

# Connect Tech TX2 or TX2i Rudi Embedded System with **NVIDIA Jetson User Guide**

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Connect Tech Inc. **Embedded Computing Experts** 

> **USERS GUIDE**



Rudi Embedded System with NVIDIA Jetson TX2 or TX2i CTIM-00479 Revision 0.09 2021-10-15



#### **CONNECT TECH**

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### **PREFACE**

#### Disclaimer

The information contained within this user's guide, including but not limited to any product specification, is subject to change without notice.

Connect Tech assumes no liability for any damages incurred directly or indirectly from any technical or typographical errors or omissions contained herein or for discrepancies between the product and the user's guide.

### **Customer Support Overview**

If you experience difficulties after reading the manual and/or using the product, contact the Connect Tech reseller from which you purchased the product. In most cases, the reseller can help you with product installation and difficulties.

In the event that the reseller is unable to resolve your problem, our highly qualified support staff can assist you. Our support section is available 24 hours a day, 7 days a week on our website at: <a href="https://connecttech.com/support/resource-center/">https://connecttech.com/support/resource-center/</a>. See the contact information section below for more information on how to contact us directly. Our technical support is always free.

### **Contact Information**

	Contact Information
Mail/Courier	Connect Tech Inc. Technical Support 489 Clair Rd. W. Guelph, Ontario Canada N1 L 0H7
Contact Information	sales@connecttech.com support@connecttech.com www.connecttech.com  Toll-Free: 800-426-8979 (North America only) Telephone: +1-519-836-1291 Facsimile: 519-836-4878 (on-line 24 hours)
Support	Please go to the <u>Connect Tech Resource Center</u> for product manuals, installation guides, device drivers, BSPs, and technical tips.  Submit your <u>technical support</u> questions to our support engineers.  Technical Support representatives are available Monday through Friday, from 8:30 a.m. to 5:00 p.m. Eastern Standard Time.

## **Limited Product Warranty**

Connect Tech Inc. provides a one-year Warranty for the Rudi Embedded System. Should this product, in Connect Tech Inc.'s opinion, fail to be in good working order during the warranty period, Connect Tech Inc. will, at its option, repair or replace this product at no charge, provided that the product has not been subjected to abuse, misuse, accident, disaster or non-Connect Tech Inc. authorized modification or repair.

You may obtain warranty service by delivering this product to an authorized Connect Tech Inc. business partner or to Connect Tech Inc. along with proof of purchase. Product returned to Connect Tech Inc. must be pre-authorized by Connect Tech Inc. with an RMA (Return Material Authorization) number marked on the outside of the package and sent prepaid, insured, and packaged for safe shipment. Connect Tech Inc. will return this product by prepaid ground shipment service.

The Connect Tech Inc. Limited Warranty is only valid over the serviceable life of the product. This is defined as the period during which all components are available. Should the product prove to be irreparable, Connect Tech Inc. reserves the right to substitute an equivalent product if available or to retract the Warranty if no replacement is available.

The above warranty is the only warranty authorized by Connect Tech Inc. Under no circumstances will Connect Tech Inc. be liable in any way for any damages, including any lost profits, lost savings, or other incidental or consequential damages arising out of the use of, or inability to use such product.

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## **ESD Warning**



Electronic components and circuits are sensitive to ElectroStatic Discharge (ESD). When handling any circuit board assemblies including Connect Tech COM Express carrier assemblies, it is recommended that ESD safety precautions be observed. ESD safe best practices include, but are not limited to:

- Leaving circuit boards in their antistatic packaging until they are ready to be installed.
- Using a grounded wrist strap when handling circuit boards, at a minimum you should touch a grounded metal object to dissipate any static charge that may be present on you.
- Only handling circuit boards in ESD safe areas, which may include ESD floor and table mats, wrist strap stations, and ESD safe lab coats.
- · Avoid handling circuit boards in carpeted areas.
- Try to handle the board by the edges, avoiding contact with components.

