



# 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](http://www.iecex.com)

Certificate No.: **IECEX ITA 14.0021X** Page 1 of 5 Certificate history:  
Status: **Current** Issue No: 2 [Issue 1 \(2017-06-08\)](#)  
Date of Issue: 2021-08-20 [Issue 0 \(2015-02-16\)](#)  
Applicant: **Nautitech Mining Systems Pty Ltd**  
Unit 3, 9 Packard Avenue  
Castle Hill NSW 2154  
**Australia**  
Equipment: **IO Module Type 12030**  
Optional accessory:  
Type of Protection: **Intrinsic Safety "ia"**  
Marking: Nautitech  
Type 12030  
Ex ia I Ma  
-20C < Ta < +60C

Approved for issue on behalf of the IECEx  
Certification Body:

**Ajay Maira**

Position:

**Certification Authority**

Signature:  
(for printed version)

*Ajay Maira*

Date:

2021-08-20

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1/30 Kennington Drive  
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Australia



TESTING & CERTIFICATION



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Manufacturer: **Nautitech Mining Systems Pty Ltd**  
Unit 3, 9 Packard Avenue  
Castle Hill NSW 2154  
**Australia**

Additional  
manufacturing  
locations:

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 60079-0:2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"  
Edition:6.0

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 Report:

[AU/ITA/ExTR14.0050/00](#)

Quality Assessment Report:

[AU/MSC/QAR21.0001/00](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Input-Output Module (IO Module or IOM) is a purpose built apparatus that may be present in a configurable instrumented system built to achieve a safety and/or a control function. The IOM is suited for operation where explosive gases may be present. The complete instrumented system may use several modules, where the modules are mechanically and electrically connected to each other using header-socket connections on the compatible sides that mate with each other, and the modules are fastened together to form one assembly.

See Annexe for further details

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

See Annexe for details



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**  
See Annexe for details.



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**Additional information:**

Job 21105

**Annex:**

[IECEX ITA 14.0021X-2 Annex final.pdf](#)

<b>IECEX Certificate of Conformity</b>		
	<b>Annexe</b>	
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**Description:**

Continued from the 'Equipment' section of the certificate:

A typical configuration of the instrumented system may contain a power supply module which connects to a suitably certified input source (usually alternator or other mains connected power source) and after its voltage and current limitation delivers power on a '4 Pin Power Rail' to all the modules, thus forming a backplane based connection system. This high power rail with  $U_o = 20V$  and  $I_o = 11.9A$  is adequately segregated between the active and return lines, and also segregated from all other circuits, with connection pins duplicated and all the modules are fastened together to prevent sparking to be considered.

The backplane also contains four (4) selectable Exia Power Buses delivered by the PSM, UPS or compatible module on a 9 Pin Power Rail. The Exia Buses ( $U_o 8.95V$   $I_o 2.4A$ ) are suitably segregated and galvanically isolated to prevent combinations of circuits and energy. The Module can be configured to obtain power from only one of the four Ex ia power buses in the 9 Pin Power Rail. A separately certified suitably rated galvanically isolated power source delivers input power to the IOM through one of these circuits.

There are also 24 intrinsically safe, adequately segregated data circuits carried through the '24 Pin Signal Rail' to all the modules completing the communications on the backplane.

The purpose of the IO module is to acquire digital sensor data or otherwise output digital control signals through ten channels of four wire input-output that are available for external field connection through a connector located at the bottom of the enclosure.

The IO Module contains several internal printed circuit boards interconnected to each other. It is totally encapsulated except for the keypad switches on the front (user available) surface of the module.

PCA 7521 (UIFP) also contains low energy, wireless, 2.4GHz Bluetooth communication circuits with a maximum output transmission power of 10.5dBm (11.22mW).

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**Specific Conditions of Use pertaining to Issue 0 of this Certificate:**

- The IOM must be installed with a compatible module on either side or end plates to form a complete system.
- The parameters provided below shall be taken into account in installation. Consult the manufacturer for assistance and advice.

