402(-FD) Hardware Manual Doc. No.: C.2045.21 / Rev. 1.6

Phoenix Contact FL MGUARD 4102 PCIE – Router Data Sheet 1357842 (26.11.2024)

Construction drawings, schematics, PCB-Layouts, Part Lists – design package V1.4

Type approval assessment report issued on 2026-03-04 at Augsburg

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

For the bridge mounted devices, the 'Acoustic noise and signals' and the 'Compass safe distance' were measured according to sections 11.1 and 11.2 of IEC 60945, 4th edition (2002).

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate



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Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE