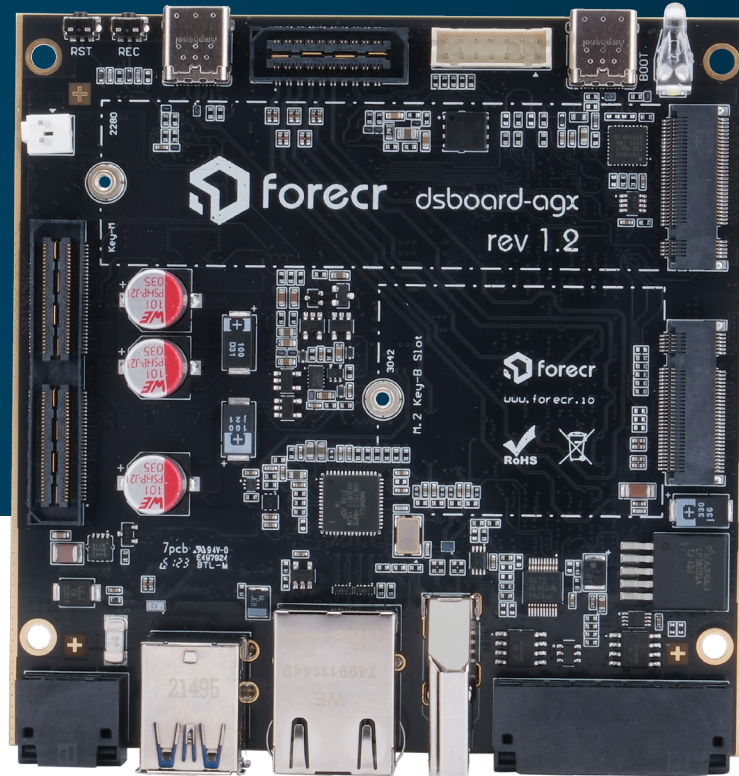




DSBOARD AGX Rev 1.2

USER MANUAL

UM-DSBDAGX-01

Revision 1.0

28/03/2024

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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

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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	28.03.2024	Preliminary Release

1. Introduction

DSBOARD-AGX is a powerful and reliable edge computing device designed for industrial applications that require high processing power and ruggedness. It is based on the NVIDIA Jetson AGX Orin system-on-module (SOM), which features an NVIDIA Ampere GPU with 1024 CUDA cores and up to 275 TOPS (trillion operations per second) of AI performance. The AGX Orin SOM also includes a 12-core ARMv8.2 CPU and a dedicated deep learning accelerator for efficient inferencing.

The DSBOARD-AGX features a wide range of connectivity options, including Gigabit Ethernet, USB 3.0, HDMI, and RS-232, as well as multiple expansion slots for adding additional peripherals such as MIPI CSI2 cameras.

The DSBOARD-AGX runs on the NVIDIA JetPack SDK, providing a complete software development environment for building and deploying AI applications in industrial environments. With its powerful AGX Orin SOM, the DSBOARD-AGX is capable of running complex AI algorithms and processing large amounts of data in realtime, making it an ideal choice for industrial applications such as robotics, automation, and surveillance.

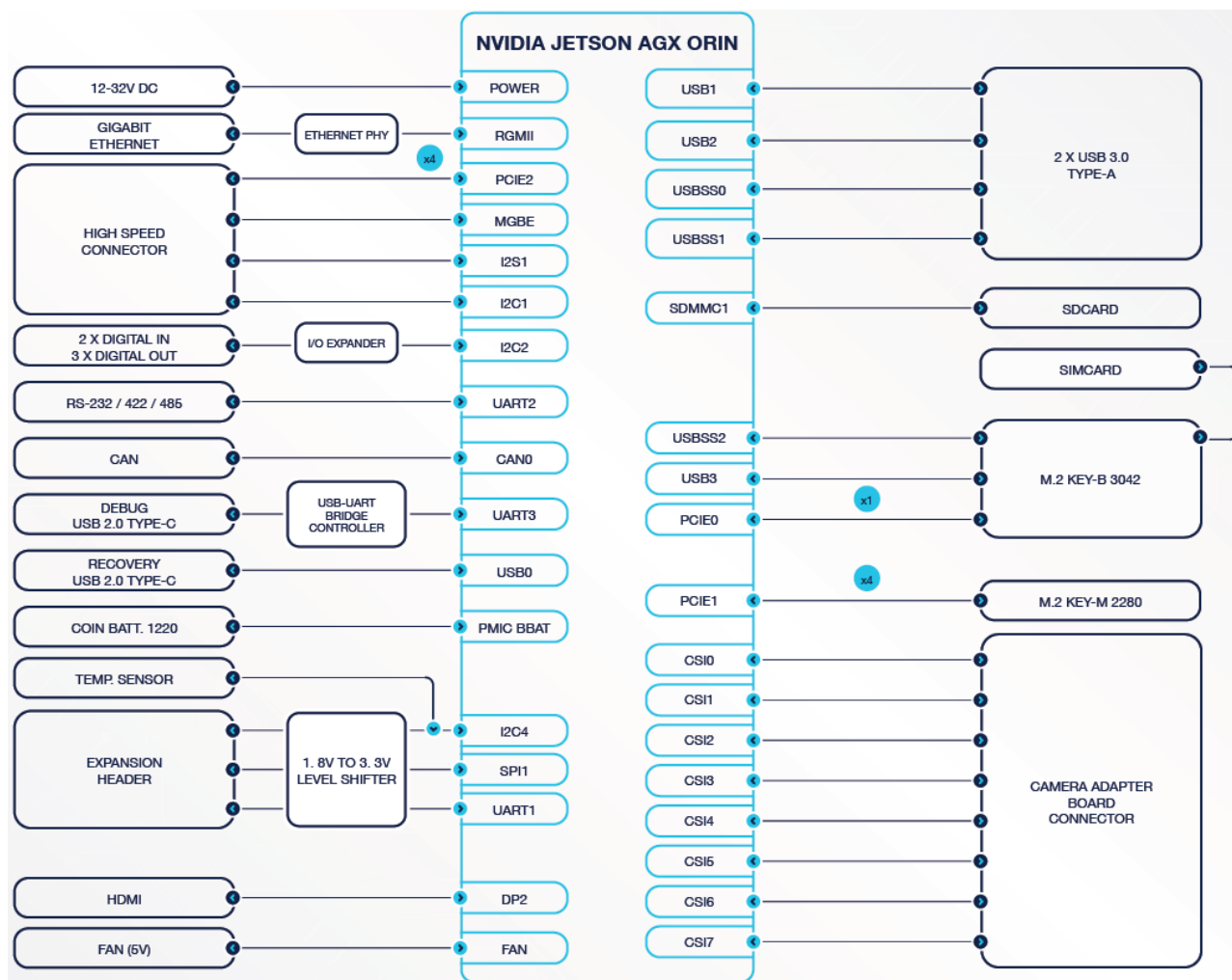
Latest revision of this user manual, datasheet, and 3D model can be downloaded from [Forecr Web Page](#).

