



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX TSA 25.0004X** Page 1 of 4 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2025-03-14
Applicant: **Nautitech Mining Systems Pty Limited**
Unit 3/9 Packard Ave
Castle Hill NSW 2154
Australia
Equipment: **IS HD and Thermal Camera, IS Profiler - HD: type 12501, Thermal: type 12502, Profiler: type 12503, IS HD CAN
CAM type 12504, IS Thermal CAN CAM type 12505**
Optional accessory:
Type of Protection: **Intrinsic safety "i"**
Marking: **Ex ia I Ma**
-20°C to +60°C

Approved for issue on behalf of the IECEx
Certification Body:

Ujen Singh

Position:

Quality & Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

14 March 2025

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





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Certificate No.: **IECEX TSA 25.0004X**

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Date of issue: 2025-03-14

Issue No: 0

Manufacturer: **Nautitech Mining Systems Pty Limited**
Unit 3/9 Packard Ave
Castle Hill NSW 2154
Australia

Manufacturing locations: **Nautitech Mining Systems Pty Limited**
Unit 3/9 Packard Ave
Castle Hill NSW 2154
Australia

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2023](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[AU/TSA/ExTR25.0003/00](#)

[ZA/ICS/ExTR24.0034/00](#)

Quality Assessment Report:

[AU/MSQ/QAR21.0001/02](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The IS HD (type 12501 & 12504) and Thermal (type 12502 & 12505) Camera are intrinsically safe imaging devices. These cameras can connect to other intrinsically safe equipment using the M23 or a Nautitech SSLink metal connector, which support both power and network and CAN connections.

The IS Profiler (type 12503) is an intrinsically safe data logging device that can also connect to other intrinsically safe equipment through the M23 or a Nautitech SSLink connector, which facilitates power, network, and CAN communication.

Both the Camera and Profiler can be operated through their respective interfaces. The equipment enclosure is made of stainless steel and features a removable stainless steel lens cover. It includes an optional specialized antenna for Wi-Fi connection, a glass lens (germanium glass for the thermal camera and solid lid for profiler), a metal connector as well as an optional adjustable stainless steel gimbal mounting facility.

The camera can optionally be mounted using side or bottom threaded holes.

The safety parameters for the applicable interfaces are listed below:

Thermal and HD Camera Power	Profiler Power
$U_i = 14 \text{ V}$	$U_i = 9 \text{ V}$
$C_i = 2.31 \mu\text{F}$	$C_i = 2.31 \mu\text{F}$
$L_i = 0$	$L_i = 0$

Thermal and HD Camera Power (Ethernet 1 and 2) Profiler (Ethernet 1)	Profiler CAN Power
$U_i = 14 \text{ V}$	$U_i = 9 \text{ V}$
$C_i = 290.4 \text{ nF}$	$P_i = 3.15 \text{ W}$
$L_i = 0$	$C_i = 8.75 \mu\text{F}$
	$L_i = 0$

The equipment will be supplied with User Manual Document number QA-PM-67.

Refer to attached Annexe for details of all variants.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The unit is subject to an IEC 60079-25 IS systems approval.



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Additional information:

Manufacturer routine tests on encapsulation are applicable as per IEC 60079-11, clause 10.4.

Annex:

[IECEX TSA 25.0004X-0_annexe- AA.pdf](#)



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 25.0004X	Issue No.:	0
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Equipment: continue.

Existing types covered by ZA/ICS/ExTR24.0034/00			New added type covered by AU/TSA/ExTR25.0003/00	
12501 HD CAM ETH 1 & 2	12502 THERMAL CAM ETH 1 & 2	12503 Profiler ETH & CAN	12504 HD CAM ETH & CAN	12505 THERMAL CAM ETH & CAN

Drawing list pertaining to Issue 0 of this Certificate:

Document / Drawing No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
CD_12501-12502-12503-12504-12505-A	1 of 1	*IS THERMAL/HD CAMERA & PROFILER - CERTIFICATION DETAIL	2	2025-03-05
DS_12501-12502-12503-12504-12505-A	1 of 1	*IS THERMAL/HD CAMERA & PROFILER - DATA SHEET	2	2025-02-24
DS_12501-12502-12503-A	1 of 1	*IS THERMAL/HD CAMERA & PROFILER - DATA SHEET	1	2025-01-22
7704	1 of 9	*Part# 7704 IS Camera Main Top Layer	2.0	2024-11-13
7704	2 of 9	*Part# 7704 IS Camera Main Mid Layer 1	2.0	2024-11-13
7704	3 of 9	*Part# 7704 IS Camera Main Mid Layer 2	2.0	2024-11-13
7704	4 of 9	*Part# 7704 IS Camera Main Bottom Layer	2.0	2024-11-13
7704	5 of 9	*Part# 7704 IS Camera Main Top Overlay	2.0	2024-11-13
7704	6 of 9	*Part# 7704 IS Camera Main Bottom Overlay	2.0	2024-11-13
7704	7 of 9	*Part# 7704 IS Camera Main Top Paste	2.0	2024-11-13
7704	8 of 9	*Part# 7704 IS Camera Main Bottom Paste	2.0	2024-11-13
7704	9 of 9	*Part# 7704 IS Camera Main PCB Stackup	2.0	2024-11-13
7706	1 of 9	*Part# 7706 IS Camera Top Top Layer	2.0	2024-06-24

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Annexe for Certificate No.:	IECEX TSA 25.0004X	Issue No.:	0
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Document / Drawing No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
7706	2 of 9	*Part# 7706 IS Camera Top Mid Layer 1	2.0	2024-06-24
7706	3 of 9	*Part# 7706 IS Camera Top Mid Layer 2	2.0	2024-06-24
7706	4 of 9	*Part# 7706 IS Camera Top Bottom Layer	2.0	2024-06-24
7706	5 of 9	*Part# 7706 IS Camera Top Top Overlay	2.0	2024-06-24
7706	6 of 9	*Part# 7706 IS Camera Top Bottom Overlay	2.0	2024-06-24
7706	7 of 9	*Part# 7706 IS Camera Top Top Paste	2.0	2024-06-24
7706	8 of 9	*Part# 7706 IS Camera Top Bottom Paste	2.0	2024-06-24
7706	9 of 9	*Part# 7706 IS Camera Top PCB Stackup	2.0	2024-06-24
7708	1 of 7	*Part# 7708 IS Camera Bottom Top Layer	3.0	2024-12-04
7708	2 of 7	*Part# 7708 IS Camera Bottom Bottom Layer	3.0	2024-12-04
7708	3 of 7	*Part# 7708 IS Camera Bottom Top Overlay	3.0	2024-12-04
7708	4 of 7	*Part# 7708 IS Camera Bottom Bottom Overlay	3.0	2024-12-04
7708	5 of 7	*Part# 7708 IS Camera Bottom Top Paste	3.0	2024-12-04
7708	6 of 7	*Part# 7708 IS Camera Bottom Bottom Paste	3.0	2024-12-04
7708	7 of 7	*Part# 7708 IS Camera Bottom PCB Stackup	3.0	2024-12-04
7720	1 of 7	*Part# 7720 IR-Adapter Top Layer	1.0	2024-06-25
7720	2 of 7	*Part# 7720 IR-Adapter Bottom Layer	1.0	2024-06-25

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Document / Drawing No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
7720	3 of 7	*Part# 7720 IR-Adapter Top Overlay	1.0	2024-06-25
7720	4 of 7	*Part# 7720 IR-Adapter Bottom Overlay	1.0	2024-06-25
7720	5 of 7	*Part# 7720 IR-Adapter Top Paste	1.0	2024-06-25
7720	6 of 7	*Part# 7720 IR-Adapter Bottom Paste	1.0	2024-06-25
7720	7 of 7	*Part# 7720 IR-Adapter PCB Stackup	1.0	2024-06-25
7705	1 to 22	*7705 IS Camera-Main	1	2024-01-25
7707	1 of 10	*7707 IS Camera-FrontEnd	3	2025-01-22
7707	2 to 6 of 10	*7707 IS Camera-FrontEnd	1	2024-06-20
7707	7 of 10	*DS_EC CAN TRANSCEIVER	4	2023-06-13
7707	8 of 10	*DS_FE ISOLATED CAN OPTO	3	2021-11-23
7707	9 of 10	*DS_JV JV_Ui_13V Ci_5uF Li_0uH	7	2025-01-22
7707	10 of 10	*JZ BARRIER	2	2024-08-23
7709	1 of 1	*7709 IS Camera-BottomPCA	3	2025-01-17
7721	1 of 1	*7721 IR-Adapter	1	2024-06-21
12501-12502-12503	1 of 1	*12501-IS Camera & 12502-IS Profiler & 12503-IS Profier	4	2025-01-14
12501-12502-12503-12504-12505	1 of 1	*12501-12502 – IS Thermal / HD Camera 12503 – IS Profiler 12504-12505 – IS Thermal/HD CAN Camera	5	2025-02-27

Note: An "*" is added before the title of documents that are new or revised.

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