## **REVISION HISTORY**

Revision	Date	Changes
0.00	2016/12/22	Initial Release
0.01	2017/02/24	Added disassembly instructions, mounting bracket details, and updated part numbers
0.02	2017/08/04	Added cable drawing links, removed drawings from doc
0.03	2017/08/28	Updated 3D model link
0.04	2017/10/19	Updated the power adapter reference P/N for ESG505/506's Added TX2 relevant info
0.05	2017/12/12	Updated TX2 specs
0.06	2018/01/19	Updated photos
0.07	2018/02/06	Updated product name & URL
0.08	2019/04/08	Updated to TX2i, Updated HDMI and PNs
0.09	2021/10/15	Updated format, Updated address, Removed TX1 references

# **INTRODUCTION**

Connect Tech's Rudi is a small form factor embedded system based on the NVIDIA® Jetson™ TX2/TX2i. used in a compact enclosure with optional mounting brackets. Rudi features revolutionary the NVIDIA Pascal™ based architecture with 256 CUDA cores delivering over 1 TeraFLOP of performance with a 64bit Quad or Hex core ARM A57 CPU.

# **Product Features and Specifications**

	Specifications
Processor	NVIDIA Jetson TX2/TX2i
Memory	TX2: 8GB LPDDR4
Storage	TX2: 32GB eMMC
Display	1x HDMI Type A Link (Supports up to HDMI 2.0 UHD 4K [2160p] at 60H z)

Ethernet	2x Gigabit Ethernet (10/100/1000) Links
USB	3x USB 2.0, 2x USB 3.0 Links
WiFi	IEEE 802.11 ac
Bluetooth	Bluetooth 4.0 (24 Mbps)
Serial	2x RS-232 (Default: 1 console, 1 general purpose)
CAN Bus	1x CAN Bus 2.0b
Power Operation	Auto Power On in Event of Power Failure External Power On/Off Contro I Button
Power Requirement	+12V DC Input Nominal
Operating Temperature	-20°C to +80°C with Minimum Airflow of 25 CFM for Standalone Operation
Dimensions	Without Mounting Bracket: 135mm x 50mm x 105mm (5.31" x 1.97" x 4. 13")
Weight	0.703kg / 1.55lb (base enclosure only)
Accessories (included)	12V Power Supply Brick (90~264 Vac), Power supply adapter (ESG505/506 only), and a CAN Bus Terminal Connector
Accessories (optional)	Dual-Band Antenna, Edge Mounting Brackets, I/O breakout cable.
Warranty and Support	1 Year Warranty and Free Support

# **Part Numbers / Ordering Information**

	Part Number	
	Manual Power On/Off Switch	Auto-Power On Mode
Ordering Part Numbers Rudi Enclosure with TX 2 and DC Barrel Power		

Connector  O-C-O  12V  12V	ESG503-21 – North America ESG503-22 – EU	ESG504-21 – North America ESG504-22 – EU
	ESG503-23 – Israel ESG503-24 – Korea ESG503-25 – China	ESG504-23 – Israel ESG504-24 – Kor ea ESG504-25 – China
Ordering Part Numbers	Manual Power On/Off Switch	Auto-Power On Mode
Rudi Enclosure with TX 2 and 2 Pin Locking Ter minal Power Connector	ESG505-21 – North America ESG505-22 – EU	ESG506-21 – North America ESG506-22 – EU
	ESG505-23 – Israel ESG505-24 – Korea	ESG506-23 – Israel ESG506-24 – Korea
	ESG505-25 – China	ESG506-25 – China
	MSG067	Mounting Bracket (x2)
Ordering Part Numbers for Accessories	MSG066	Dual-Band SMA Antenna
	CBG258	MISC I/O Cable: 2×6 Pin (0.100" pitch) to Flying lead (1 2" length)