2. Product Specification

2.1 Technical Specification

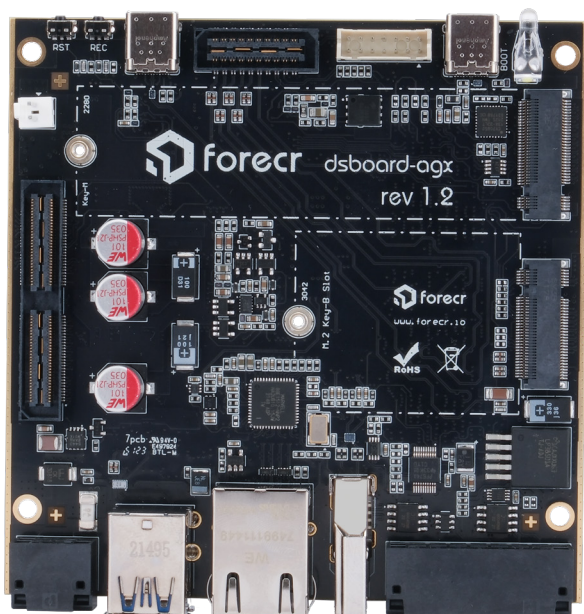
Supported Modules	NVIDIA Jetson AGX Orin 32GB NVIDIA Jetson AGX Orin 64GB
Memory	32 GB 256-bit LPDDR5x 64 GB 256-bit LPDDR5x
Graphics Interfaces	1x HDMI 2.0(max resolution 3840x2160)
Interfaces	1x Gigabit Ethernet 2x USB 3.1 Type-A 1x CAN Bus 1x RS232/422/485 (software configurable) 2x USB-C (Debug/Recovery) 2x Digital Input 3x Digital Output
Wireless Communication	LTE/5G Connectivity by extension sockets
Power Supply	12-32 VDC
Extension Sockets	1x M.2 Key-B, 1x SIM, 1x MicroSD, 1x 5V Fan 1x SPI, 1x UART, 1x I2C, 1x PCIE (x4), 1x I2S, 1 x XFI for 10G, 1x Camera Connector (6 CSI camera support)
Mass Storage	64 GB eMMC 5.1 Flash 1x M.2 Key-M SSD Slot
Ambient Conditions	-25°C ... +85°C
Form Factor / Dimensions	100 mm x 100 mm, 103gr
Operating Systems	Ubuntu Linux 20.04
JetPack Support	JetPack 5.x

