

DSBOARD-AGXS Rev 1.0

USER MANUAL

UM-DSBDAGXS-01

Revision 1.0

19/01/2026



Forecr
<https://www.forecr.io>
support@forecr.io

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Preface

Disclaimer

Forecr emphasizes that the information contained in this user manual is continuously updated in line with the technical modifications and enhancements made by Forecr to its carrier board. Therefore, this manual only represents the technical status of Forecr carrier board at the time of publishing.

Forecr shall not be held responsible for any damages that may occur directly or indirectly as a result of any technical or typographical errors or omissions found in this document or for any discrepancies between the product and the user's manual.

Customer Support

In case you encounter any challenges after reading the user manual and/or using the carrier board, please reach out to the Forecr reseller from which you purchased the carrier board.

See the contact information section below for more information on how to contact us directly.

Contact Information

E-mail Address	<p>For information requests: info@forecr.io</p> <p>For support requests: support@forecr.io</p> <p>For wholesale inquiries: sales@forecr.io</p>
Address	<p>Forecr OÜ Akadeemia tee 21/1 (II floor), Room 219, 12618, Tallinn, Estonia</p>
Telephone Number	<p>Estonia +372 5332 2632</p>
Website	<p>https://www.forecr.io</p>

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Symbols

ElectroStatic Discharge (ESD) Sensitive Device!

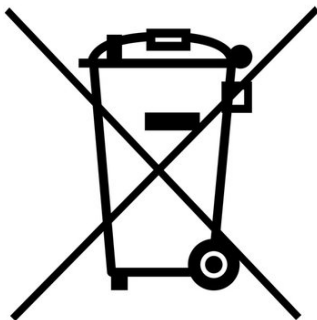
Electronic boards and their components are sensitive to static electricity. When handling any circuit board assemblies, it is recommended that ESD safety precautions be observed.

ESD safe best practices include, but are not limited to:

- Do not handle the carrier board out of its antistatic packaging while it is not used for operational purposes unless it is otherwise protected.
- Whenever possible, unpack or pack this product only at ESD safe work stations.
- Where a safe work station is not guaranteed, it is important for the user to be electrically discharged before touching the product with his/her hands or tools.
- Try to handle the board by the edges, avoiding contact with components.


HOT Surface!

Do not touch. Contact may cause burns. Allow to cool before servicing.


Waste Electrical and Electronic Equipment (WEEE)!

The carrier board should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.


Restriction of Hazardous Substances (RoHS)!

The carrier board complies with the regulations and restrictions established by the ROHS Directive and does not contain hazardous substances in concentrations that may be harmful to health or the environment.

Limited Product Warranty

Forecr provides a 1-year Warranty for the carrier board. This warranty period is valid from the original purchase date of the carrier board. In order to maintain warranty, the carrier board must not be altered or modified in any way. Changes or modifications to the board, that are not explicitly approved by Forecr and described in this user manual or received from Forecr Support as a special handling instruction, will void your warranty.

To receive warranty service, the carrier board must be delivered to Forecr within the warranty period together with the original invoice or proof of purchase.

Revision History

Revision No	Revision Date	Revision Description
rev 1.0	19.01.2026	Preliminary Release

1. Introduction

The DSBOARD-AGXS is engineered to bring powerful edge AI performance to the most space-constrained industrial environments. Designed with the same compact footprint as the Jetson AGX Orin SOM, it delivers seamless integration while supporting 32GB, 64GB, and Industrial AGX Orin modules.

With high speed 10G and 1G Ethernet, dual USB 3.1, and versatile M.2 expansion for high-bandwidth storage and wireless connectivity, the DSBOARD-AGXS enables next-generation AI workloads with exceptional efficiency. Its dedicated camera expansion slot supports MIPI and GMSL add-on boards, making it ideal for vision-centric applications.

Rich industrial I/O—RS-232/422/485, CAN, digital I/Os, SPI, I2C, UART, PWM combined with an onboard 6-axis IMU, temperature sensor, and nanoSIM slot, ensures robust performance across automation, robotics, defense, and smart security deployments. Compact, powerful and built for the edge, the DSBOARD-AGXS unlocks the full potential of AGX Orin in any mission-critical environment

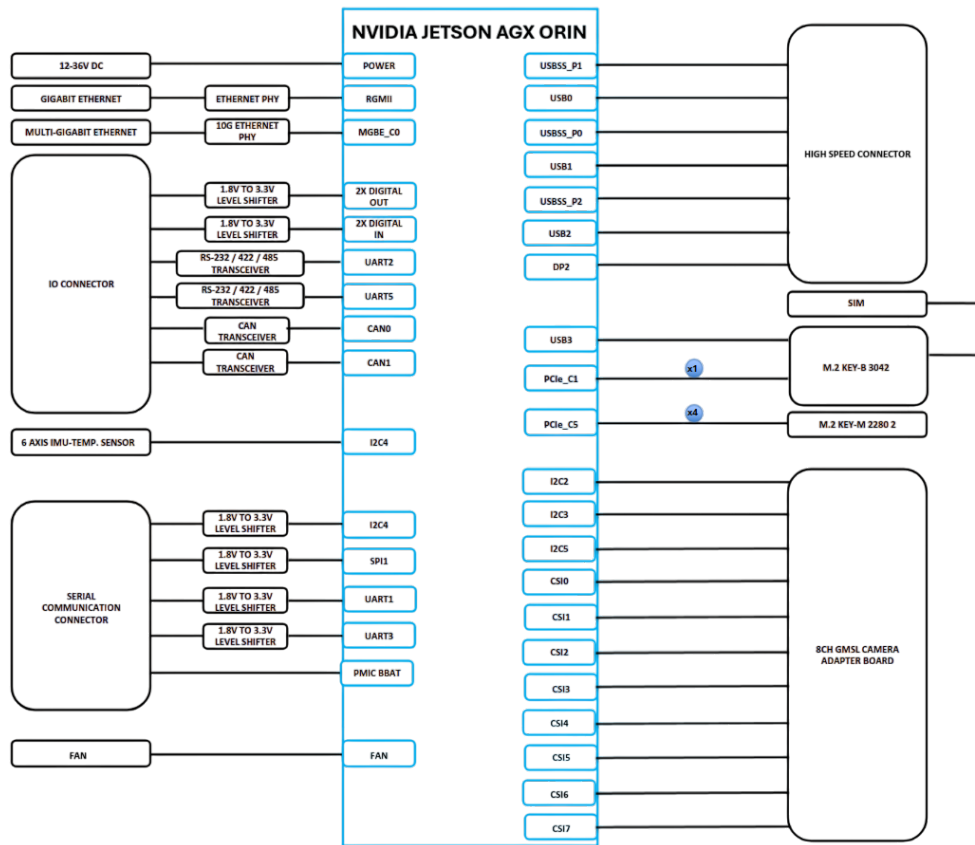
Latest revision of this user manual, datasheet, and 3D model can be downloaded from [Forecr](#) Web Page.