# **Connector Locations (Front)**



# **Connector Locations (Rear)**



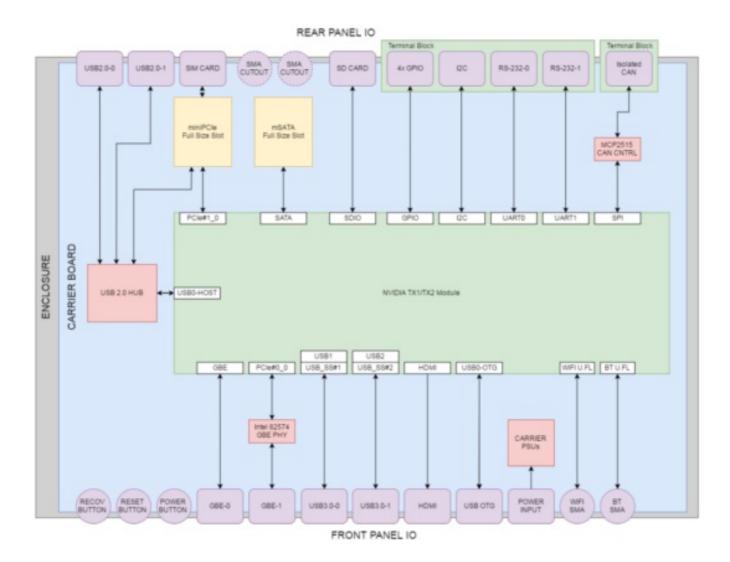
**Connector Summary** 

Designator	Connector	Description
12V PWR	Power Input	Power Input Connector – 2.1mm Barrel. Or Two Pin Termin al Connector 3.5mm Pitch
OTG USB	USB micro	USB 2.0 micro Type A/B Connector
USB 3.0 A	USB 3.0 Port A	USB 3.0 SuperSpeed Type A Connector
USB 3.0 B	USB 3.0 Port B	USB 3.0 SuperSpeed Type A Connector
USB 2.0 A	USB 2.0 Port A	USB 2.0 Port 1 Type A Connector
USB 2.0 B	USB 2.0 Port B	USB 2.0 Port 2 Type A Connector
HDMI	НДМІ	HDMI Type A Connector
GbE 1	Gigabit Ethernet Port 1	Gigabit Ethernet (10/100/1000) Port 1 RJ-45 (TX2/TX2i)
GbE 2	Gigabit Ethernet Port 2	Gigabit Ethernet (10/100/1000) Port 2 RJ-45 (Intel)
ANT 1	Antenna 1	NVIDIA Jetson TX2/TX2i J8 U.FL (WiFi)
ANT 2	Antenna 2	NVIDIA Jetson TX2/TX2i J9 U.FL (Bluetooth)
SD Card	SD Card	Full Size SD card Push/Push Connector
Sim Card	Sim Card	Standard Size SIM Card Push/Push Connector (used with onboard miniPCle site only).
CAN Bus	3 Pin Terminal Block	3 Pin Terminal Block 3.5mm pitch
I/O	12 Pin Header Block	12 Pin 0.100" 6×2 Header Block (I2C, GPIO and UARTs)

# **Switch Summary**

Designator	Function	Description
Power Button	Power ON/OFF	Rudi System Power ON/OFF Button
Reset	Hardware Reset	Rudi System Reset push button
Recovery	Force Recovery	Used for TX2/TX2i system programming (used in conjunction with the dual purpose USB OTG port).

## **Block Diagram**



# **DETAILED FEATURE DESCRIPTION**

The Rudi Embedded System is an NVIDIA Jetson TX2/TX2i-based embedded system. The Rudi comes with an NVIDIA Jetson TX2/TX2i preloaded with the latest Linux for Tegra (Ubuntu) with the Connect Tech Board Support Package installed.

# **Power Input**

The Rudi Embedded System accepts a single power input to power the entire system. An input range of +12.0V +/- 10% DC is required. In addition, both reverse polarity protection, and surge protection has been designed into the Rudi Embedded System.

Function		Power
Location	Rear par	nel 12V PWR
Туре	DC Barre A Max ra	el Connector 2.0mm center pin 2.5
	Pin	Description
Pinout	Inner	Power
Pillout	Outer	GND
	Power In	put Range: +12V +/-10%
Features	1 .	er input has reverse polarity and su ection built-in.



# Power Input (Alternate 2 pin Terminal ESG505/506)

The Rudi Embedded System accepts a single power input to power the entire system. An input range of +12.0V +/- 10% DC is required. In addition, both reverse polarity protection, and surge protection has been designed into the Rudi Embedded System.

Function		Power
Location	Rear par	nel 12V PWR
Туре		Pin Terminal Connector 3.5mm pitc rew locking.
Mating	1847055	
	Pin	Description
Pinout	Left	GND
Fillout	Right	POWER
	Power In	put Range: +12V +/-10%
Features		er input has reverse polarity and su rection built-in.



## **USB OTG**

Function	USB 2.0 port (Host or Target device capable)
Location	Front panel OTG
Туре	Micro USB Type A/B
Features	Multi-function port. Used as a 3 <sup>rd</sup> USB 2.0 Host p ort, or during Force Recovery mode it becomes a Target device port that can attach to another host to interface directly to the TX2/TX2i for flash repro gramming operations.