2.2 Block Diagram

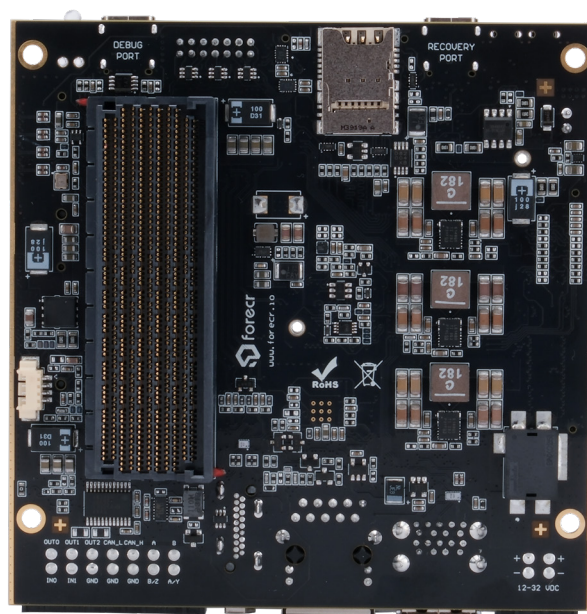


2.3 Board Visuals

Top Side



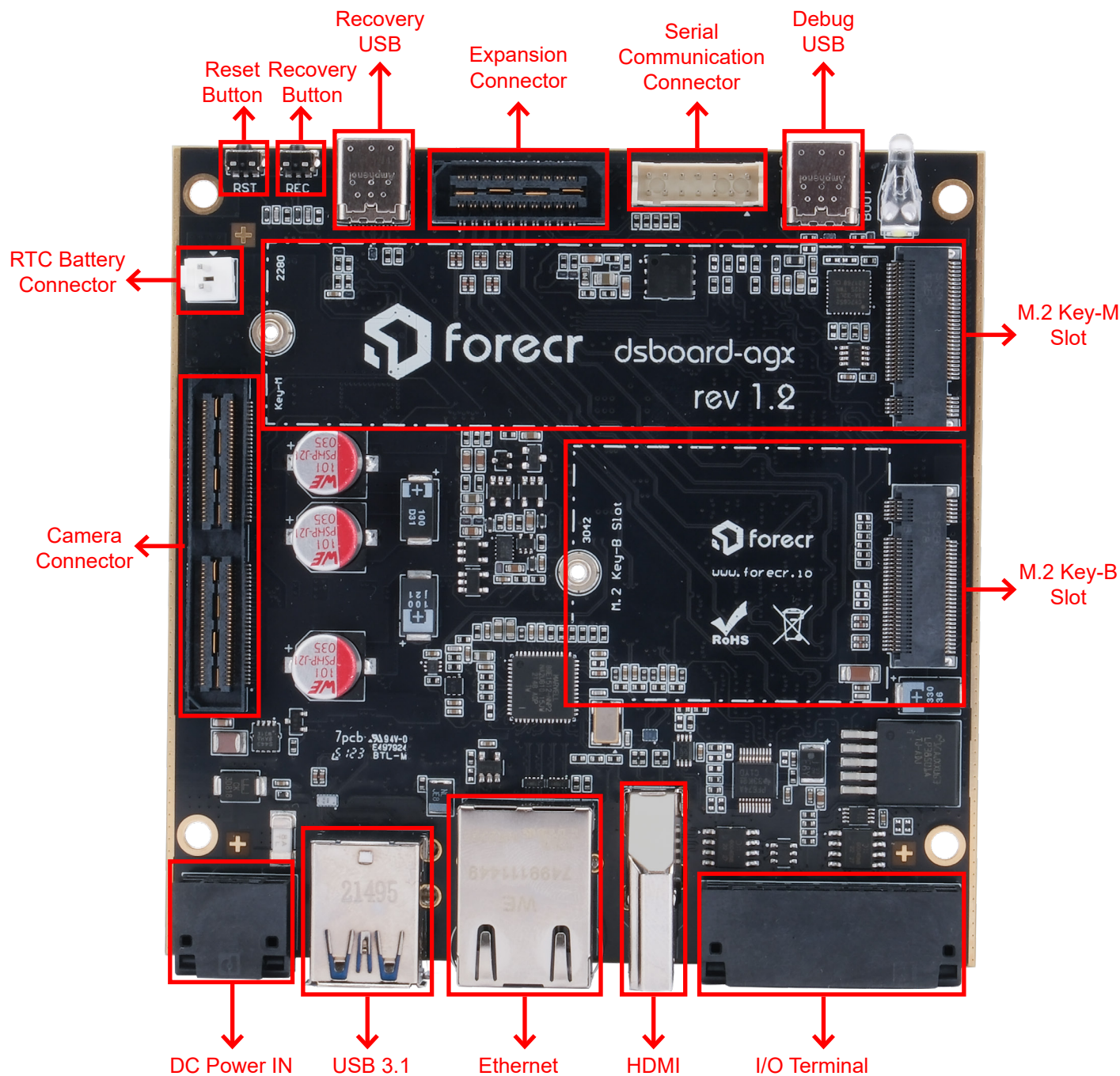
Bottom Side



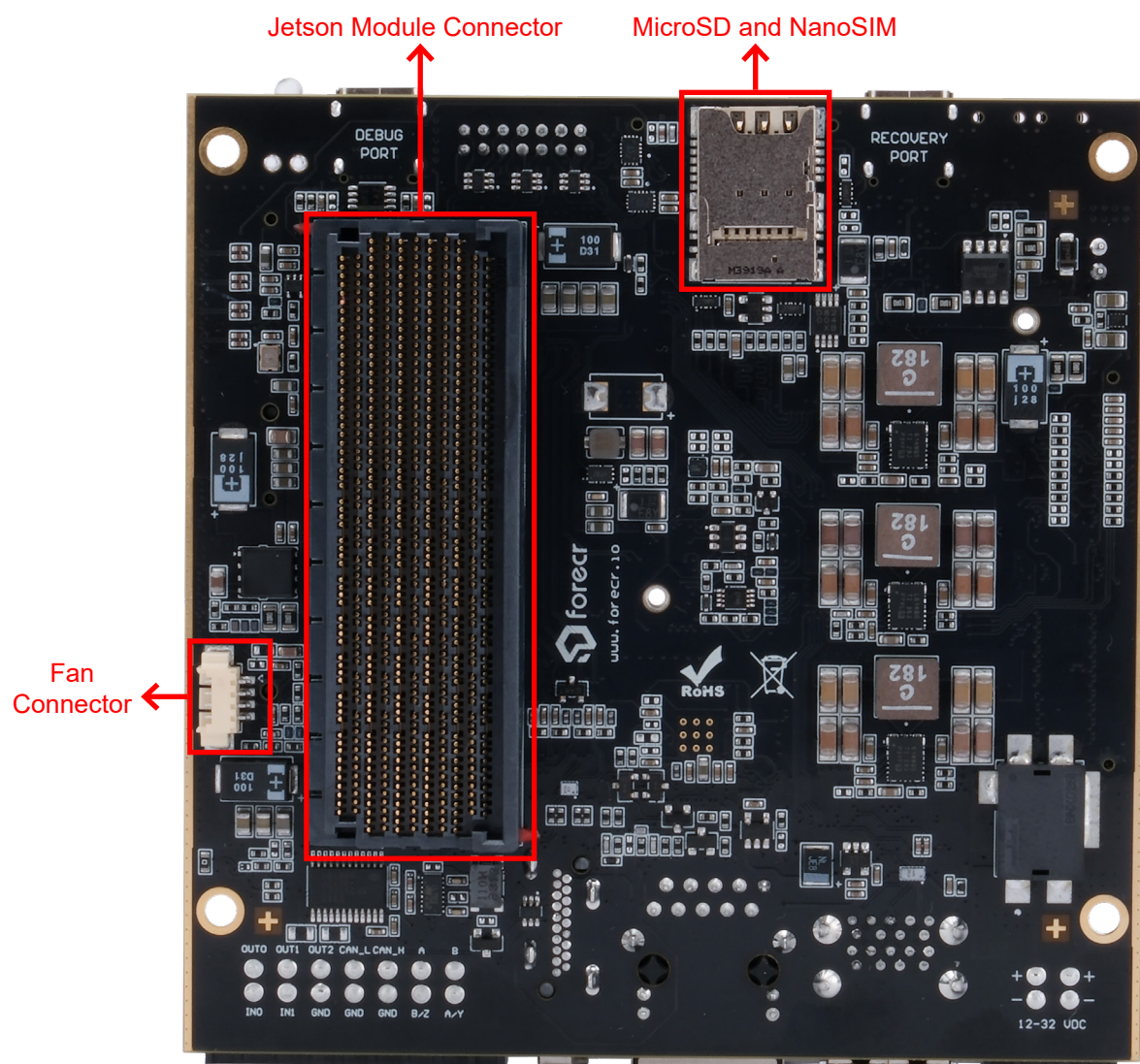
3. Hardware Information

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-AGX Power Connector
DSBOARD-AGX Camera Connector
DSBOARD-AGX 2-Pin Header for RTC Battery
DSBOARD-AGX SD Card Connector
DSBOARD-AGX M.2 Key-M Connector
DSBOARD-AGX M.2 Key-B Connector
DSBOARD-AGX I/O Terminal Connector
DSBOARD-AGX Fan Connector
DSBOARD-AGX High Speed Expansion Connector
DSBOARD-AGX Serial Communication Connector
DSBOARD-AGX HDMI Connector
DSBOARD-AGX USB 3.1 Type-A Connector
DSBOARD-AGX 10/100/1000 Ethernet Connector
DSBOARD-AGX Recovery Mode Type-C USB Connector
DSBOARD-AGX Debug Mode Type-C USB Connector
Buttons
DSBOARD-AGX Recovery Pushbutton
DSBOARD-AGX Reset Pushbutton

3.3 The Definition of Each Connector

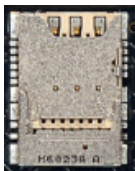
3.3.1 Power Connector

	Function		Description
	Mating Connector		1708595
	Minimum Input Voltage		+18V
	Maximum Input Voltage		+32V
	Pinout		
	Pin	Description	
	1	Positive	
	2	Positive	
	3	Negative	
	4	Negative	

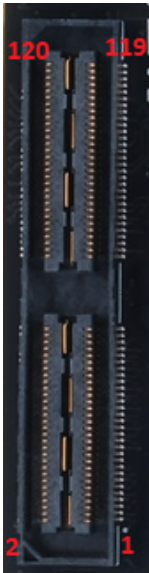
3.3.2 2-Pin Header for RTC Battery

	Description	
	Mating Connector	0014562021from Molex
	Input Voltage Range	1.85V to 5.5V

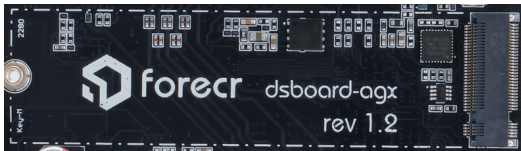
3.3.3 SD Card Connector

	Description	
	The DSBOARD-AGX implements a micro SD Card connector and nano SIM card connector together. The bottom part is used for micro SD card and the upper part is used for nano SIM card connector.	