2. Product Specification

2.1 Technical Specification

Supported Modules	NVIDIA Jetson AGX Orin 32GB NVIDIA Jetson AGX Orin 64GB NVIDIA Jetson AGX Orin Industrial
Memory	32 GB 256-bit LPDDR5x 64 GB 256-bit LPDDR5x
Graphics Interfaces	1x DisplayPort 1.4
Interfaces	1x 10G Ethernet (Copper) 1x 1G Ethernet (Copper) 2x USB3.1 2x RS-232/422/485 2x CAN Bus 2x Digital Input 2x Digital Output 1x Serial Communications Header (1xSPI,1xI2C, 2xUART, 2xPWM) 11V FAN (default) /5V Selectable Header 6-axis IMU
Wireless Communication	WiFi/Bluetooth/LTE/5G Connectivity by extension sockets
Power Supply	12-36 VDC
Extension Sockets	1x M.2 Key-B 3042 1x Camera Expansion Slot (for use with MIPI, GMSL addon boards)
Mass Storage	1x M.2 Key-M 2280 (PCIe Gen4 x4)
Ambient Conditions	-25°C ... +85°C (-40°C with Industrial SOM)
Form Factor / Dimensions	87x100mm (same as AGX Orin SOM)
Operating Systems	Ubuntu Linux 20.04 Ubuntu Linux 22.04
JetPack Support	JetPack 5.x JetPack 6.x

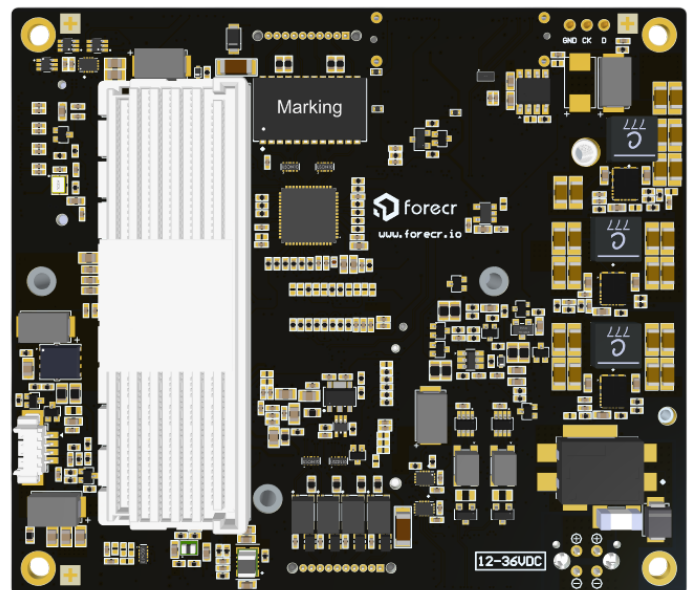
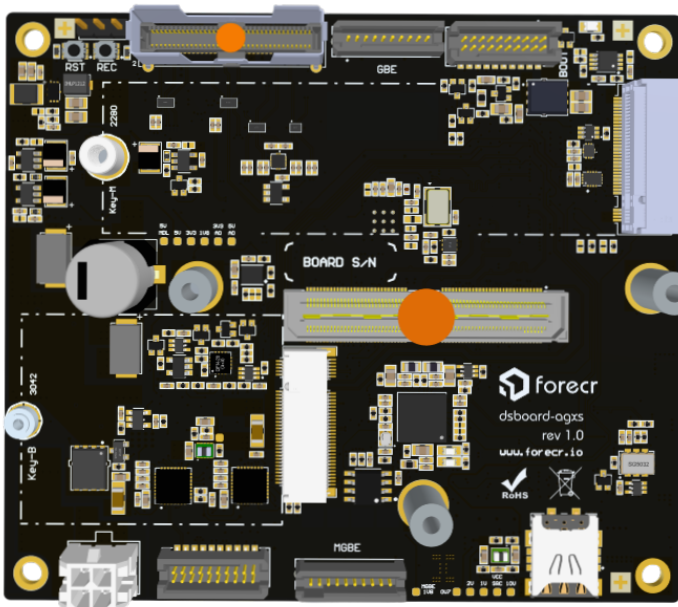
2.2 Block Diagram