## I/O Connector

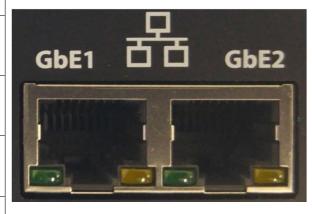
The Rudi Embedded System has a console port to allow for remote or headless use of the System. With an RS-232 Link, the RS232 Console port allows for additional debugging of the Rudi Embedded System.

Functio n	Misc I/O Features (I2C, GPIO, UARTs)		
Location	Rear panel I/O connector		
Туре	2×6 0.100" pitch Header Block		
	Pi n	Signal	Description
	1	I2C_CLK	3.3V General Purpose I2C Bus Clock. (Attached to TX1 I2C-0)
	2	I2C_DATA	3.3V General Purpose I2C Bus Data. (Attached to TX1 I2C-0)
	3	GND	Digital GND
		,	

	4	GND	Digital GND	2 I/O 12
	5	GPIO1	3.3V General Purpose I/O	THILL
Pinout	6	GPIO2	3.3V General Purpose I/O	1 11
	7	GPIO3	3.3V General Purpose I/O	
	8	GPIO4	3.3V General Purpose I/O	
	9	UART1_RX	General Purpose UART RS-232 Receive.	
	10	UART1_TX	General Purpose UART RS-232 Transmit.	
	11	UARTO_RX	Console UART RS-232 Receive.	
	12	UART0_TX	Console UART RS-232 Transmit.	
Feature s			of add-on features for General pu our GPIOs, and two UARTs.	

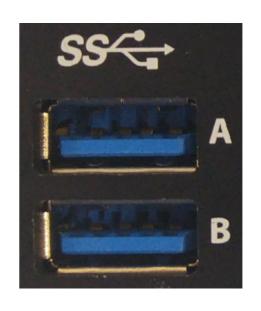
# 10/100/1000 Ethernet (GBE)

Function	Gigabit Ethernet Connector
Location	Front panel GbE1 and GbE2
Туре	Standard RJ45 receptacle
Pinout	Standard GbE pinout
Features	GbE 1 – TX2/TX2i direct controller port capable of 10/100/1000 Base-T Gigabit Ethernet GbE 2 – PCle Intel-based controller port capabl e of 10/100/1000 Base-T Gigabit Ethernet.

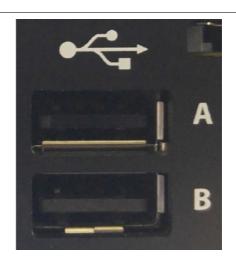


# **USB 3.0**

Function	USB 3.0
Location	Front panel SS-A, SS-B
Туре	Industry Standard USB 3.0 Type A Connector
Pinout	Standard USB 3.0 pinout
Features	SuperSpeed USB 3.0 interfaces capable of eith er USB 3.0 or USB 2.0 interfaces.



Function	USB 2.0
Location	Rear panel USB-A, USB-B
Туре	Industry Standard USB 2.0 Type-A Connector
Pinout	Standard USB 2.0 pinout
Features	Full Speed USB 2.0 interfaces. Note these ports are disabled during Force Recovery Mode.



### **HDMI**

Function	HDMI v1.4b Display Interface
Location	Front panel HDMI
Туре	Standard HDMI Type A receptacle.
Pinout	Standard HDMI 1.4b pinout
Features	HDMI Display output, capable of resolution up t o 3840×2160.



# Antenna 1

The Rudi Embedded System enables access to the NVIDIA Jetson WiFi and Bluetooth modems. The external SMA Antenna 1 Connector is attached internally to the J8 U.FL on the Jetson TX2/TX2i.

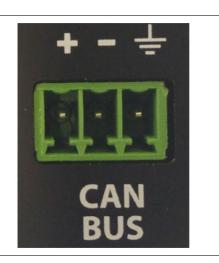
Function	Antenna 1
Location	Front panel ANT1
Туре	Micro High-Frequency SMA Connector (Female s ocket)
Features	Dual-Band capable WiFi Antenna port 2.4/5.8GH z



## Antenna 2

The Rudi Embedded System enables access to the NVIDIA Jetson WiFi and Bluetooth modems. The external SMA Antenna 2 Connector is attached internally to the J9 U.FL on the Jetson TX2/TX2i.

Function	Antenna 2
Location	Front panel ANT2
Туре	Micro High-Frequency SMA Connector (Female s ocket)
Features	Bluetooth Antenna port – 2.45GHz



# SD Card

Functio n	Full-Size SD Card
Location	Rear panel SD CARD
Туре	Full-size Push/Push SD Card connector
Feature s	Standard Full-size Secure Digital Car d interface for use with SDHC and St andard SD Cards.