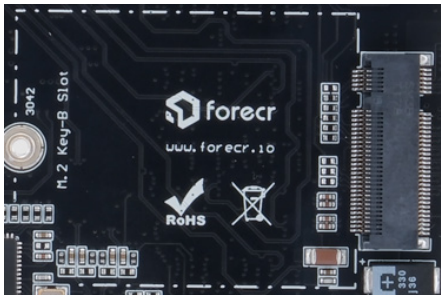
3.3.4 Camera Connector

	Function	Description							
	Connector Type	QSH-060-01-H-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	AVDD_CAM_ZV8	117	CAM_INT1
		10	CSI1.CLK_N	46	CSI6.CLK_N	82	AVDD_CAM_ZV8	118	VDD_3V3
		11	GND	47	GND	83	AVDD_CAM_ZV8	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	CSI5.CLK_P	101	CAM_TE_RSV		
		30	GND	66	CSI7.CLK_P	102	VDD_1V8		
		31	CSI2.D1_P	67	CSI5.CLK_N	103	CAM_INT3		
		32	CSI3.D1_P	68	CSI7.CLK_N	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		

3.3.5 M.2 Key-M Connector

	Description
	The DSBOARD-AGX implements a M.2 M-Key Connector for suitable modules. Board to board spacing=2.45 mm Max component height=1.25 mm Blue: Board-to-Board spacing Red: Max component height 

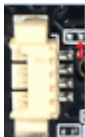
3.3.6 M.2 Key-B Connector

	Description
	The DSBOARD-AGX implements a M.2 B-Key Connector for suitable modules. Board to board spacing=2.45 mm Max component height=1.6 mm Blue: Board-to-Board spacing Red: Max component height 

3.3.7 I/O Terminal Connector

	Function		Description	
	Mating connector		1790344 (DFMC 1,5/ 7-STF-3,5) from Phoenix Contact.	
	Pinout	Pin	Description	I/O Type
		1	RS422 B	I/O
		2	RS422 Y / RS485 A	I/O
		3	RS232 RX / RS422 A	I/O
		4	RS232 TX / RS422 Z / RS485 B	I/O
		5	CAN_H	I/O
		6	GROUND	Power
		7	CAN_L	I/O
		8	GROUND	Power
		9	DIGITAL_OUT2 Note: Up to 24V,1A max, low-side switch	Output
		10	ISOLATED GROUND	Power
		11	DIGITAL_OUT1 Note: Up to 24V,1A max, low-side switch	Output
		12	DIGITAL_IN1	Input
		13	DIGITAL_OUT0 Note: Up to 24V,1A max, low-side switch	Output
		14	DIGITAL_IN0	Input

3.3.8 Fan Connector

	Function		Description	
	Mating Connector		0510210400 from Molex Picoblade series	
	Pinout	Pin	Description	
		1	GND	
		2	+5V	
		3	TACH	
		4	PWM	

3.3.9 High Speed Expansion Connector

	Function	Description			
	Connector Type	QSH-020-01-L-D-DP-A from Samtec			
	Mating connector	QTH-020-01-L-D-DP-A-K			
	Pinout	Pin	Description	Pin	Description
		1	UPHY.TX10_N	21	PEX.CLK4_N
		2	UPHY.RX10_N	22	PEX.L4_RST_N
		3	UPHY.TX10_P	23	PEX.CLK4_P
		4	UPHY.RX10_P	24	PEX.L4_CLKREQ_N
		5	UPHY.TX11_N	25	GPIO25_XF10_MDIO
		6	UPHY.RX11_N	26	XF10_RST_N
		7	UPHY.TX11_P	27	GPIO26_XF10_MDC
		8	UPHY.RX11_P	28	XF10_INT_N
		9	UPHY.TX22_N	29	I2S1.CLK
		10	UPHY.RX22_N	30	I2S1.FS
		11	UPHY.TX22_P	31	I2S1.SDIN
		12	UPHY.RX22_P	32	I2S1.SDOUT
		13	UPHY.TX23_N	33	MCLK01_AUDIO
		14	UPHY.RX23_N	34	VDD_5V
		15	UPHY.TX23_P	35	NA
		16	UPHY.RX23_P	36	VDD_5V
		17	UPHY.TX6_N	37	I2C1_SDA
		18	UPHY.RX6_N	38	VDD_5V
		19	UPHY.TX6_P	39	I2C1_SCL
		20	UPHY.RX6_P	40	VDD_5V

3.3.10 Serial Communication Connector

	Function	Description			
	Connector Type	1-1470109-4 from TE Connectivity			
	Mating connector	1-111626-8			
	Pinout	Pin	Description	Pin	Description
		1	+5V (1A max)	8	SPI1_MOSI
		2	+3.3V (1A max)	9	I2C4_SCL
		3	GND	10	I2C4_SDA
		4	GND	11	UART1_TX
		5	SPI1_CS0	12	UART1_RTS
		6	SPI1_SCK	13	UART1_RX
		7	SPI1_MISO	14	UART1_CTS

3.3.11 HDMI Connector

	<table><tr><th>Description</th></tr><tr><td>The NVIDIA® Jetson AGX Orin module will output video via the DSBOARD-AGX vertical HDMI connector that is HDMI 2.0 capable.</td></tr></table>	Description	The NVIDIA® Jetson AGX Orin module will output video via the DSBOARD-AGX vertical HDMI connector that is HDMI 2.0 capable.
Description			
The NVIDIA® Jetson AGX Orin module will output video via the DSBOARD-AGX vertical HDMI connector that is HDMI 2.0 capable.			

3.3.12 USB 3.1 Type-A Connector

	<table><tr><th>Description</th></tr><tr><td>The DSBOARD-AGX incorporates 2 USB 3.1 Type-A connectors with a 2A current limit per connector.</td></tr></table>	Description	The DSBOARD-AGX incorporates 2 USB 3.1 Type-A connectors with a 2A current limit per connector.
Description			
The DSBOARD-AGX incorporates 2 USB 3.1 Type-A connectors with a 2A current limit per connector.			

3.3.13 10/100/1000 Ethernet Connector

	<table><tr><th>Description</th></tr><tr><td>The DSBOARD-AGX implements RJ-45 ethernet connector for internet communication. RJ-45 connector is connected directly to the NVIDIA Jetson module.</td></tr></table>	Description	The DSBOARD-AGX implements RJ-45 ethernet connector for internet communication. RJ-45 connector is connected directly to the NVIDIA Jetson module.
Description			
The DSBOARD-AGX implements RJ-45 ethernet connector for internet communication. RJ-45 connector is connected directly to the NVIDIA Jetson module.			

3.3.14 Recovery Mode Type-C USB Connector

	<table><tr><th>Description</th></tr><tr><td>The DSBOARD-AGX implements a Type-C USB connector to allow to install or upgrade the operating system.</td></tr></table>	Description	The DSBOARD-AGX implements a Type-C USB connector to allow to install or upgrade the operating system.
Description			
The DSBOARD-AGX implements a Type-C USB connector to allow to install or upgrade the operating system.			