2.3 Board Visuals

Top Side

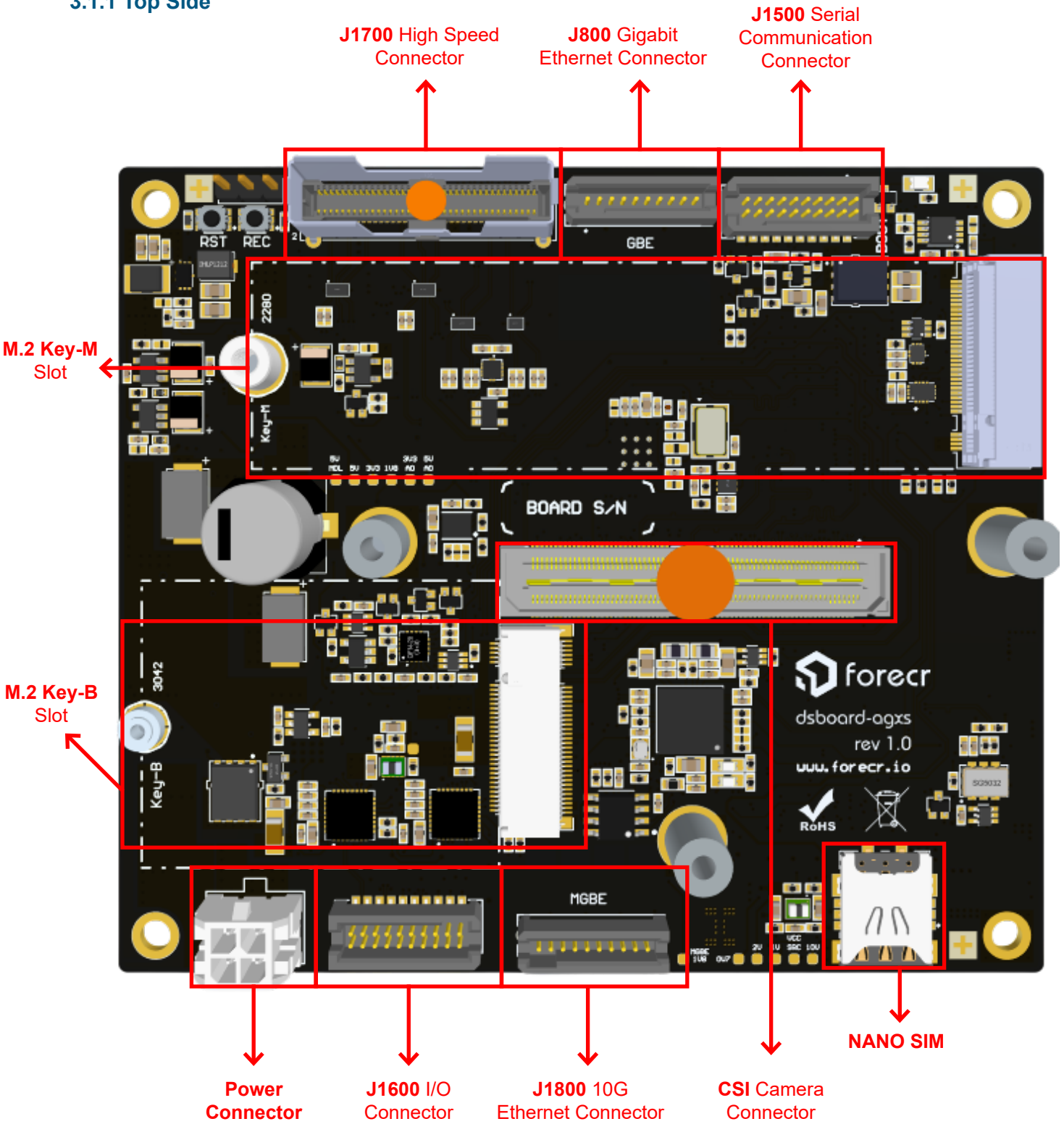
Bottom Side



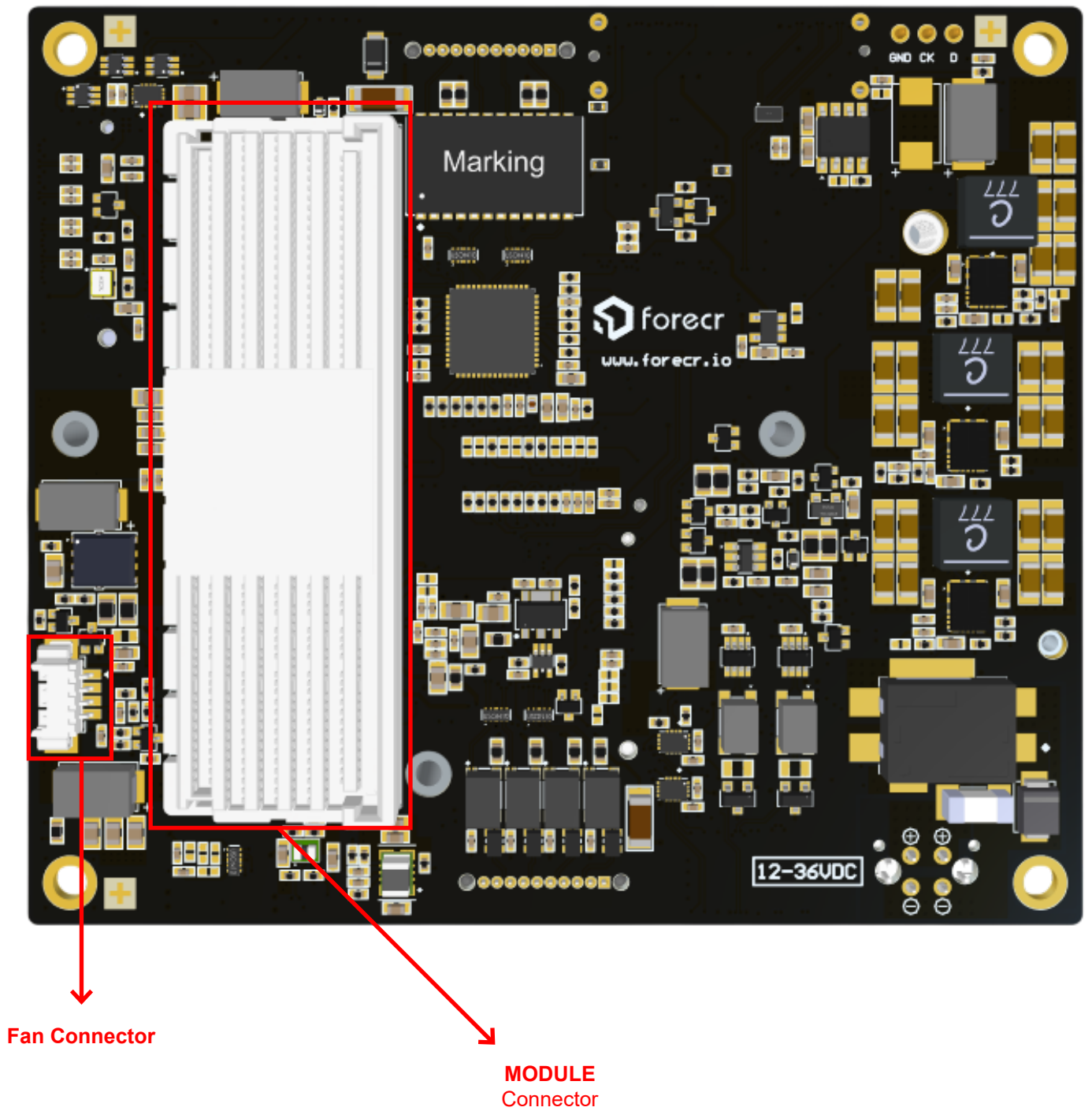
3. Hardware Information

3.1 Connector and Button Location

3.1.1 Top Side



3.1.2 Bottom Side

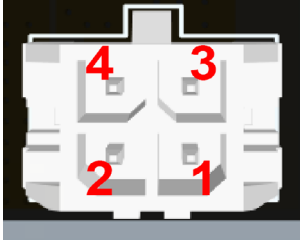


3.2 List of Connectors and Buttons


Connectors
DSBOARD-AGXS Power Connector
DSBOARD-AGXS J800 Gigabit Ethernet Connector
DSBOARD-AGXS J1500 Serial Communication Connector
DSBOARD-AGXS J1600 I/O Connector
DSBOARD-AGXS J1800 10G Ethernet Connector
DSBOARD-AGXS J1700 High Speed Connector
DSBOARD-AGXS M.2 Key-M Connector
DSBOARD-AGXS M.2 Key-B Connector
DSBOARD-AGXS CSI Camera Connector
DSBOARD-AGXS SIM Card Connector
DSBOARD-AGXS Panel Connector
DSBOARD-AGXS Fan Connector
Buttons
DSBOARD-AGXS Recovery Pushbutton
DSBOARD-AGXS Reset Pushbutton

3.3 The Definition of Each Connector

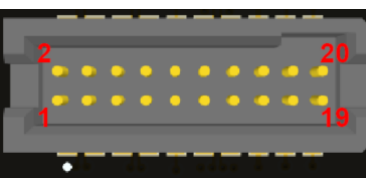
3.3.1 Power Connector

	Function		Description		
	Connector Type		0430450424		
	Mating Connector		0430250408		
	Minimum Input Voltage		+12 VDC		
	Maximum Input Voltage		+36 VDC		
	Pinout		Pin	Description	Pin
		1	Negative	3	Positive
		2	Negative	4	Positive

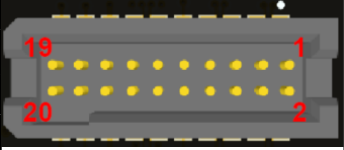
3.3.2 J800 Gigabit Ethernet Connector

	Function		Description			
	Connector Type		TFM-110-01-L-S-A			
	Mating connector		SFSS-10-28-G-x.xx-S			
	Pinout		Pin	Description	Pin	Description
			1	DGND	6	GBE_CONN.MDI1_N
			2	GBE_CONN.MDI3_N	7	GBE_CONN.MDI1_P
		3	GBE_CONN.MDI3_P	8	GBE_CONN.MDI0_N	
		4	GBE_CONN.MDI2_N	9	GBE_CONN.MDI0_P	
		5	GBE_CONN.MDI2_P	10	DGND	


3.3.3 J1500 Serial Communication Connector

	Function		Description			
	Connector Type		TFM-110-02-L-D-TR			
	Mating connector		SFSD-10-28-G-x.xx-S			
	Pinout		Pin	Description	Pin	Description
			1	RS422_CH1.RX_N	11	CAN0_CONN_P
			2	RS422_CH1.TX_N	12	CAN1_CONN_P
			3	RS422_CH1.RX_P	13	CAN0_CONN_N
			4	RS422_CH1.TX_P	14	CAN1_CONN_N
			5	RS422_CH0.RX_N	15	DGND
			6	RS422_CH0.TX_N	16	DGND
			7	RS422_CH0.RX_P	17	DIGITAL_IN0_3V3
		8	RS422_CH0.TX_P	18	DIGITAL_OUT0_3V3	
		9	PWM1_OUT_3V3	19	DIGITAL_IN1_3V3	
		10	PWM5_OUT_3V3	20	DIGITAL_OUT1_3V3	