# **SIM Card**

Functio n	Full-Size SIM Card
Location	Rear panel SIM
Туре	Full-size Push/Push SIM card connector
Feature s	Full-size SIM card interface that is used exclu sively with the mPCle port when used in conjunction with a mPCle Cell modem expansion card.



# **SWITCH DESCRIPTION**

The Rudi Embedded System has a single Power Button on the Front Faceplate.

# **Power Button**

Functio n	Power Button	A
Notes	A nearly flush switch with an easy toggle press to turn the system on. Blue light in the center will indicate the system is fully powered.  The System will turn off if the PWR button is held for s everal seconds.	PWR

# **Reset Button**

Functio n	Reset Button	<u>P</u>
Notes	System Reset button. The button is slightly recessed so it is protected from accidental contact. The papercli p-sized hole provides access.	ESET

# **Recovery Button**

Functio n	Recovery Button
Notes	Used in conjunction with the USB OTG port for reprogramming the TX2/TX2i onboard the eMMC drive. By holding this button and powering on the system (or toggling reset), the TX2/TX2i will enter recovery mode for reprogramming. It also turns the USB OTG port int o a target device port instead of a host port to enable another system to discover it over USB.

### **Force Recovery Mode**

USB OTG port of the Rudi can be used to reprogram the TX2/TX2i when put into force recovery mode. To enable force USB recovery mode using the Rudi Embedded System follow the steps below:

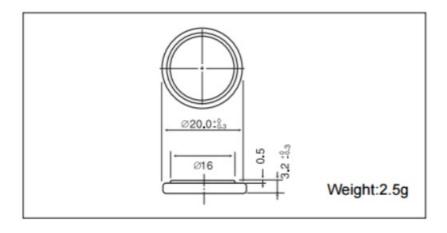
- 1. Power down the system completely. The system power MUST be OFF, not in suspend or sleep mode.
- 2. Connect the OTG USB port to another host device that will be supplying the new system file.
- 3. Using a paper clip or similar depress the Recovery button
- 4. The power on the system with the Recovery button is still depressed. After three (3) seconds release the Recovery button.
- 5. The TX2/TX2i will show up on the host system as a new NVIDIA Target device.
- 6. After successfully updating the system software, power off the system. A clean power-up will revert the OTG port back into host mode.

## **RTC Battery**

Included in the Rudi Embedded System is a BR2032 coin battery to provide RTC backup power for the TX2/TX2i. Information about battery life can be found in CTI App Note CTIN-00009 <a href="https://www.connecttech.com/pdf/CTIN-00009.pdf">https://www.connecttech.com/pdf/CTIN-00009.pdf</a>.

The battery is a poly-carbon-monofluoride Lithium coin cell, some details can be found below.

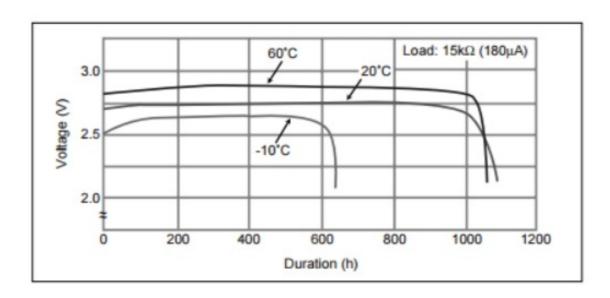
## Dimensions (mm)



### **Specification**

Nom [nal voltage (V)	
Nominal capacity (mAh)	190
Continuous standard load (mA)	0_03
Operating temperature (C)	<u>-30</u> – <u>+80</u>

# **Temperature Characteristics**



# **EXPANSION OPTIONS**

The Rudi Embedded System has two internal expansion ports. One full-size mini PCIe Expansion Slot and one full-size mSATA slot.

# miniPCle Expansion Card

Function	Full-size Mini PCIe expansion slot
Location	Internal
Features	The internal mPCIe supports either a PCIe or USB2.0 based expansion card that allows adding feat ures to the Rudi to include options like:  · 3G-SDI Video Capture  · Analog Video Capture (NTSC/PAL)  · GbE Expansion  · Multi-port Serial  · Cell Modem

# mSATA Expansion Card

Function	Full size mSATA expansion slot
Location	Internal
Features	The internal mSATA slot supports additional storage of up to 1TB.