3.3.15 Debug Mode Type-C USB Connector

	<table><tr><th>Description</th></tr><tr><td>The DSBOARD-AGX implements a Type-C USB connector to access the module by using serial connection.</td></tr></table>	Description	The DSBOARD-AGX implements a Type-C USB connector to access the module by using serial connection.
Description			
The DSBOARD-AGX implements a Type-C USB connector to access the module by using serial connection.			

3.4 The Definition of Buttons

3.4.1 Recovery Pushbutton

	<table><tr><th data-bbox="537 1619 1358 1830">Description</th></tr><tr><td data-bbox="537 1619 1358 1830"> The DSBOARD-AGX 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></table>	Description	The DSBOARD-AGX 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).
Description			
The DSBOARD-AGX 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).			

3.4.2 Reset Pushbutton

	<table><tr><th>Description</th></tr><tr><td>The DSBOARD-AGX implements a reset button to reset the Jetson SoM.</td></tr></table>	Description	The DSBOARD-AGX implements a reset button to reset the Jetson SoM.
Description			
The DSBOARD-AGX implements a reset button to reset the Jetson SoM.			

4. Software Information

4.1 Installation

JetPack-5.x Installation can be found here: <https://www.forecr.io/blogs/installation/jetpack-5-x-installation-for-dsboard-agx>

5. Connectivity

5.1 General Purpose Input/Output (GPIO)

MODULE PIN NUMBER	I/O NAME	MODULE PIN NAME	TYPE	DESCRIPTION
A54	M2B_W_DISABLE2#	GPIO17	OUTPUT	GNSS disable control. Drive low to disable GNSS. Drive high for normal operation.
C55	M2B_W_DISABLE1#	GPIO18	OUTPUT	LTE/5G module airplane mode control. Drive low to enable airplane mode. Drive high for normal operation.
J55	M2B_RESET	GPIO32	OUTPUT	LTE/5G module reset control input. Drive low to trigger reset. Drive high for normal operation.
B59	M2B_FULLCARD_PWROFF#	GPIO04	OUTPUT	LTE/5G module power on/off control. Drive low to power off the module. Drive high for normal operation.
A59	M2B_PWR_ON#	GPIO05	OUTPUT	LTE/5G module 3.8V power supply LDO enable control. Drive high to disable LDO. Drive low for normal operation.
A47	RS485_CTRL	GPIO38	OUTPUT	Receiver or driver control for RS-485. Drive low to enable receiver. Drive high to enable driver.
D54	RS485/RS232	GPIO03	OUTPUT	Serial communication control for SP330EEY-L transceiver. Drive low to enable RS-232. Drive high to enable RS-485.
H52	HALF/FULL	GPIO27		Half duplex or full duplex control for RS-485 communication protocol. Drive low for full duplex communication. Drive high for half duplex communication.

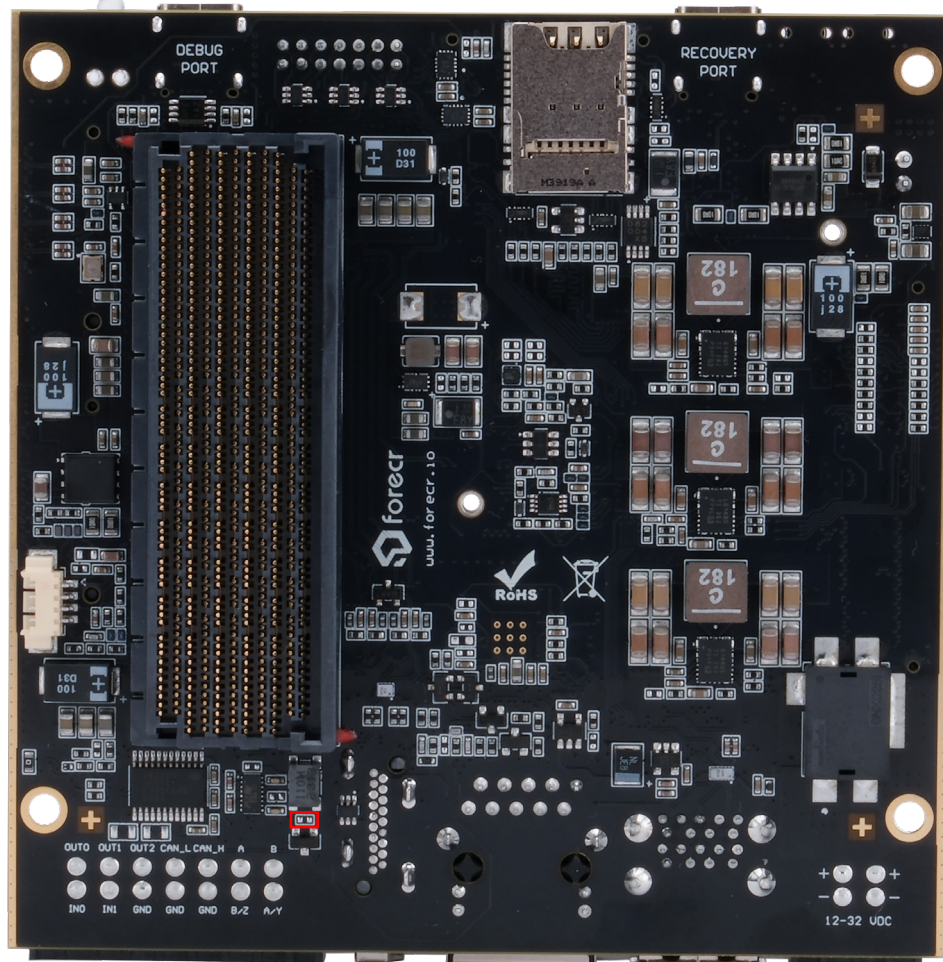
5.2 I/O Connector

On the connector, there are 4 serial communication, 3 ground, 2 CANBus, 2 digital input and 3 digital output pins.

5.2.1 CANBus Interface

There is a single CAN Bus interface on the DSBOARD-AGX. MAX3051 transceiver is used between native CAN pins of the Jetson and connector. There is a 0402 size 120R termination resistor between CAN_H and CAN_L pins on the board, which is not populated by default. A standard resistor with above specs can be fitted if termination resistor is needed on the DSBOARD-AGX side.

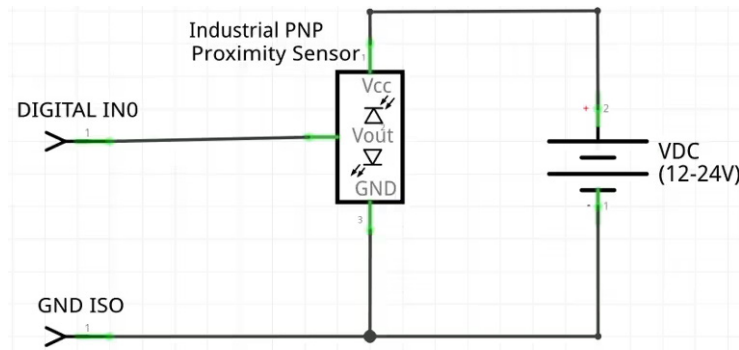
CANBus Termination Resistor



5.2.2 Industrial Input Output Interface

5.2.2.1 Setting and Reading Input Pin

Digital input side accepts signals between 12-24V (rated for 2.25mA). In our application, we used [Heschen M12 Inductive Proximity Sensor \(PNP & Normally Open\(NO\)\)](#) with 24V voltage source.



