BOARD SUPPORT PACKAGE
For Connect Tech NVIDIA Jetson TX2 Carriers

BSP Version: TX2-32.4.2 V003

Last Updated: 2020/07/06

Introduction

This Board Support Package adds support for Connect Tech Jetson TX2 family of carrier boards to Linux4Tegra. It includes any extra files required to use all the features of the carriers. Please check the "Product Specific Details" section for what features for your board is supported with this BSP release and the "Changes" section for the changes made between versions. You can check which version of the BSP you have installed by running: cat /etc/cti/CTI-L4T.version

Check for the Latest Version of the CTI-L4T BSP at:
https://connecttech.com/resource-center/l4t-board-support-packages/

Requirements

Consult KDB344 at for TX2 hardware compatibility with your carrier. http://connecttech.com/resource-center-category/all-kdb-entries/

- o   x86 based host machine running Ubuntu 18.04
- o   Jetpack 4.4 installed via Nvidia SDK Manager (from Nvidia Embedded Download Center)
- o   TX2, TX2i or TX2-4G module
- o   Connect Tech TX2 Family Carrier
- o   USB Cable for flashing

*L4T version can be found in /etc/nv_tegra_release and will look like this:
R32 (release), REVISION: 2.0

Installation

1. Before Installing the BSP you will need to install Jetpack 4.3 on the x86 host system using the Nvidia SDK Manager

2. Copy the CTI-L4T-TX2-32.4.2-V###.tgz package into
    ~/nvidia/nvidia_sdk/JetPack_4.4_Linux_GA_P3310/Linux_for_Tegra/

3. Extract the BSP:
    tar -xzf CTI-L4T-TX2-32.4.2-V###.tgz
    (replacing ### with your file name)

4. Change into the CTI-L4T directory:
    cd ./CTI-L4T

5. Run the install script (as root or sudo) to automatically install the BSP files to the correct locations:
    sudo ./install.sh
    cd ..

6. The CTI-L4T BSP is now installed on the host system and it should now be able to flash the TX2/TX2i/TX2-4G

7. To flash on the TX2, TX2i or TX2-4G use the following (do not add ".conf"):

    CTI Assisted Flashing:
        ./cti-flash.sh

    Manual Flash:
        ./flash.sh cti/<module>/<boardname> mmcblk0p1

    TX2 Examples:
        ./flash.sh cti/tx2/astro-usb3 mmcblk0p1
        ./flash.sh cti/tx2/astro-mpcie mmcblk0p1
        ./flash.sh cti/tx2/spacely-imx274-3cam mmcblk0p1

    TX2i Examples:
        ./flash.sh cti/tx2i/astro-usb3 mmcblk0p1
        ./flash.sh cti/tx2i/astro-mpcie mmcblk0p1
        ./flash.sh cti/tx2i/spacely-imx274-3cam mmcblk0p1

    TX2-4G Examples:
        ./flash.sh cti/tx2-4G/astro-usb3 mmcblk0p1
        ./flash.sh cti/tx2-4G/astro-mpcie mmcblk0p1
        ./flash.sh cti/tx2-4G/spacely-imx274-3cam mmcblk0p1

Flashing Instructions

1. Connect the TX2/TX2i/TX2-4G and Carrier to the computer via USB, following the instructions in the appropriate manual
2. Put the system to be flashed into recovery mode, following the instructions in the appropriate manual
3. Run ./flash.sh cti/<module>/<board> mmcblk0p1 from Linux_for_Tegra directory
4. Once the flashing has completed, the TX2/TX2i/TX2-4G will reboot
5. To switch between different boards, you will need to repeat these steps
6. There is currently no run time support for switching profiles on the TX2/TX2i/TX2-4G

Product Specific Details

TX2i Compatibility Note: The following carriers require a hardware ECN to be applied in order to work with the TX2i. All new boards sold after April 16th will have the ECN applied. Please contact Connect Tech support if you are unsure if the ECN has been applied.

- Astro pre-Rev H
- Spacely Rev D & E
- Cogswell

TX2-4G Compatibility Note: The following carriers require a hardware ECN to be applied in order to work with the TX2-4G. All new boards sold after November 8th will have the ECN applied. Please contact Connect Tech support if you are unsure if the ECN has been applied.

- Astro
- Elroy
- Cogswell
- Spacely

ASG001 (Astro)

- PWM Fan Support
- USB Support
- mPCIe Support

NOTE: Currently NO CSI camera support

ASG002 (Elroy)

- PWM Fan Support
- USB Support
- mPCIe Support
- SPI Support

NOTE: Currently NO CSI camera support

ASG003 (Orbitty)

- PWM Fan Support
- USB Support

ESG501 (Rosie)

- mPCIe Support
- USB Support

ESG503 (Rudi)

- USB Support
- GPIO Support
- mPCIe Support
- CAN Support

ASG008 (Sprocket)

- USB Support
- IMX274 Support
- IMX185 Support

ASG007 (Cogswell)

- USB Support
- PCIe Support
- GPIO Support
- CAN Support

ASG006 (Spacely)

- USB Support
- PCIe Support
- GPIO Support
- CAN Support
- IMX274 Support
- IMX185 Support

VPG003 (Graphite-VPX)

- USB Support
- PCIe Support

NOTE: Currently NO CSI camera support

ASG016 (Quasar)

- PWM Fan Support
- USB Support
- IMX274 Support
- IMX185 Support

Changes

Version Xavier-NX-32.4.3 V003, August 20, 2020

- Supports apt-get upgrade

Contact Connect Tech

If you have any problems, questions or suggestions regarding the Board Support Package and hardware, please feel free to contact Connect Tech Inc.

Contact Information	
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.
Contact Information	<u>support@connecttech.com</u> <u>sales@connecttech.com</u>

www.connecttech.com

Toll Free: 800-426-8979 (North America only)
Telephone: +1-519-836-1291
Facsimile: 519-836-4878 (on-line 24 hours)