3.3.4 J1600 I/O Connector

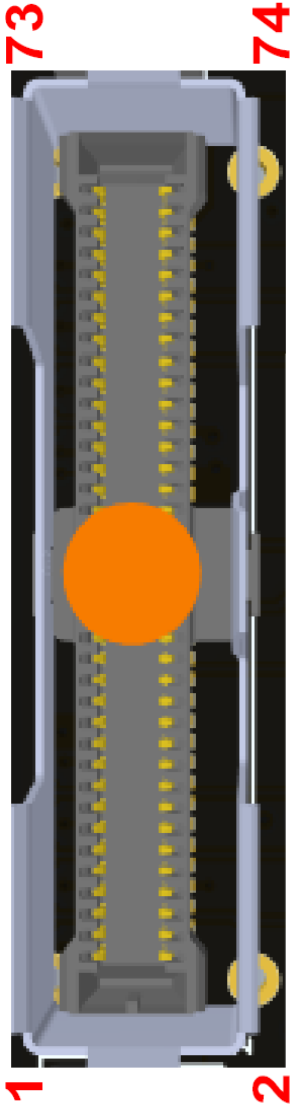
	Function	Description			
	Connector Type	TFM-110-02-L-D-TR			
	Mating connector	SFSD-10-28-G-x.xx-S			
	Pinout	Pin	Description	Pin	Description
		1	VDD_5V	11	UART1_3V3.TX
		2	VDD_3V3	12	UART1_3V3.RTS
		3	DGND	13	UART1_3V3.RX
		4	DGND	14	UART1_3V3.CTS
		5	SPI1_3V3.CS0	15	FORCE_RECOVERY*
		6	SPI1_3V3.SCK	16	UART3_3V3.TX
		7	SPI1_3V3.MISO	17	SYS_RST_IN*
8		SPI1_3V3.MOSI	18	UART3_3V3.RX	
9		I2C4_3V3.SCL	19	BUTTON_POWER_ON_N	
10	I2C4_3V3.SDA	20	PMIC_BBATT		

3.3.5 J1800 10G Ethernet Connector

	Function	Description			
	Connector Type	TFM-110-01-L-S-A			
	Mating connector	SFSS-10-28-G-x.xx-S			
	Pinout	Pin	Description	Pin	Description
		1	DGND	6	ENET_10G_CONN.D1_N
2		ENET_10G_CONN.D3_N	7	ENET_10G_CONN.D1_P	
3		ENET_10G_CONN.D3_P	8	ENET_10G_CONN.D0_P	
4		ENET_10G_CONN.D2_P	9	ENET_10G_CONN.D0_N	
5	ENET_10G_CONN.D2_N	10	DGND		

3.3.6 J1700 High Speed Connector

Function	Description			
Connector Type	ARF6-24-S-D-A-K-TR			
Mating Connector	ARC6-24-xx.x-LU-LU-3-1			
Pinout	Pin	Description	Pin	Description
	1	DGND	38	DGND
	2	DGND	39	NC
	3	USBSS1_CONN.TX_P	40	USBSS2_CONN.D_P
	4	USBSS0_CONN.TX_P	41	NC
	5	USBSS1_CONN.TX_N	42	USBSS2_CONN.D_N
	6	USBSS0_CONN.TX_N	43	NC
	7	DGND	44	DGND
	8	DGND	45	NC
	9	USBSS1_CONN.RX_P	46	USBSS2_VBUS
	10	USBSS0_CONN.RX_P	47	DP2_CEC_CONN
	11	USBSS1_CONN.RX_N	48	USBSS2_VBUS
	12	USBSS0_CONN.RX_N	49	DGND
	13	DGND	50	DGND
	14	DGND	51	DP2_CON.TXD2_N
	15	USBSS1_CONN.D_P	52	VDD_3V3_DP
	16	USBSS0_CONN.D_P	53	DP2_CON.TXD2_P
	17	USBSS1_CONN.D_N	54	VDD_3V3_DP
	18	USBSS0_CONN.D_N	55	DGND
	19	DGND	56	DGND
	20	DGND	57	DP2_CON.TXD1_N
	21	USBSS1_VBUS	58	DP2_CON.AUX_N
	22	USBSS0_VBUS	59	DP2_CON.TXD1_P
	23	USBSS1_VBUS	60	DP2_CON.AUX_P
	24	USBSS0_VBUS	61	DGND
	25	NC	62	DGND
	26	DGND	63	DP2_CON.TXD0_N
	27	NC	64	DP2_CON.TXD3_N
	28	USBSS2_CONN.TX_P	65	DP2_CON.TXD0_P
	29	NC	66	DP2_CON.TXD3_P
	30	USBSS2_CONN.TX_N	67	DGND
	31	NC	68	DGND
	32	DGND	69	DP2_HPD_CONN
	33	NC	70	NC
	34	USBSS2_CONN.RX_P	71	DP2_MODE
	35	NC	72	NC
	36	USBSS2_CONN.RX_N	73	DGND
	37	NC	74	DGND




3.3.7 M.2 Key-M Connector

Description						
Connector Type			123A-85MA0			
Pinout	Pin	Description	Pin	Description	Pin	Description
	1	DGND	24	NC	47	UPHY_TX12_N
	2	VDD_3V3	25	UPHY_TX14_P	48	NC
	3	DGND	26	NC	49	UPHY_TX12_P
	4	VDD_3V3	27	DGND	50	PEX.L5_RST_N
	5	UPHY.RX15_N	28	NC	51	DGND
	6	NC	29	UPHY.RX13_N	52	PEX.L5_CLKREQ_N
	7	UPHY.RX15_P	30	NC	53	PEX.CLK5_N
	8	NC	31	UPHY.RX13_P	54	GPIO29_M2_KEYM_PEWAKE*
	9	DGND	32	NC	55	PEX.CLK5_P
	10	NC	33	DGND	56	NC
	11	UPHY_TX15_N	34	NC	57	DGND
	12	VDD_3V3	35	UPHY_TX13_N	58	NC
	13	UPHY_TX15_P	36	NC	67	NC
	14	VDD_3V3	37	UPHY_TX13_P	68	32KHZ_CLK
	15	DGND	38	NC	69	NC
	16	VDD_3V3	39	DGND	70	VDD_3V3
	17	UPHY.RX14_N	40	I2C2.SCL	71	DGND
	18	VDD_3V3	41	UPHY.RX12_N	72	VDD_3V3
	19	UPHY.RX14_P	42	I2C2.SDA	73	DGND
	20	NC	43	UPHY.RX12_P	74	VDD_3V3
	21	DGND	44	GPIO34_M2_KEYM_ALERT*	75	DGND
	22	NC	45	DGND		
	23	UPHY_TX14_N	46	NC		

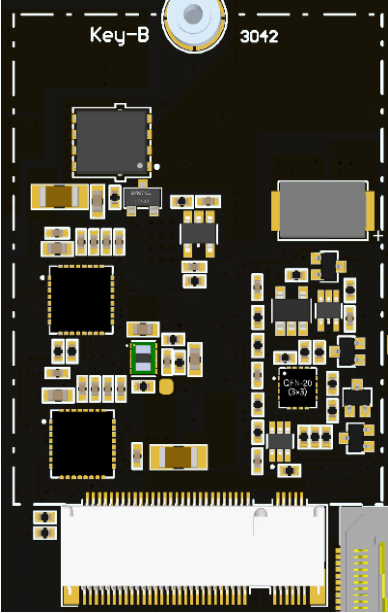
Board to board spacing= 4.15 mm
 Max component height= 2 mm

Blue: Board-to-Board spacing
 Red: Max component height



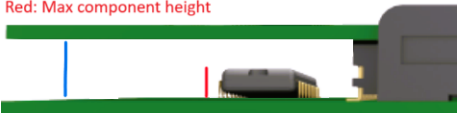
3.3.8 M.2 Key-B Connector

Description				
Connector Type		SM3ZS067U410ABR1000		
Pinout	Pin	Description	Pin	Description
	1	NC	43	UPHY.RX21_P
	2	VDD_3V8	44	NC
	3	DGND	45	DGND
	4	VDD_3V8	46	NC
	5	DGND	47	UPHY_TX21_N
	6	M2B_FULLCARD_PWOFF#	48	NC
	7	USB3.D_P	49	UPHY_TX21_P
	8	M2B_W_DISABLE1#	50	PEX.L7_RST_N
	9	USB3.D_N	51	DGND
	10	NC	52	PEX.L7_CLKREQ_N
	11	DGND	53	PEX.CLK6_N
	20	NC	54	PCIE_WAKE_N
	21	NC	55	PEX.CLK6_P
	22	NC	56	NC
	23	NC	57	DGND
	24	NC	58	NC
	25	NC	59	NC
	26	M2B_W_DISABLE2#	60	NC
	27	DGND	61	NC
	28	NC	62	NC
	29	NC	63	NC
	30	M2_USIM_RST	64	NC
	31	NC	65	NC
	32	M2_USIM_CLK	66	NC
	33	DGND	67	M2B_RESET
	34	M2_USIM_DAT	68	NC
	35	NC	69	NC
	36	M2_USIM_VDD	70	VDD_3V8
	37	NC	71	DGND
	38	NC	72	VDD_3V8
	39	DGND	73	DGND
	40	NC	74	VDD_3V8
	41	UPHY.RX21_N	75	NC
	42	NC		