Find sysfs equivalent of the connected output pin from the table below. For this setup, it is DIGITAL_IN0. After proper hardware connection with industrial LED, we can continue with the software side.

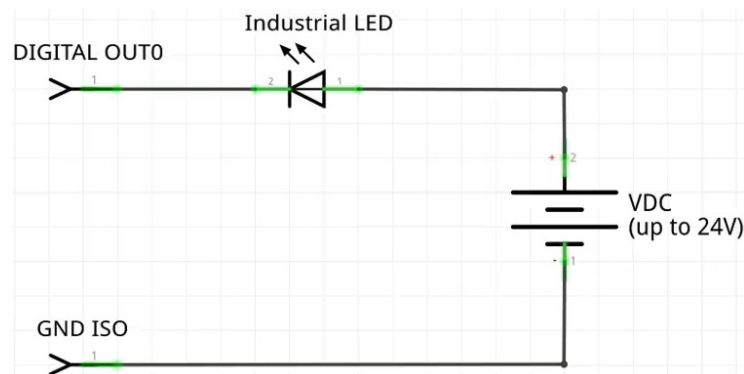
Pin Name	Sysfs Name
DIGITAL_IN0	gpio-308
DIGITAL_IN1	gpio-309
GROUND	GND

Set DIGITAL_IN0 as input and read sensor value. To do this, you should use the commands below.

```
sudo sh -c "echo 308 > /sys/class/gpio/export"
sudo sh -c "echo in > /sys/class/gpio/gpio308/direction"
sudo sh -c "cat /sys/class/gpio/gpio308/value"
```

5.2.2.2 Setting Digital Output as High and Low

Digital output side can drive loads up to 24V and has a current limit of 1A. They work as low side switches, open-close between them and GND. So, you should have a circuitry as in the schematic below. In our application, we used [GASH-ER 24V Indicator Light](#) with 24V voltage source.



Find sysfs equivalent of the connected output pin from the table below. For this setup, it is DIGITAL_OUT0. After proper hardware connection with industrial LED, we can continue with the software side.

Pin Name	Sysfs Name
DIGITAL_OUT0	gpio-312
DIGITAL_OUT1	gpio-313
DIGITAL_OUT2	gpio-314
GROUND	GND

Then, set DIGITAL_OUT0 as output and control light state. To do this, you should use the commands below.

```
sudo sh -c "echo 312 > /sys/class/gpio/export"
sudo sh -c "echo out > /sys/class/gpio/gpio312/direction"
```

To short output:

```
sudo sh -c "echo 1 > /sys/class/gpio/gpio312/value"
```

To open output:

```
sudo sh -c "echo 0 > /sys/class/gpio/gpio312/value"
```

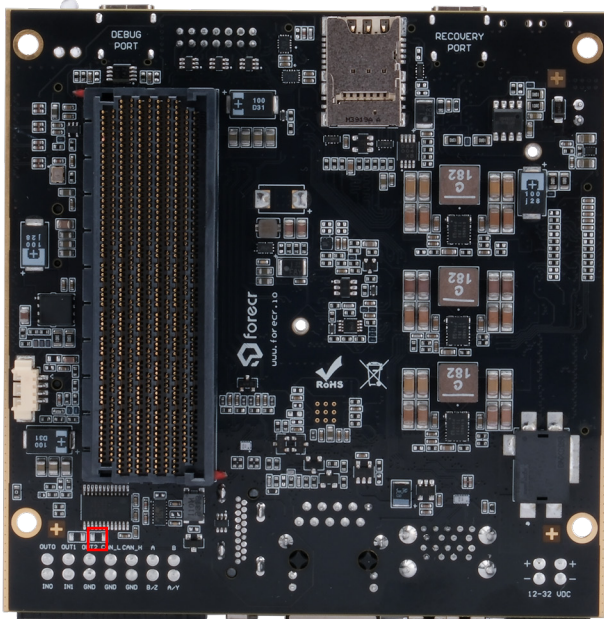
5.2.3 Serial Communication Interface

5.2.3.1 RS422

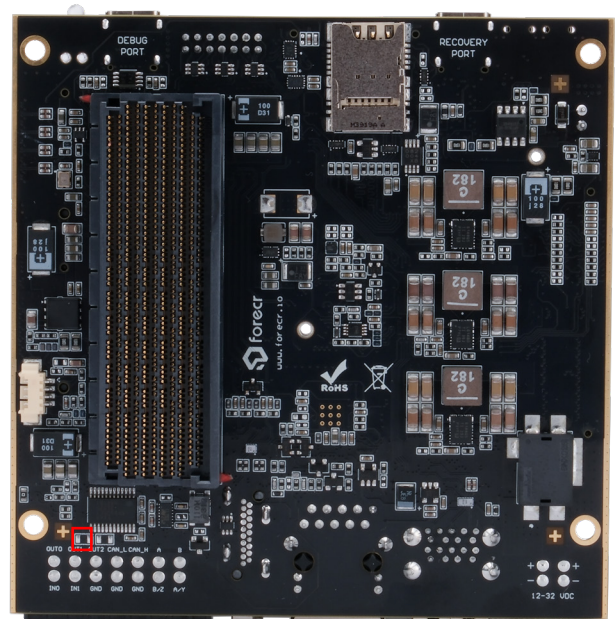
ISL83490 from Renesas is used to convert UART1 to RS-422 from Jetson. An example application can be found on the Forecr blog webpage <https://www.forecr.io/blogs/all>.

There are two 0805 size 120R termination resistors, one between transmit lanes and one between receive lanes. These are not populated by default. In case termination resistors are needed on the DSBOARD-AGX side, standard resistors with above specs can be fitted.