**Table 1.1**

<b>Internal Connectors (Backplane) J1, J2 *Note 2</b>				
Description	Circuit	Pin	Function	12030 IOM
Exia 9 pin Power Rail	BUS A	1	POWER_A	Processor Input Circuit  *Note 1
		2	GROUND_A	
	BUS B	7	POWER_B	
		4	GROUND_B	
	BUS C	3	POWER_C	
		6	GROUND_C	
	BUS D	8	POWER_D	
		9	GROUND_D	
Not Connected	5	Not Connected	Not connected	
Exia 24 Pin Signal Rail	Datalogger/Non Safety CAN BUS	10	CANH_NS	U <sub>i</sub> = 9V C <sub>i</sub> = 3uF L <sub>i</sub> = 0uH
		11	CANL_NS	
		28	CANH_DL	
		29	CANL_DL	
		19	DATA CAN POWER	
		12	DATA CAN GROUND	
	UPS Toggle	30	TOGGLE_1	U <sub>i</sub> = 9V
		33	TOGGLE_GROUND	Feed through only
		31	TOGGLE_2	U <sub>i</sub> = 9V
		33	TOGGLE_GROUND	Feed through only
		32	TOGGLE_3	U <sub>i</sub> = 9V
	Safety CAN BUS	33	TOGGLE_GROUND	Feed through only
		13	CANH_S	U <sub>i</sub> = 9V Feed through only
		14	CANL_S	
		26	SAFETYCAN POWER	
	25	SAFETYCAN GROUND		
	Heartbeat	17	DATAH	U <sub>i</sub> = 9V
		16	DATAL	Feed through only
	CAN BUS Bridge A	27	CANH_BA	U <sub>i</sub> = 9V
		21	CANL_BA	Feed through only
CAN BUS Bridge B	22	CANH_BB	U <sub>i</sub> = 9V	
	23	CANL_BB	Feed through only	

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	Spare	15	Reserved for future module	$U_i = 9V$ Feed through only
		18	Reserved for future module	$U_i = 9V$ Feed through only
		20	Reserved for future module	$U_i = 9V$ Feed through only
		24	Reserved for future module	$U_i = 9V$ Feed through only
4 Pin Power Rail	Charging Terminals	37	Ground	$U_n = 20V$ $I_n = 11.9A$ Feed through only See *Note 3
		36		
		35	Power	
		34		

\*Note 1: The IOM shall be configured to use only one set of configuration jumpers to source power from only one Power Bus. Entity parameters depend of the position of the configuration jumpers and are shown in the table 1.2 below.

\*Note 2: J1 and J2 form a back plane through each module with all signals passing through unless stated otherwise

\*Note 3: The Backplane '4 Pin Power Rail' is separate from all circuits in this IOM module, and has separation between the power and neutral rail, and has duplication of contacts to prevent sparking. The  $U_n$  20V and  $I_n$  11.9A are allowable nominal voltages and currents in Ex ia conditions.



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**Table 1.2**  
Parameters due to IOM configurations:

Permitted configurations	IOM #1	IOM #2	IOM #3	IOM #4	IOM #5
Jumpers populated	JP2_1 JP2_2	JP2_3 JP2_4	JP2_5 JP2_6	JP2_7 JP2_8	
BUS A	U <sub>i</sub> = 9V C <sub>i</sub> = 5.5uF L <sub>i</sub> = Neg	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only
BUS B	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V C <sub>i</sub> = 5.5uF L <sub>i</sub> = Neg	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only
BUS C	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V C <sub>i</sub> = 5.5uF L <sub>i</sub> = Neg	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only
BUS D	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V Feed through only	U <sub>i</sub> = 9V C <sub>i</sub> = 5.5uF L <sub>i</sub> = Neg	U <sub>i</sub> = 9V Feed through only

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c) The following parameters shall be taken into account for the connection of the external sensors to the IO Module:

External connector JDRC-40				Entity Parameters
Description	Circuit	Pin	Function	12030 IOM
Sensor circuits	1	1	Power	Per Circuit: U <sub>o</sub> = 9V I <sub>o</sub> = 569mA C <sub>o</sub> = 90uF L <sub>o</sub> = 1mH
		11	Signal	
		21	Common	
		31	Screen	
	2	2	Power	
		12	Signal	
		22	Common	
		32	Screen	
	3	3	Power	
		13	Signal	
		23	Common	
		33	Screen	
	4	4	Power	
		14	Signal	
		24	Common	
		34	Screen	
	5	5	Power	
		15	Signal	
		25	Common	
		35	Screen	
	6	6	Power	
		16	Signal	
		26	Common	
		36	Screen	
	7	7	Power	
		17	Signal	
		27	Common	
		37	Screen	
	8	8	Power	
		18	Signal	
		28	Common	
		38	Screen	
	9	9	Power	
		19	Signal	
		29	Common	
		39	Screen	
	10	10	Power	
		20	Signal	
		30	Common	
		40	Screen	