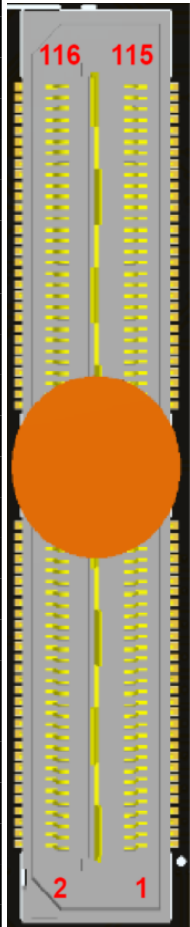
Board to board spacing= 2.45 mm
Max component height= 2 mm

Blue: Board-to-Board spacing
Red: Max component height

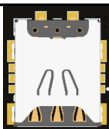


3.3.9 CSI Camera Connector


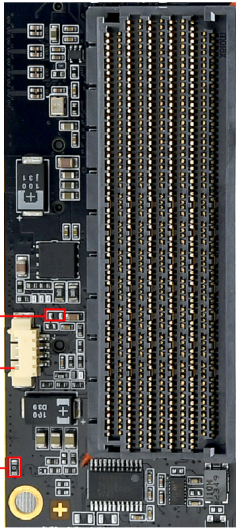
Function	Description							
Connector Type	QSH-060-01-L-D-A-K-TR							
Pinout	Pin	Description	Pin	Description	Pin	Description	Pin	Description
	1	CSI0.D0_P	37	CSI4.D0_P	73	CSI5.D1_N	109	CAM_BAC KLIGHT_PWM
	2	CSI1.D0_P	38	CSI6.D0_P	74	CSI7.D1_N	110	VDD_3V3
	3	CSI0.D0_N	39	CSI4.D0_N	75	CAM_I2C.SCL	111	NC
	4	CSI1.D0_N	40	CSI6.D0_N	76	CAM_ERROR1	112	NC
	5	GND	41	GND	77	CAM_I2C.SDA	113	NC
	6	GND	42	GND	78	CAM_ERROR2	114	NC
	7	CSI0.CLK_P	43	CSI4.CLK_P	79	GND	115	GND
	8	CSI1.CLK_P	44	CSI6.CLK_P	80	GND	116	GND
	9	CSI0.CLK_N	45	CSI4.CLK_N	81	NC	117	CAM_INT1
	10	CSI1.CLK_N	46	CSI6.CLK_N	82	NC	118	VDD_3V3
	11	GND	47	GND	83	NC	119	CAM_VDD_ SYS_EN
	12	GND	48	GND	84	CAM_ERROR3	120	VDD_3V3
	13	CSI0.D1_P	49	CSI4.D1_P	85	CAM_FRSYNC1		
	14	CSI1.D1_P	50	CSI6.D1_P	86	CAM_ERROR4		
	15	CSI0.D1_N	51	CSI4.D1_N	87	I2C2.SCL		
	16	CSI1.D1_N	52	CSI6.D1_N	88	CAM1.MCLK		
	17	GND	53	GND	89	I2C2.SDA		
	18	GND	54	GND	90	CAM1.PWDN		
	19	CSI2.D0_P	55	NC	91	CAM0.MCLK		
	20	CSI3.D0_P	56	NC	92	CAM1.RST		
	21	CSI2.D0_N	57	NC	93	CAM0_PWDN		
	22	CSI3.D0_N	58	NC	94	CAM2.MCLK		
	23	GND	59	CSI5.D0_P	95	CAM0.RST		
	24	GND	60	CSI7.D0_P	96	CAM_FRSYNC4		
	25	CSI2.CLK_P	61	CSI5.D0_N	97	CAM_FRSYNC3		
	26	CSI3.CLK_P	62	CSI7.D0_N	98	CAM_FRSYNC2		
	27	CSI2.CLK_N	63	GND	99	GND		
	28	CSI3.CLK_N	64	GND	100	GND		
	29	GND	65	NC	101	CAM_TE_RSV		
	30	GND	66	NC	102	VDD_1V8		
	31	CSI2.D1_P	67	NC	103	CAM_INT3		
	32	CSI3.D1_P	68	NC	104	CAM_INT4		
	33	CSI2.D1_N	69	GND	105	I2C5.SCL		
	34	CSI3.D1_N	70	GND	106	CAM_INT2		
	35	GND	71	CSI5.D1_P	107	I2C5.SDA		
36	GND	72	CSI7.D1_P	108	VDD_3V3			



3.3.10 SIM Card Connector


	<table border="1"> <thead> <tr> <th colspan="2">Description</th> </tr> </thead> <tbody> <tr> <td colspan="2">The DSBOARD-AGXS implements a nano SIM card connector together.</td> </tr> </tbody> </table>	Description		The DSBOARD-AGXS implements a nano SIM card connector together.	
Description					
The DSBOARD-AGXS implements a nano SIM card connector together.					

3.3.11 Fan Connector


	<table border="1"> <thead> <tr> <th>Function</th> <th colspan="2">Description</th> </tr> </thead> <tbody> <tr> <td>Mating Connector</td> <td colspan="2">0510210400 from Molex Picoblade series</td> </tr> <tr> <td>Pinout</td> <td>Pin</td> <td>Description</td> </tr> <tr> <td></td> <td>1</td> <td>GND</td> </tr> <tr> <td></td> <td>2</td> <td>+11V (Optional 5V with resistor change)</td> </tr> <tr> <td></td> <td>3</td> <td>TACH</td> </tr> <tr> <td></td> <td>4</td> <td>PWM</td> </tr> </tbody> </table>		Function	Description		Mating Connector	0510210400 from Molex Picoblade series		Pinout	Pin	Description		1	GND		2	+11V (Optional 5V with resistor change)		3	TACH		4	PWM
Function	Description																						
Mating Connector	0510210400 from Molex Picoblade series																						
Pinout	Pin	Description																					
	1	GND																					
	2	+11V (Optional 5V with resistor change)																					
	3	TACH																					
	4	PWM																					
 <p>Resistor slot for 5V fan voltage</p> <p>Fan Connector</p> <p>Resistor slot for 11V fan voltage</p>	<p>NOTE</p> <p>*FAN voltage is 11V by default. There is a 0R 0603 resistor installed at 11V FAN voltage slot.</p> <p>*To change FAN voltage to 5V, resistor at 11V slot must be removed first. Then a 0R 0603 resistor must be installed at the 5V slot.</p>																						

3.4 The Definition of Buttons

3.4.1 Recovery Pushbutton

	<table border="1"> <thead> <tr> <th colspan="2">Description</th> </tr> </thead> <tbody> <tr> <td colspan="2">The DSBOARD-AGXS implements a recovery pushbutton. Recovery button should be pressed with reset button at the same time. After released reset button, recovery button should be pressed a little bit more (min. 250 ms).</td> </tr> </tbody> </table>	Description		The DSBOARD-AGXS implements a recovery pushbutton. Recovery button should be pressed with reset button at the same time. After released reset button, recovery button should be pressed a little bit more (min. 250 ms).	
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3.4.2 Reset Pushbutton