RS422 RX (A/B) Termination Resistor



RS422 TX (Z/Y) Termination Resistor



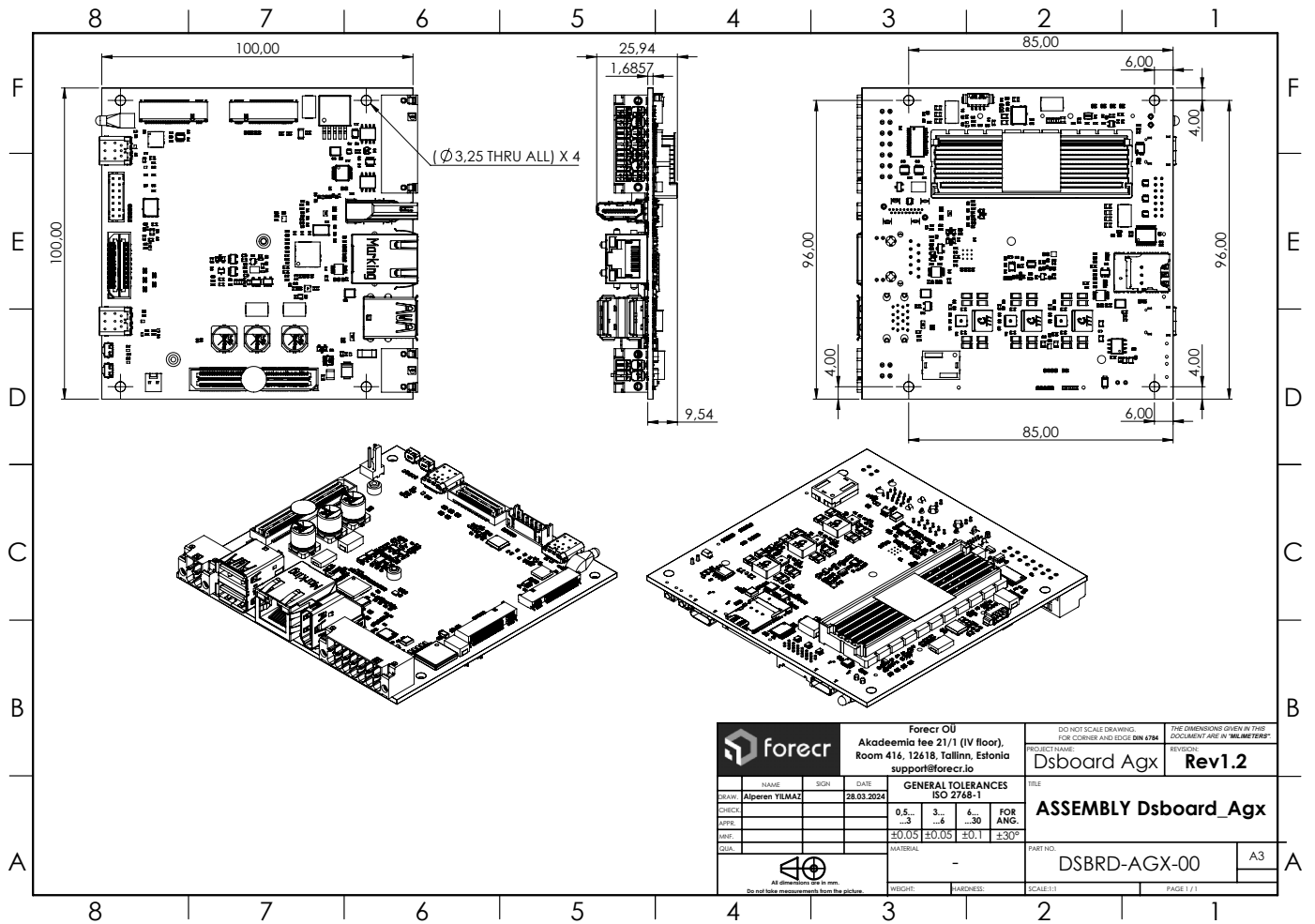
5.2.3.2 RS232

TRSF3232E from Texas Instruments is used to convert UART0 to RS-232 from Jetson. An example application can be found on the Forecr blog webpage <https://www.forecr.io/blogs/all>.