Contact <u>sales@connecttech.com</u> for details on expansion port options.

### **RUDI OPERATION**

- 1. Ensure the external power supply is turned OFF and unplugged from the AC power source.
- 2. Connect the power cable from the +12V brick supply to the Rudi Embedded System. Ensure that the power supply being used is in the acceptable range of +12V +/-10%.
- 3. Connect any additional system cables such as USB, Ethernet, HDMI, etc.
- 4. Switch ON the Power Supply. DO NOT power up your system by plugging in live power. The system protects from some surges, but it is good practice to plug the barrel connector into Rudi, before plugging the brick into an AC source.
  - a. Toggle the front PWR button on the Rudi Embedded System for a startup if an ESG503. Please allow 15 to 30 seconds to power up into the Linux for Tegra (L4T) Ubuntu Operating System.
  - b. If Auto-Power On Mode is enabled, the Rudi will power on as soon as power is applied.

### SYSTEM LEDS

The Rudi Embedded System has 5 System LEDs on the front, in 3 different colors.

LED	Description	LED Colour
PWR	System Power	Blue
ACT1	Gigabit Ethernet ACT 1	Orange
LINK1	Gigabit Ethernet LINK 1	Green
ACT2	Gigabit Ethernet ACT 2	Orange
LINK2	Gigabit Ethernet LINK 2	Green

The LEDs can be found on the front panel of the Rudi Embedded System.

### **CURRENT CONSUMPTION DETAILS**

Below are the maximum ratings of the Rudi Embedded System.

Theoretical Maximum	Amps	Watts
The theoretical absolute maximum total draw of all functionality on the Rudi E mbedded System	1.7A	21W

Please refer to the NVIDIA Jetson TX2/TX2i manual for full details on the current consumption and operational details.

Actual Measurements	Amps	Watts
System Idle	0.400A	4.8W
HDMI video output, USB keyboard/mouse, 2x GBE running, system sitting in Ubuntu Desktop (GUI)	0.600A	7.2W

## **ACCESSORIES**

## **Power Brick**

Included with the Rudi Embedded System is a +12Vdc 65W power brick capable of accepting 90-264Vac (47-63Hz) power input.



If using the 2-terminal locking power connector (ESG505/506), CBG277 will be provided for adapting the above power supply to the Rudi power input. View the CBG277 drawing.

## **CAN Bus Terminal Connector**

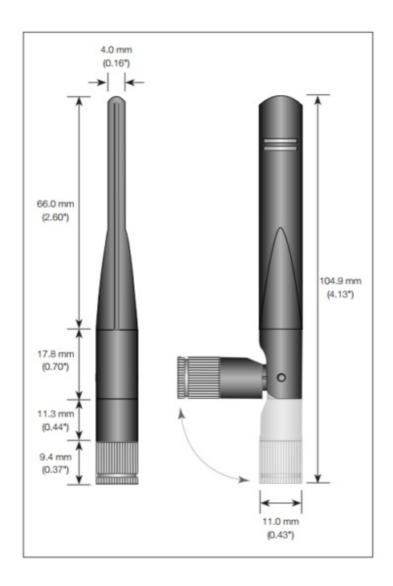
Another included accessory is a 3 pin CAN Bus terminal connector for ease-of-use wiring using screw clamp terminals.



### **Dual-Band Antenna**

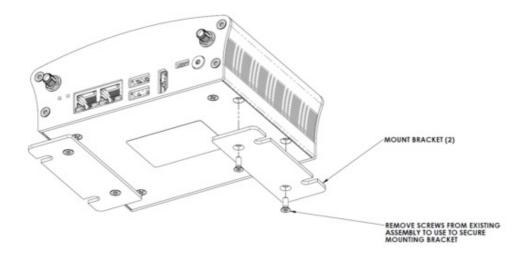
An optional accessory is a standard dual-band antenna for use with WiFi and Bluetooth modems. The antenna comes with an SMA Male connector and a tilt feature.

CTI P/N: MSG066



# **Mounting Brackets**

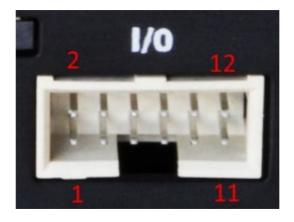
An optional accessory is (2) two flush mount brackets to fasten Rudi to another surface.