	<table border="1"> <thead> <tr> <th colspan="2">Description</th> </tr> </thead> <tbody> <tr> <td colspan="2">The DSBOARD-AGXS implements a reset button. It is recommended to use needle-like material.</td> </tr> </tbody> </table>	Description		The DSBOARD-AGXS implements a reset button. It is recommended to use needle-like material.	
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4. Software Information

4.1 Installation

This section will be completed soon It will be published on our website once completed Please check our [Forecr](#) Web Page regularly

5. Connectivity

5.1 General Purpose Input/Output (GPIO)

MODULE PIN NUMBER	I/O NAME	MODULE PIN NAME	TYPE	DESCRIPTION
E10	CAM_VDD_SYS_EN	GPIO12	OUTPUT	
A62	CAM_FRSYNC1	GPIO10	BIDIRECTIONAL	Camera 1 frame sync.
F59	CAM_FRSYNC2	GPIO07	BIDIRECTIONAL	Camera 2 frame sync.
E59	CAM_FRSYNC3	GPIO06	BIDIRECTIONAL	Camera 3 frame sync.
G7	CAM_FRSYNC4	GPIO13	BIDIRECTIONAL	Camera 4 frame sync.
L15	CAM_ERROR1	GPIO14	INPUT	Camera 1 error.
L9	CAM_ERROR2	GPIO28	INPUT	Camera 2 error.
A7	CAM_ERROR3	GPIO29	INPUT	Camera 3 error.
L4	CAM_ERROR4	UART4_RTS	INPUT	Camera 4 error.
L49	CAM0_PWDN	UART4_CTS	OUTPUT	Camera 0 power down (3.3V Level)
F10	CAM1_PWDN	GPIO15	OUTPUT	Camera 1 power down (3.3V Level)
L5	CAM0_RST	UART4_TX	OUTPUT	Camera 0 reset.
F9	CAM1_RST	GPIO16	OUTPUT	Camera 1 reset.
J54	CAM0.MCLK	MCLK02	OUTPUT	Camera 0 reference clock (1.8V Level)
H53	CAM1.MCLK	MCLK03	OUTPUT	Camera 1 reference clock (1.8V Level)
H55	CAM2.MCLK	MCLK04	OUTPUT	Camera 2 reference clock (1.8V Level)
E61	CAM_INT1	SPI2_CLK	INPUT	Camera 1 interrupt.
D62	CAM_INT2	SPI2_MISO	INPUT	Camera 2 interrupt.
F60	CAM_INT3	SPI2_MOSI	INPUT	Camera 3 interrupt.
D60	CAM_INT4	SPI2_CS0_N	INPUT	Camera 4 interrupt.
J51	CAM_TE_RSV	GPIO24	OUTPUT	Not connected as default
K57	CAM_BACKLIGHT_PWM	PWM01	OUTPUT	Not connected as default
A58	DIGITAL_IN0	GPIO20	INPUT	DIGITAL INPUT (3.3 Level)
B58	DIGITAL_IN1	GPIO21	INPUT	DIGITAL INPUT (3.3 Level)
B6	DIGITAL_OUT0	SDCARD_CLK	OUTPUT	DIGITAL OUTPUT (3.3 Level)
A5	DIGITAL_OUT	SDCARD_CMD	OUTPUT	DIGITAL OUTPUT (3.3 Level)
H52	PWM1_OUT	GPIO27	OUTPUT	PWM OUTPUT (3.3 Level)
L50	PWM5_OUT	GPIO35	OUTPUT	PWM OUTPUT (3.3 Level)
A57	CH0.DE	UART2_CTS	OUTPUT	Driver enable for serial communication control.

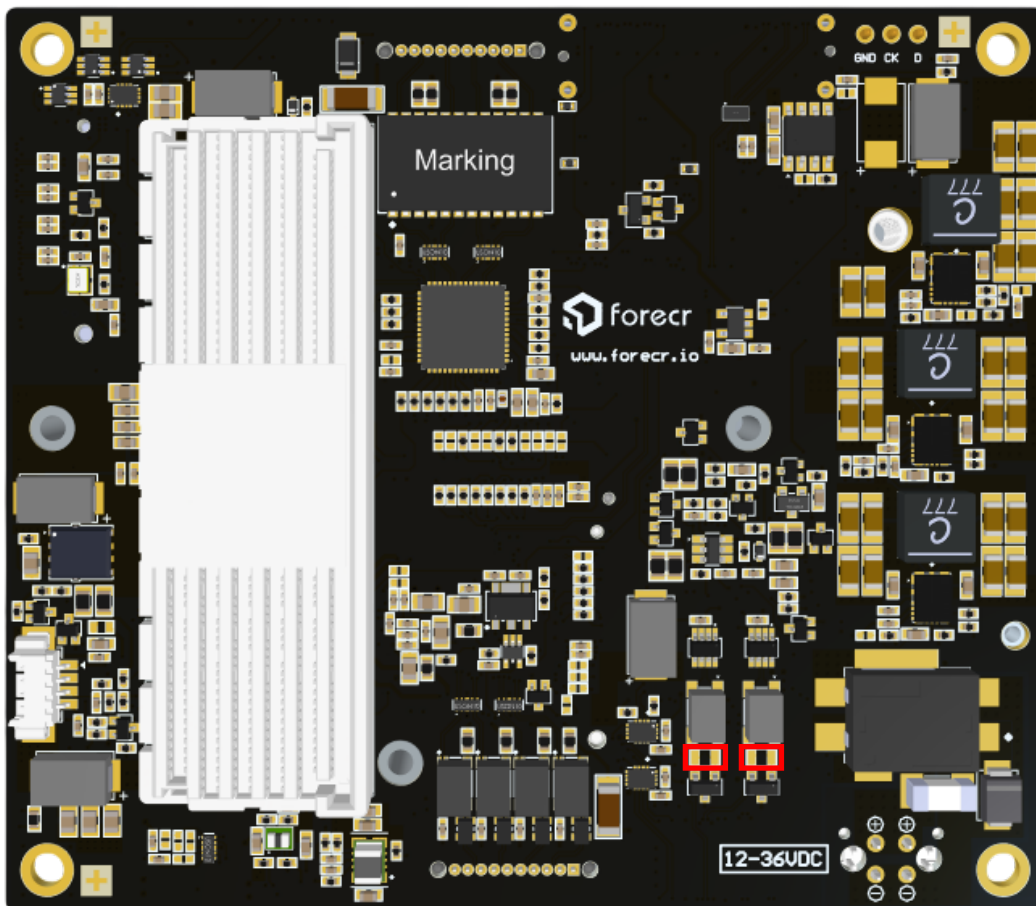
G58	CH0.R\E\	UART2_RTS	OUTPUT	Receiver enable for serial communication control.
F55	CH0. HALF/F\U\L\L\	SPI3_CLK	OUTPUT	Half duplex or full duplex control for RS-485 communication protocol. Drive low for full duplex communication. Drive high for half duplex communication.
G56	CH0.RS485/ R\S\2\3\2\	SPI3_MOSI	OUTPUT	RS-485/RS-232 mode select pin. Drive high for RS-485 communication. Drive low for RS-232 communication.
E56	CH0.TERM	SPI3_CS1_N	OUTPUT	The TERM pin enables the internal 120 Ω differential termination resistor between the A and B lines in RS-485 mode to prevent signal reflections.
J59	CH1.DE	I2S3_DIN	OUTPUT	Driver enable for serial communication control a
K58	CH1.R\E\	UART5_RTS	OUTPUT	Receiver enable for serial communication control
K59	CH1. HALF/F\U\L\L\	I2S3_DOUT	OUTPUT	Half duplex or full duplex control for RS-485 communication protocol Drive low for full duplex communication O Drive high for half duplex communication O
C60	CH1.RS485/ R\S\2\3\2\	I2S3_FS	OUTPUT	RS-485/RS-232 mode select pin Drive high for RS-485 communication. Drive low for RS-232 communication.
C59	CH1.TERM	I2S3_SCLK	OUTPUT	The TERM pin enables the internal 120 Ω differential termination resistor between the A and B lines in RS-485 mode to prevent signal reflections.
D56	XFI0_RST_N	SPI3_MISO	OUTPUT	10G Ethernet reset signal.
C57	XFI0_INT_N	SPI3_CS0_N	INPUT	10G Ethernet interrupt signal.
F54	GPIO22_USB_VBUS_EN0	GPIO22	OUTPUT	Connect to enable and over-current pins of load switch.
K49	XFI0_MDIO	GPIO25	BIDIRECTIONAL	MGBE C0 Management Clock
H51	XFI0_MDC	GPIO26	OUTPUT	MGBE C0 Management Data

