



APPLICATION FOR ESCC CAPABILITY APPROVAL (or its EXTENSION):

CAPABILITY DOMAIN: Hermetic Hybrid Microcircuits

Executive Member: ESA

Date: 20/11/2025

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Appl. No.

384A

Capability domain submitted for approval

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Capability Domain Description	Capability Abstract Number	Based on Technology	Test Structures	Component Proposed for Qualification
Thin film Hybrids	NORS/2038/TPF/TNO001 Capability Abstract Kongsberg Hybrid Line	Thin film hybrid technology	STH-1080_TV STH-2130_TV STH-2291_TV STH-2915_TV STH-2923_TV	All Hybrids with components included in PID1198

Component Manufacturer
Kongsberg Defence & Aerospace AS

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Location of manufacturing plant(s)
**Knudsrødveien 7
N-3189 Horten
Norway**

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ESCC Specifications used for Capability Approval

4

Generic: ESCC25600 Issue 1
Details: ESCC2566000 Issue 3

Report reference:
NORS/2038/TPF/QUR001 HYB PCA Test report
ESA-TECQEC-LAB-TR-2022-002958

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PID used for manufacturing Approval Testing Lot
Reference No.: NORS/HYBRID/GEN/MIF/PID1198

Issue: 3

Revision: -

Date: 27/05/2021

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PID Changes since start of Capability Approval

- None
- Minor* * provide details in Box 12
- Major*

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Current PID Verified by: ESA
Name of Executive Representative

Ref. No.: NORS/HYBRID/GEN/MIF/PID1198

Issue: 5

Date: 26/09/2025

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Current Manufacturing Facilities and Quality System audited by:

ESA on 11/05/2022 NORS/2038/ECF/20220511 QS Audit and Line Survey (Part 2)

Name of Executive Representative Liam Murphy Date 11/05/2022 Report Reference Number: MOM009_1

Satisfactory: Yes No Corrective Actions Closed Out: Yes No N/A

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Quality and Reliability Data

Evaluation testing performed Yes No

Report Ref. No.: NORS/5007/TPF/QUR001_1 date: 05.12.2024

Equivalent data: N/A

Certification: ESA Certificate of Process Capability Approval No. 384

Failure Analysis, DPA, NCCS: Yes No
(supply data)

Ref. Nos. and purpose:

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	<p align="center">APPLICATION FOR ESCC CAPABILITY APPROVAL (or its EXTENSION)</p> <p>CAPABILITY DOMAIN:</p> <p>Executive Member: ESA</p> <p align="right">Date: 20/11/2025</p>	<p>Page 2</p> <p>Application No.</p> <p>384A</p>
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The undersigned hereby certifies on behalf of the ESCC Executive, that the above information is correct; that the appropriate documentation has been evaluated; that full compliance to all ESCC requirements is evidenced except as stated in box 13; that the reports and data are available at the ESCC Executive and therefore applies for ESCC Capability Approval status to be given to the capability domain defined herein.

Date:

Denis
Lacombe

Digitally signed by
Denis Lacombe
Date: 2025.11.28

15:23:23 +01'00'

(Signature of the Executive Coordinator)

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Continuation of Boxes above:

PID Change log from issue 4 to issue 5 (see NORS\5007\TPF\TNO002_1C)

	<p align="center">APPLICATION FOR ESCC CAPABILITY APPROVAL (or its EXTENSION)</p> <p>CAPABILITY DOMAIN:</p> <p>Executive Member: ESA</p> <p align="right">Date: 20/11/2025</p>	<p>Page 3</p> <p>Application No.</p> <p>384A</p>
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Non compliance to ESCC requirements:

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No.:	Specification	Paragraph	Non compliance

Additional tasks required to achieve full compliance for ESCC Capability Approval or rationale for acceptability of noncompliance:

14

Executive Manager Disposition:

15

Application Approval: Yes No

Action/Remarks:

Date: 30/11/2025

Ali Zadeh

A. Zadeh - Head of the Avionics and EEE Division

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NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC CAPABILITY APPROVAL [or its EXTENSION, see BOX 12 below]		
GENERAL	Whenever possible, all entries should be typed and in any case be suitable for legible reproduction by normal means.	
ENTRIES Form heading	shall indicate: - the title of the capability domain or the technology as given in the Capability Abstract - the Executive Member ; - the entering date; - the serial number and the suffix of the form.	
Box 1	shall provide under capability domain description the full name or a description statement of the capability domain – the number of the Capability Abstract document – the basic technology used for capability approval – the test structures specification numbers or identification numbers – the components which successfully passed component approval test and are proposed for qualification within the domain. N.B. The capability abstract shall be attached as an Appendix.	
Box 2 and 3	Manufacturer's name and location of the plant(s) where the capability domain is situated.	
Box 4	The ESCC Generic and Detail specifications (including issue number and date) used during Capability Approval.	
Box 5	Reference to test report(s) submitted in support of the application for capability approval and components proposed for qualification.	
Box 6	Enter details to identify the PID that was applicable at the time of manufacturing of samples for capability approval testing.	
Box 7	If the PID has been changed during or after capability approval testing, adequate details shall be provided together with the reasons for change. Major changes shall be clearly identified.	
Box 8	The box serves to identify the current PID and the Executive Representative that has verified it together with the date of this verification.	
Box 9	The box can be completed only after a physical visit to the plant to confirm that the practices, procedures, material, etc. used in manufacturing the components are as described in the PID. This audit shall be carried out in accordance with the requirements of ESCC Basic Specification No. 20200 and the results shall be formally recorded. The report number shall be referenced.	
Box 10	Details entered shall be sufficient to evidenced that an evaluation programme according to ESCC Basic Specification No. 24300 has been performed and that the results thereof are summarised in the audit and test reports. If the evaluation programme has not been carried out according to established ESCC Specifications, the applicant Executive Member shall provide alternative data and declare the assessed degree of satisfactory compliance with the ESCC requirements. Reference shall be made to the reports on Destructive Physical Analysis (DPA), Failure Analysis reports as well as any Non Conformance (NCCS) issued during the Evaluation and/or capability approval testing.	
Box 11	Enter the name of the Executive Member (i.e., CNES, DLR, ESTEC, etc.) and the signature and date of the responsible Executive Coordinator .	
Box 12	To be used when there is a need to expand any of the boxes from 1 through 10. Identify the Box affected and reference Box 12 in the relevant Box. Box 12 can be broken into 12a, 12b, etc. if several boxes have to be expanded. In the case of Application for the Extension of Capability Approval, the Box 12 may be used to provide a summary of lots of component types (types, date codes, quantity) manufactured and tested within the capability domain. Refer to ESCC 24300, paragraph 9.4.3 for complete requirements.	
Box 13	State noncompliance with reference to specification(s) and paragraph(s). To simplify reference in Box 14 each nonconformance shall be sequentially numbered. If relevant state 'None'.	
Box 14	Any additional action deemed necessary by the Executive Member to bring the submitted data to a standard likely to be accepted by the ESCC Executive should be listed herein or the reason(s) to accept the noncompliance.	
Box 15	All Executive Manager recommendations on the application itself, special conditions or restrictions, modifications of the ESCC QPL entry, letters to the manufacturer, etc. shall be entered clearly in Box 15, signed by the representative for ESA , and dated.	