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**Drawing list pertaining to Issue 0 of this Certificate:**

Manufacturer's Documents				
Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date:
PLC				
ZUQPTY4FSNWN-191-477	1 of 1	12030_IOM_1r0-Schematics_Index	-	2015-02-03
ZUQPTY4FSNWN-191-268	1 of 43	Part# 12030-1.0 IO Module Coversheet (IOM) SCHEMATIC	2	2014-03-07
ZUQPTY4FSNWN-191-268	2 of 43	Part# 7495-1.0 PCB1-PSU SCHEMATIC	2	2014-02-14
ZUQPTY4FSNWN-191-268	3 of 43	Part# 7491-1.0 PCB2-FPGA SCHEMATIC	2	2014-02-27
ZUQPTY4FSNWN-191-268	4 of 43	Part# 7514-1.0 PCB3-INTERFACE SCHEMATIC	2	2014-02-27
ZUQPTY4FSNWN-191-268	5 of 43	Part# 7493-1.0 PCB4-SAFECPU SCHEMATIC	1	2014-02-27
ZUQPTY4FSNWN-191-268	6 of 43	Part# 7497-1.0 PCB5-FLEX SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	7 of 43	Part# DS_EF-1.0 CUBEx_BACKPLANE_RIGHT SCHEMATIC	1	2013-07-22
ZUQPTY4FSNWN-191-268	8 of 43	Part# DS_EF-1.0 CUBEx_BACKPLANE_LEFT SCHEMATIC	2	2013-07-22
ZUQPTY4FSNWN-191-268	9 of 43	Part# 12030-1.0 AX_Ui_9V Ci_5uF Li_0uH Po_12W03 SCHEMATIC	2	2013-11-11
ZUQPTY4FSNWN-191-268	10 of 43	Part# 7495-1.0 Isolated Flyback SCHEMATIC	2	2014-02-26
ZUQPTY4FSNWN-191-268	11 of 43	Part# DS_EE-1 EE_IS_Crowbarrier_Uo_9V SCHEMATIC	1	2015-02-12 <sup>1</sup>
ZUQPTY4FSNWN-191-268	12 of 43	Part#DS_AV-1.0 IS BARRIER Ui_9V Ci_5.5uF Po_<3.15W SCHEMATIC	1	2013-08-12

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ZUQPTY4FSNWN-191-268	13 of 43	Part# DS_AT-1 BARRIER Ui_9V Io_284mA SCHEMATIC	1	2013-06-25
ZUQPTY4FSNWN-191-268	14 of 43	Part# DS_AM-1 OPTO-2CH-Ui_9V-5V-3V3_ISIS SCHEMATIC	2	2014-02-27
ZUQPTY4FSNWN-191-268	15 of 43	Part# DS_AN-1 OPTO-2CH-Ui_9V-3V-5V_ISIS SCHEMATIC	2	2014-02-27
ZUQPTY4FSNWN-191-268	16 of 43	Part# DS_EB-1.0 ISOLATED CAN TRANSCEIVER SCHEMATIC	2	2014-05-12 <sup>2</sup>
ZUQPTY4FSNWN-191-268	17 of 43	Part# 7493-1.0 DISINTF SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	18 of 43	Part# 7491-1.0 FPGASENSORBRIDGE SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	19 of 43	Part# 7491-1.0 HIGHEFFPOW SCHEMATIC	1	2014-02-27
ZUQPTY4FSNWN-191-268	20 of 43	Part# 12030-1.0 OPTODRIVER SCHEMATIC	1	2014-03-04
ZUQPTY4FSNWN-191-268	21 of 43	Part# 7491-1.0 ZDRIVER SCHEMATIC	2	2014-03-03
ZUQPTY4FSNWN-191-268	22 of 43	Part# 7491-1.0 U_2v5REF SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	23 of 43	Part# 7493-1.0 J1_DRC40 SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	24 of 43	Part# 7491-1.0 PCYC&SDETECT SCHEMATIC	1	2014-03-04
ZUQPTY4FSNWN-191-268	25 of 43	Part# 7491-1.0 4GBITNANDFLASH SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	26 of 43	Part# 7491-1.0 FPGAFLASHHOST SCHEMATIC	1	2014-03-06