5.2 I/O Connector

5.2.1 CANBus Interface

There are two CAN Bus interfaces on the DSBOARD-AGXS. TCAN332GDCNR transceivers are used between the native CAN pins of the Jetson and the connectors. There is an 0805 size 120R termination resistor between the CAN_H and CAN_L pins on the board, which is not populated by default. A standard resistor with the above specifications can be fitted if a termination resistor is needed on the DSBOARD-AGXS side

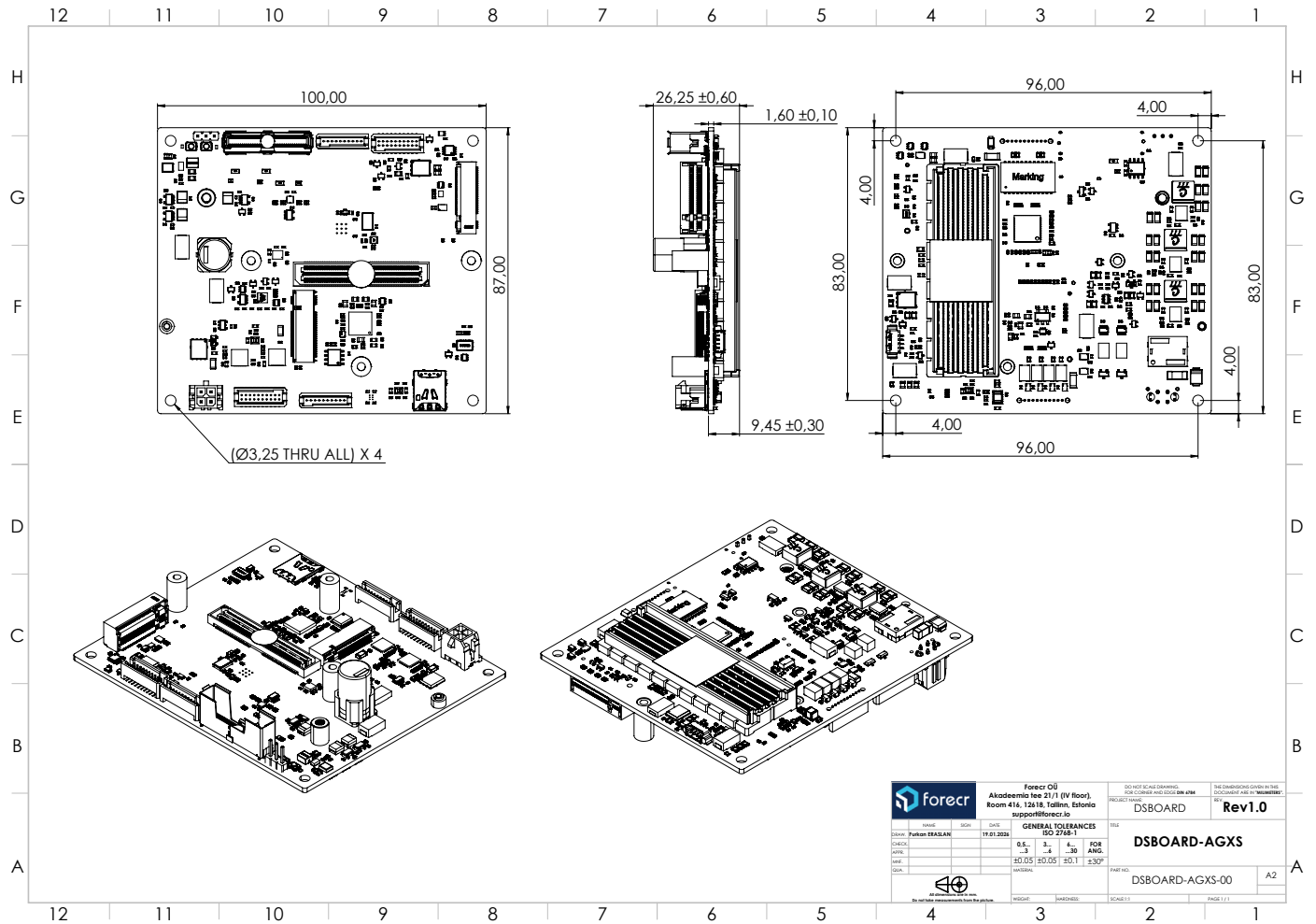
CANBus Termination Resistor



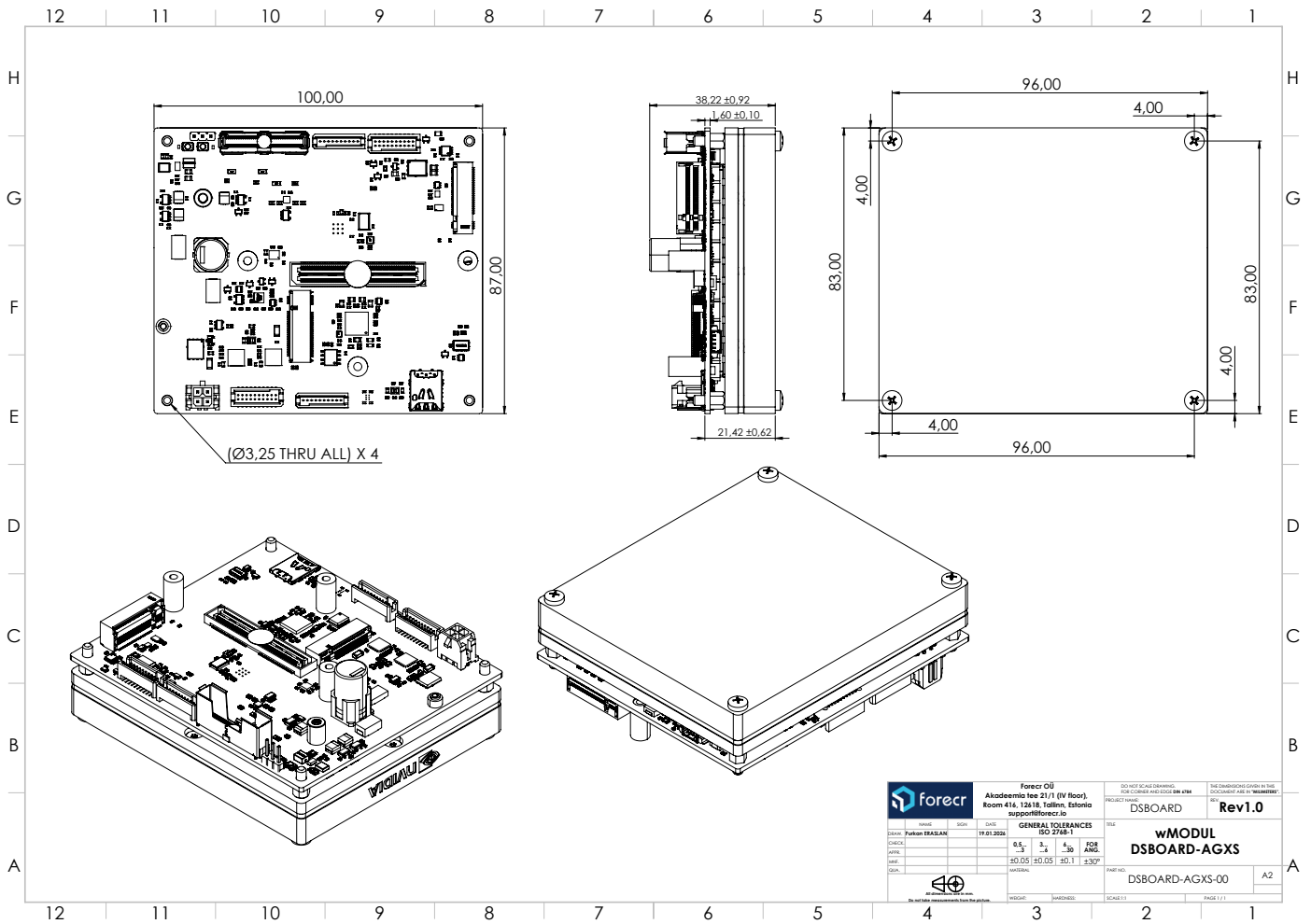
6. 3D Model & Mechanical Information

Full 3D models of all DSBOARD AGXS Carrier Board can be found here: https://github.com/forecr/forecr_3d_models/tree/master/DSBOARD-AGXS

DSBOARD-AGXS Stand Alone

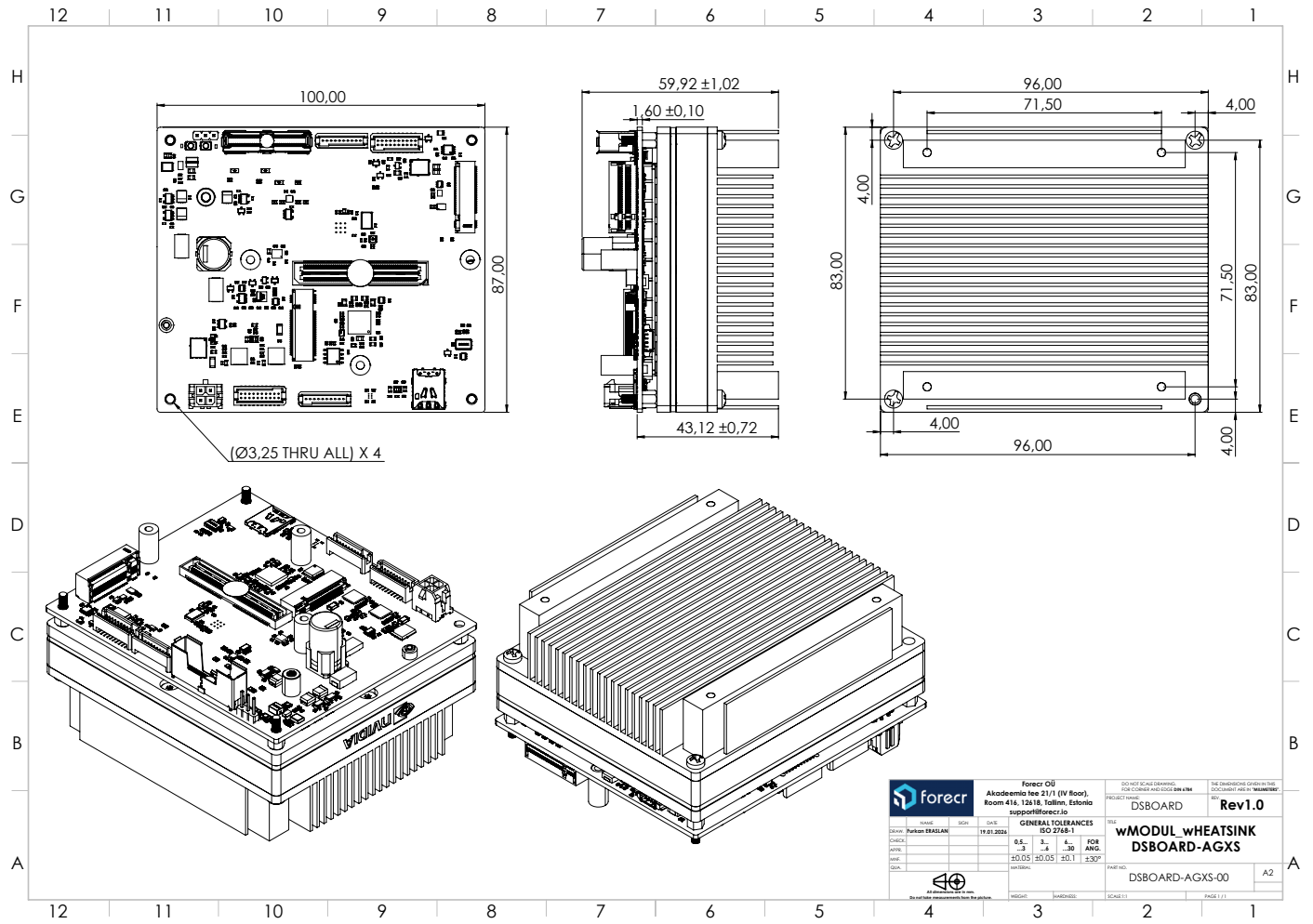


DSBOARD-AGXS with Jetson AGX Orin Module



		Forecr OÜ Akadeemia tee 21/1 (IV floor), Room 414, 12618, Tallinn, Estonia support@forecr.io		DO NOT SCALE DRAWING! SEE DIMENSIONS AND DIMENSION LINES	THE DIMENSIONS GIVEN IN THIS DOCUMENT ARE IN MILLIMETERS
DESIGN: Furtsov, KESKANE	SCALE:	DATE: 19.01.2024	GENERAL TOLERANCES ISO 2768-1	PROJECT NAME: DSBOARD	
CHECK:			0.5 -3 6 FOR -0.8 -8 -20 ANG.	REV: Rev1.0	
MATERIAL:				TITLE: wMODUL DSBOARD-AGXS	