#### MISC I/O Breakout Cable

An optional accessory for the MISC I/O connector is available to help break out the connections to flying leads. The cable is a standard 2×6 position 0.100" pitch socket header with 12" of flying lead to configure as required.

CTI P/N: CBG258. View the drawing.



## **SOFTWARE / BSP DETAILS**

All Connect Tech NVIDIA Jetson TX2/TX2i based products are built upon a modified Linux for Tegra (L4T) Device Tree that is specific to each CTI product.

**WARNING:** The hardware configurations of CTI's products differ from that of the NVIDIA supplied evaluation kit. Please review the product documentation and install ONLY the appropriate CTI L4T BSPs.

Failure to follow this process could result in non-functional hardware.

Connect Tech's Custom L4T BSP (CTI-L4T)

Connect Tech offers a custom BSP to add additional peripheral support on CTI's Jetson Carrier Boards.

The CTI-L4T can be downloaded directly from Connect Tech here:

https://connecttech.com/product/rudi-embedded-system-with-nvidia-jetson-tx2-tx1/

BSPs, supporting documentation and release notes can be found at: <a href="https://www.connecttech.com/jetson">https://www.connecttech.com/jetson</a>

### NVIDIA Linux For Tegra (L4T)

The Rudi Embedded System is designed to be used with the stock NVIDIA Linux For Tegra (L4T) Builds. However, the Connect Tech Board Support Package is required for full functionality.

NVIDIA's L4T can be downloaded directly from NVIDIA here: <a href="https://developer.nvidia.com/embedded/">https://developer.nvidia.com/embedded/</a>

## **NVIDIA Jetpack for L4T**

The JetPack for L4T is an on-demand all-in-one package that bundles and installs all software tools required to develop for the NVIDIA's TX2/TX2i Platform with Connect Tech's Jetson Carrier Boards. JetPack includes host and target development tools, APIs, and packages (OS images, tools, APIs, middleware, samples, and documentation including compiling samples) to enable developers to jump-start their development environment for developing with the Jetson Embedded Platform. The latest release of JetPack runs on an Ubuntu 14.04 Linux 64-bit host system and supports both the latest Jetson

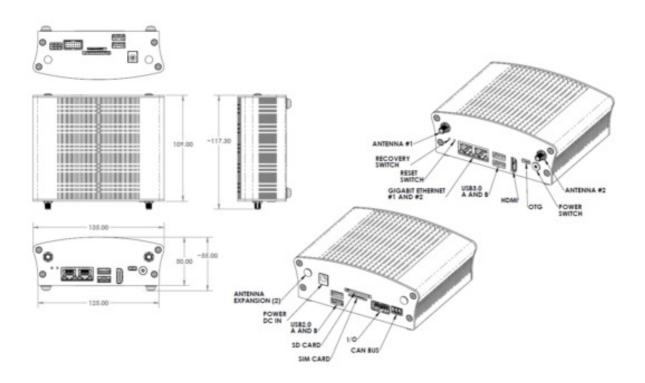
### TX2/TX2i Development Kit and Jetson TK1 Development Kit.

NVIDIA's Jetpack can be downloaded directly from NVIDIA here: <a href="https://developer.nvidia.com/embedded/jetpack">https://developer.nvidia.com/embedded/jetpack</a>

## **MECHANICAL DETAILS**

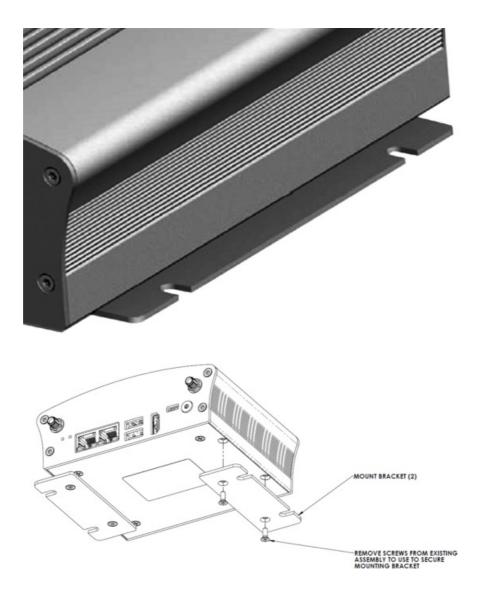
A complete 3D STEP Model file of Rudi Embedded System can be downloaded here: <a href="https://www.connecttech.com/ftp/3d">https://www.connecttech.com/ftp/3d</a> models/ESG503 3D MODEL.zip