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ZUQPTY4FSNWN-191-268	27 of 43	Part# 7491-1.0 16BITSRAM SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	28 of 43	Part# 7491-1.0 FPGASRAMHOST SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	29 of 43	Part# 7491-1.0 FPGASPIUART SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	30 of 43	Part# 7491-1.0 FPGACONFIG SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	31 of 43	Part# 7491-1.0 FPGAPORCLK SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	32 of 43	Part# 7491-1.0 FPGAPWR SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	33 of 43	Part# 7493-1.0 SAFEPSU SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	34 of 43	Part# 7491-1.0 PSU_1V1 SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	35 of 43	Part# 7493-1.0 PSU_1V2 SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	36 of 43	Part# 7491-1.0 PSU_2V5 SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	37 of 43	Part# 12030-1.0 PSU_3V3 SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	38 of 43	Part# 12030-1.0 PSU_5V0 SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-268	39 of 43	Part# 7493-1.0 SAFEPCU SCHEMATIC	2	2014-03-06
ZUQPTY4FSNWN-191-268	40 of 43	Part# 7493-1.0 ONBOARD°C SCHEMATIC	1	2014-03-06

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ZUQPTY4FSNWN-191-268	41 of 43	Part# 7514-1.0 CANSEL SCHEMATIC	1	2013-07-01
ZUQPTY4FSNWN-191-268	42 of 43	Part# DS_BR-1.0 SAFETY µP SCHEMATIC	1	2013-05-29
ZUQPTY4FSNWN-191-268	43 of 43	Part# DS_BT-1.0 MEMORY_SPI_FLASH_4MB SCHEMATIC	1	2013-06-25
ZUQPTY4FSNWN-191-305	12	Part# 7490-1 PCB2-FPGA (All layers) PCB Artwork	2	2014-03-20
ZUQPTY4FSNWN-191-286	8	Part# 7492-1 PCB4-SAFECPU (All layers) PCB Artwork	1	2014-03-12
ZUQPTY4FSNWN-191-284	8	Part# 7494-2 PCB1-PSU (All layers) PCB Artwork	1	2014-03-12
ZUQPTY4FSNWN-191-287	8	Part# 7496-1 IOM PCB5-FLEX (All layers) PCB Artwork	1	2014-03-12
ZUQPTY4FSNWN-191-285	8	Part# 7513-2 PCB3-INTERFACE (All layers) PCB Artwork	1	2014-03-12
ZUQPTY4FSNWN-191-283	1	Part 12030-1 IOM CERTIFICATION DETAIL	1	2014-08-26
ZUQPTY4FSNWN-191-282	1	PART 12030-1 IO Module Datasheet	1	2014-02-26
<b>UIFP Faceplate</b>				
ZUQPTY4FSNWN-191-448	1 of 7	Part# 2181-936 - 2.0 CUBEx UI Faceplate SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-448	2 of 7	Part# 7521-1.2 UIFP Main PCB SCHEMATIC	1	2015-01-12

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ZUQPTY4FSNWN-191-448	3 of 7	Part# 7521-1.2 UIFP Load SCHEMATIC	1	2015-01-12
ZUQPTY4FSNWN-191-448	4 of 7	Part# 7521-1.2 UIFP LCD SCHEMATIC	1	2015-01-12
ZUQPTY4FSNWN-191-448	5 of 7	Part# 7525-1.0 UIFP FLEX Keypad SCHEMATIC	1	2014-02-11
ZUQPTY4FSNWN-191-448	6 of 7	Part# DS_BZ-1 IS BARRIER Keypad SCHEMATIC	1	2014-01-08
ZUQPTY4FSNWN-191-448	7 of 7	Part# DS_EJ-1 Bluetooth 4.0 BLE SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-449	10	Part# 7520 UIFP Main PCB (all layers) PCB Artwork	1	2015-01-12
ZUQPTY4FSNWN-191-450	6	Part# 7525 UIFP FLEX Keypad (all layers) PCB Artwork	1	2015-01-12
ZUQPTY4FSNWN-191-445	1	Part 2181-936-2 UIFP CERTIFICATION DETAIL	1	2013-07-30

<sup>1</sup> The drawing date listed was incorrect. Corrected during Issue 2 of this certificate.

<sup>2</sup> The drawing date listed was incorrect. Corrected during Issue 2 of this certificate.