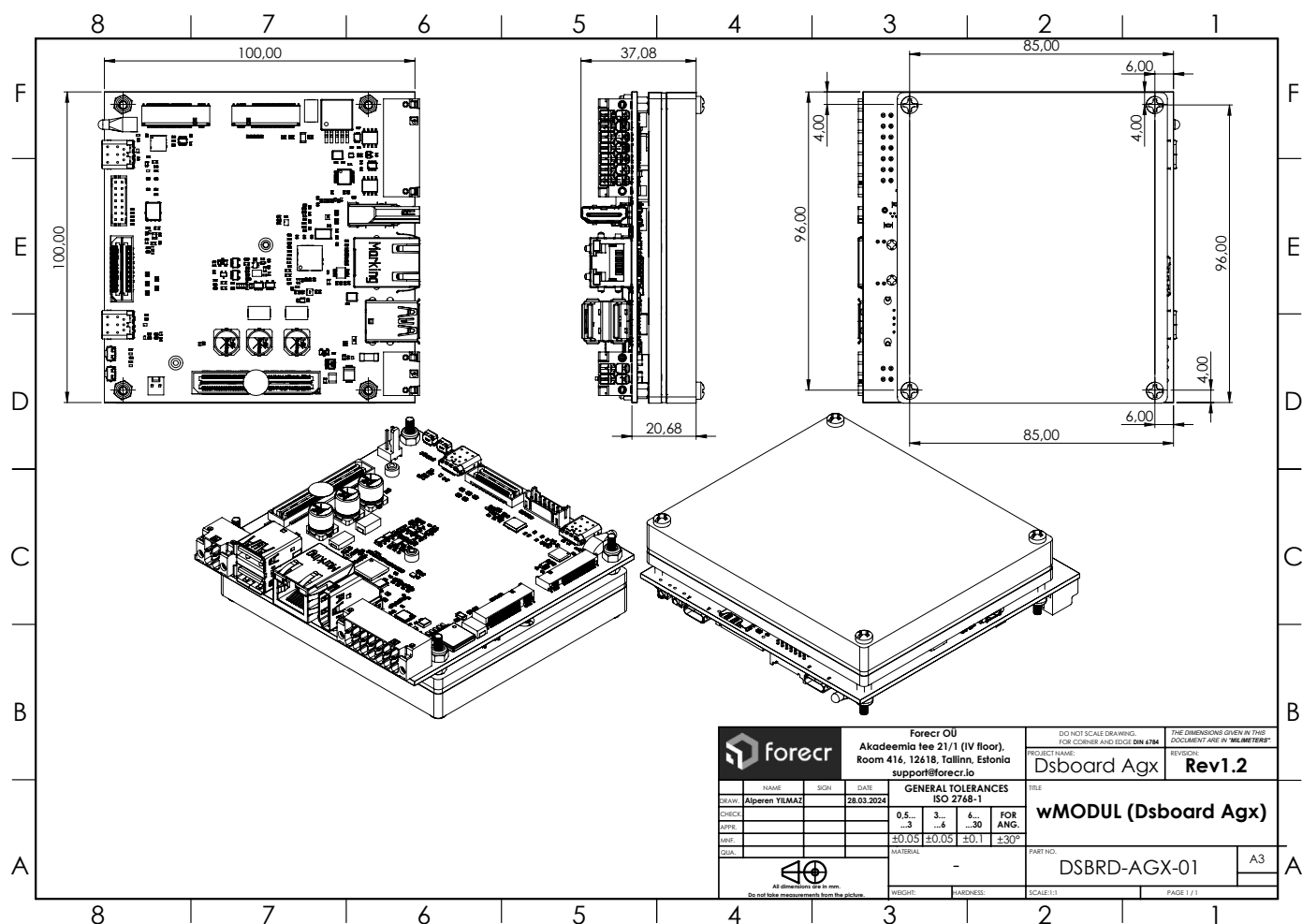
6. 3D Model & Mechanical Information

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

DSBOARD-AGX Stand Alone



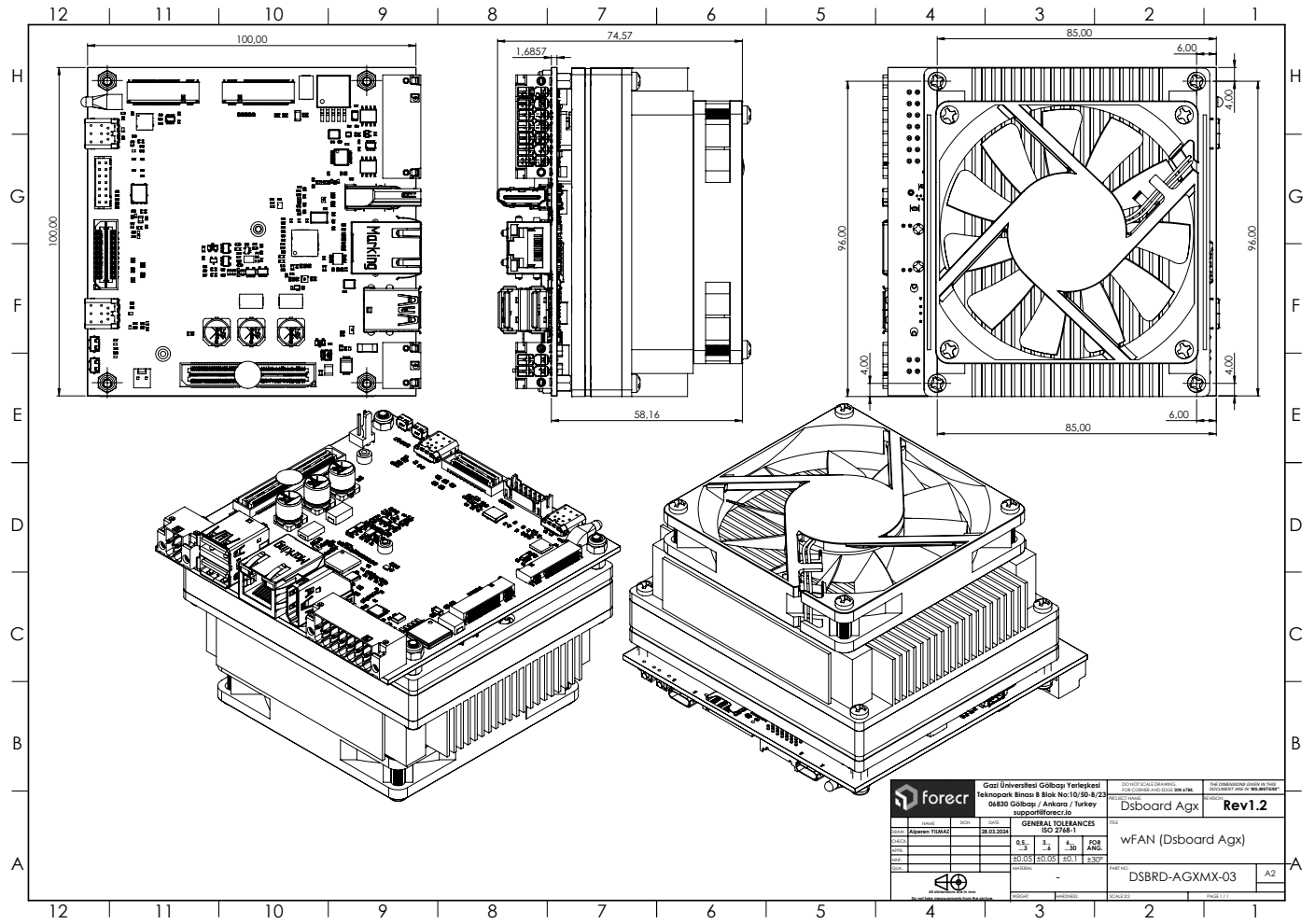
DSBOARD-AGX with Jetson AGX Orin Module



The technical drawing illustrates the DSBRD-AGXMX-02 module in three views: top, side, and isometric. The top view shows a square footprint of 100.00 mm by 100.00 mm. The side view indicates a height of 42.38 mm. The isometric view shows the module's profile with a width of 85.00 mm and a height of 96.00 mm. The drawing includes a title block with the following information:

forecr		Gazi Üniversitesi Gölbaşı Yerleşkesi Teknopark Binası B Blok No:10/50-8/23 06830 Gölbaşı / Ankara / Turkey support@forecr.tr		CONTO SCALE DRAWING FOR CONTROL AND QC ONLY		THE DIMENSIONS SHOWN IN THIS DOCUMENT ARE IN MILLIMETER	
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78				78		78	

DSBOARD-AGX with Jetson AGX Orin Module, Heatsink and Thermal Integration Details



7. Power Consumption

7.1 AGX Orin 32GB

Power Supply: 24V-5A

All CPU and GPU cores are %100 loaded.

	Power Up Sequence	15W (4 core)		30W (8 core)		40W (8 core)		MAXN (8 core)	
		Avg	Peak	Avg	Peak	Avg	Peak	Avg	Peak
Current (A)	~1	0,92	0,98	1,4	1,45	1,75	1,89	2,2	2,36
Power (W)	24	22,08	23,52	33,6	34,8	42	45,36	52,8	56,64

7.2 AGX Orin 64GB

Power Supply: 24V-5A

All CPU and GPU cores are %100 loaded.

	Power Up Sequence	15W (4 core)		30W (8 core)		50W (12 core)		MAXN (12 core)	
		Avg	Peak	Avg	Peak	Avg	Peak	Avg	Peak
Current (A)	~1,5	0,89	0,92	1,2	1,38	1,7	1,98	3,45	3,6
Power (W)	36	21,36	22,08	28,8	33,12	40,8	47,52	82,8	86,4

8. MTBF Prediction

Prediction method	Mil Hdbk 217F2, parts count
Environment	GF - Ground Fixed, $T_A=40^{\circ}\text{C}$, $T_J=60^{\circ}\text{C}$
Date	19-Feb-2024
Total Failure Rate	8.044760 (FPMH)
MTBF	124305 (Hours), 14.19 (Years)

9. Ordering Information

DSBOARD-AGX-AA	DSBOARD-AGX carrier board without SOM
DSBOARD-AGX-AB	DSBOARD-AGX carrier board with 32GB AGX Orin SOM
DSBOARD-AGX-AC	DSBOARD-AGX carrier board with 64GB AGX Orin SOM