### **Rudi Embedded System**

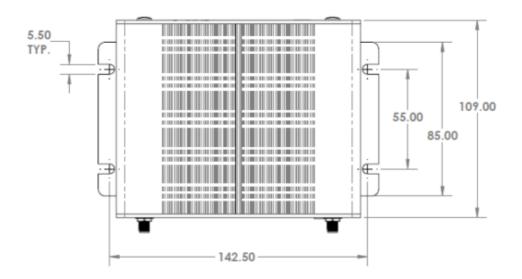


## **Mechanical Mounting Package**

The Rudi Embedded System has an optional mounting edge bracket to allow for wall or rack-mount use.



Please contact sales for additional information: <a href="mailto:sales@connecttech.com">sales@connecttech.com</a>



# **Bottom Disassembly Instructions (ESD CAUTION!)**

The Rudi Embedded System has two expansion slots. One is an mSATA slot for storage expansion, the other is a mini PCle slot for feature expansion. These slots can be accessed by removing the bottom cover by precisely following the instructions shown below.

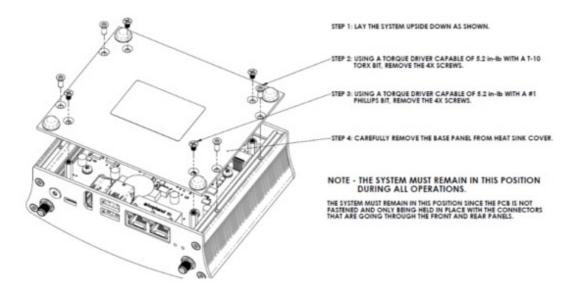
#### INSTRUCTIONS FOR DISASSEMBLY

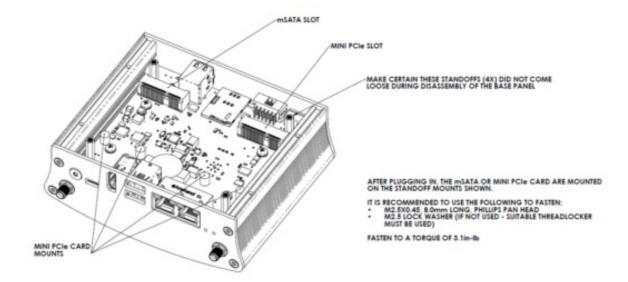
THE FOLLOWING PAGES SHOW THE DISASSEMBLY OF THE BASE PANEL TO GAIN ACCESS INTO THE SYSTEM TO ALLOW FOR PLUG-INS INTO MINI PCIe SLOTS.

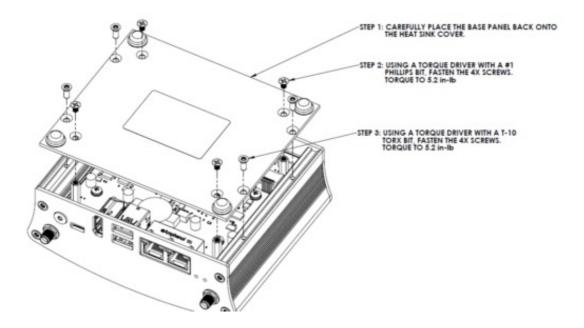
ALL OPERATIONS MUST BE COMPLETED IN A ESD-CONTROLLED ENVIRONMENT. WRIST OR HEEL ESD STRAPS MUST BE WORN DURING ANY OPERATION OUTLINED.

ALL FASTENERS TO BE REMOVED AND RE-ASSEMBLED USING PROPER TORQUE DRIVERS









## **Documents / Resources**



<u>Connect Tech TX2 or TX2i Rudi Embedded System with NVIDIA Jetson</u> [pdf] User Guide TX2, TX2i, Rudi Embedded System, NVIDIA Jetson, TX2 or TX2i Rudi Embedded System, Connect Tech TX2 or TX2i

## References

- © Connect Tech Inc., Embedded Computing Experts
- <sup>⊕</sup> Rudi Embedded System with NVIDIA® Jetson™ TX2 Connect Tech Inc.
- Autonomous Machines | NVIDIA Developer
- JetPack SDK | NVIDIA Developer
- ® NVIDIA® Jetson Solutions Connect Tech Inc.

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