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**Variations permitted by Issue 1 of this certificate:**

1. The applicant and manufacturer have changed to NTMS.
2. Revised QAR reference to AU/ITA/QAR08.0004/09 to include this equipment in the scope of the audit of the manufacturer.
3. The manufacturer has submitted a complete set of drawings which have been retitled with their name. Where the drawing contained pictures showing the name of the earlier manufacturer, these have been edited to that extent. No other changes were made, and the revised drawing list is included below.
4. There are no changes in the parameters or conditions from the earlier issue of the certificate.

**Specific Conditions of Use pertaining to Issue 1 of this certificate:**

There are no changes to the conditions of use.

**Drawings Associated with the Issue 1 of this Certificate:**

<b>Manufacturer's Documents</b>				
<b>Drawing/Document Number:</b>	<b>Page/s:</b>	<b>Title:</b>	<b>Revision Level:</b>	<b>Date:</b>
PLC				
ZUQPTY4FSNWN-191-268	1 of 43	12030 IO Module Coversheet (IOM) SCHEMATIC	1.2	2014-03-07
ZUQPTY4FSNWN-191-268	2 of 43	7495 PCB1-PSU SCHEMATIC	2.2	2014-02-14
ZUQPTY4FSNWN-191-268	3 of 43	7491 PCB2-FPGA SCHEMATIC	2.2	2014-02-27
ZUQPTY4FSNWN-191-268	4 of 43	7514 PCB3-INTERFACE SCHEMATIC	2.2	2014-02-27
ZUQPTY4FSNWN-191-268	5 of 43	7493 PCB4-SAFECPU SCHEMATIC	1.2	2014-02-27
ZUQPTY4FSNWN-191-268	6 of 43	7497 PCB5-FLEX SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	7 of 43	DS_EF CUBEx_BACKPLANE_RIGHT SCHEMATIC	1.1	2013-07-22



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ZUQPTY4FSNWN-191-268	8 of 43	DS_EF CUBEx_BACKPLANE_LEFT SCHEMATIC	2.1	2013-07-22
ZUQPTY4FSNWN-191-268	9 of 43	12030 AX_Ui_9V Ci_5uF Li_0uH Po_12W03 SCHEMATIC	2.1	2013-11-11
ZUQPTY4FSNWN-191-268	10 of 43	7495 Isolated Flyback SCHEMATIC	2.2	2014-02-26
ZUQPTY4FSNWN-191-268	11 of 43	DS_EE EE_IS_Crowbarrier_Uo_9V SCHEMATIC	2.1	2015-02-12
ZUQPTY4FSNWN-191-268	12 of 43	DS_AV IS BARRIER Ui_9V Ci_5.5uF Po_<3.15W SCHEMATIC	1.1	2013-08-12
ZUQPTY4FSNWN-191-268	13 of 43	DS_AT BARRIER Ui_9V Io_284mA SCHEMATIC	1.1	2013-06-25
ZUQPTY4FSNWN-191-268	14 of 43	DS_AM OPTO-2CH-Ui_9V-5V-3V3_ISIS SCHEMATIC	2.1	2013-06-13
ZUQPTY4FSNWN-191-268	15 of 43	DS_AN OPTO-2CH-Ui_9V-3V-5V_ISIS SCHEMATIC	2.2	2013-06-13
ZUQPTY4FSNWN-191-268	16 of 43	DS_EB ISOLATED CAN TRANSCEIVER SCHEMATIC	2.1	2013-10-08
ZUQPTY4FSNWN-191-268	17 of 43	7493 DISINTF SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	18 of 43	7491 FPGASENSORBRIDGE SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	19 of 43	7491 HIGHEFFPOW SCHEMATIC	1.2	2014-02-27
ZUQPTY4FSNWN-191-268	20 of 43	12030 OPTODRIVER SCHEMATIC	1.2	2014-03-04
ZUQPTY4FSNWN-191-268	21 of 43	7491 ZDRIVER SCHEMATIC	2.2	2014-03-03

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### Manufacturer's Documents