QUANTITY:				PART NO.: DSBOARD-AGXS-00	
By the hole measurements from the position.			DESIGNER: TAVETHEISS	SCALE: 1:1	PAGE: 1 / 1

DSBOARD-AGXS with Jetson AGX Orin Module and Heatsink Integration Details



7. Power Consumption

7.1 AGX Orin 32GB

Power Supply: 24V-4A

All CPU and GPU cores are %100 loaded.

	Power Up Sequence	Idle	Standby (Suspend mode)	15W (4 core)	30W (8 core)	40W (8 core)	MAXN (8 core)
Current (A)	0.93	0.32	0.04	0.65	1	1.44	1.91
Power (W)	22.32	7.68	0.96	15.6	24	34.56	45.84

7.2 AGX Orin 64GB

Power Supply: 24V-4A

All CPU and GPU cores are %100 loaded.

	Power Up Sequence	Idle	Standby (Suspend mode)	15W (4 core)	30W (8 core)	50W (12 core)	MAXN (12 core)
Current (A)	1,39	0.33	0.07	0.69	1.04	1.57	2.92
Power (W)	33.36	7.92	1.68	16.56	24.96	37.68	70.08

7.3 AGX Orin Industrial

Power Supply: 24V-4A

All CPU and GPU cores are %100 loaded.

	Power Up Sequence	Idle	Standby (Suspend mode)	15W (4 core)	35W (8 core)	60W (12 core)	MAXN (12 core)
Current (A)	1.49	0.53	0.05	0.8	1.15	1.84	2.91
Power (W)	35.76	12.72	1.2	19.2	27.6	44.16	69.84

8. MTBF Prediction

This section will be completed soon. It will be published on our website once completed. Please check our [Forecr Web Page](#) regularly.