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ZUQPTY4FSNWN-191-268	22 of 43	7491 U_2v5REF SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	23 of 43	7493 J1_DRC40 SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	24 of 43	7491 PCYC&SDETECT SCHEMATIC	1.2	2014-03-04
ZUQPTY4FSNWN-191-268	25 of 43	7491 4GBITNANDFLASH SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	26 of 43	7491 FPGAFLASHHOST SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	27 of 43	7491 16BITSRAM SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	28 of 43	7491 FPGASRAMHOST SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	29 of 43	7491 FPGASPIUART SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	30 of 43	7491 FPGACONFIG SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	31 of 43	7491 FPGAPORCLK SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	32 of 43	7491 FPGAPWR SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	33 of 43	7493 SAFEPSU SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	34 of 43	7491 PSU_1V1 SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	35 of 43	7493 PSU_1V2 SCHEMATIC	2.2	2014-03-06

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ZUQPTY4FSNWN-191-268	36 of 43	7491 PSU_2V5 SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	37 of 43	12030 PSU_3V3 SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	38 of 43	12030 PSU_5V0 SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	39 of 43	7493 SAFECPU SCHEMATIC	2.2	2014-03-06
ZUQPTY4FSNWN-191-268	40 of 43	7493 ONBOARD°C SCHEMATIC	1.2	2014-03-06
ZUQPTY4FSNWN-191-268	41 of 43	7514 CANSEL SCHEMATIC	1.2	2013-07-01
ZUQPTY4FSNWN-191-268	42 of 43	DS_BR SAFETY µP SCHEMATIC	1.2	2013-05-29
ZUQPTY4FSNWN-191-268	43 of 43	DS_BT MEMORY_SPI_FLASH_4MB SCHEMATIC	1.1	2013-06-25
ZUQPTY4FSNWN-191-305	12	Part# 7490 PCB2-FPGA PCB Artwork (All layers)	1.2	2014-03-20
ZUQPTY4FSNWN-191-286	8	Part# 7492 PCB4-SAFECPU PCB Artwork (All layers)	2.2	2014-03-12
ZUQPTY4FSNWN-191-284	8	Part# 7494 PCB1-PSU PCB Artwork (All layers)	2.2	2014-03-12
ZUQPTY4FSNWN-191-287	8	Part# 7496 IOM PCB5-FLEX PCB Artwork (All layers)	1.1	2014-03-12

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ZUQPTY4FSNWN-191-285	8	Part# 7513 PCB3-INTERFACE PCB Artwork (All layers)	2.2	2014-03-12
12030-A	1 of 2	IO MODULE CERTIFICATION DETAIL	2	2017-05-05
12030-A	2 of 2	IO Module Datasheet	2	2017-05-05
<b>UIFP Faceplate</b>				
ZUQPTY4FSNWN-191-448	1 of 7	2181-936 CUBEx UI Faceplate SCHEMATIC	2.1	2014-03-06
ZUQPTY4FSNWN-191-448	2 of 7	7521 UIFP Main PCB SCHEMATIC	1.3	2015-01-12
ZUQPTY4FSNWN-191-448	3 of 7	7521 UIFP Load SCHEMATIC	1.3	2015-01-12
ZUQPTY4FSNWN-191-448	4 of 7	7521 UIFP LCD SCHEMATIC	1.3	2015-01-12
ZUQPTY4FSNWN-191-448	5 of 7	7525 UIFP FLEX Keypad SCHEMATIC	1.1	2014-02-11
ZUQPTY4FSNWN-191-448	6 of 7	DS_BZ IS BARRIER Keypad SCHEMATIC	1.1	2014-01-08
ZUQPTY4FSNWN-191-448	7 of 7	DS_EJ Bluetooth 4.0 BLE SCHEMATIC	1.1	2014-03-06
ZUQPTY4FSNWN-191-449	10	Part# 7520 UIFP Main PCB (all layers) PCB Artwork	1.3	2015-01-12
ZUQPTY4FSNWN-191-450	6	Part# 7525 UIFP FLEX Keypad (all layers) PCB Artwork	1.1	2015-01-12
2181-936-A	1	UIFP CERTIFICATION DETAIL	2	2017-03-02

# IECEX Certificate of Conformity



## Annexe



**Annexe for Certificate No.:**

**IECEX ITA 14.0021X**

**Issue No.:**

**2**

**Variations permitted by Issue 2 of this certificate:**

- The manufacturer's Quality Assessment was changed from Ex Testing and Certification to another IECEx Certification Body, Mine Safety Technology Centre. QAR reference has been changed accordingly.

**Specific Conditions of Use pertaining to Issue 2 of this certificate:**

There are no changes to the conditions of use.

**Drawings Associated with the Issue 2 of this Certificate:**

There are no drawings applicable to this issue of the certificate.