AVer**M**edia

EX731-AA/N1

Pico-ITX Carrier Board with Dual M.2 Support Daughter Board for NVIDIA Jetson TX1 and Jetson TX2



Features

- Operate with NVIDIA Tegra X1/X2 module
- 2 HDMI outputs
- 1 USB 3.0
- 1 RJ45 for Giga Ethernet
- Compact design with Pico-ITX (100 mm x 72mm)
- Extension daughter board has
 - 2 M.2 B+M
 - RS485
 - Audio Mic in
- TX2 support CAN Bus
- Suitable for applications of robotics, UAV, UGV, AOI, medical image, and other video-enabled equipment for automation, AI, and deep learning

Specifications

Support Module	NVIDIA Tegra X1/X2 Module	
Video Interface	1x HDMI Out Type A, 4096 x 2160 p60	
Storage	1x micro SD card	
LAN Port	1x RJ-45 for Gigabyte Ethernet	
Buttons	Power on/off, Reset, Recovery	
USB3.0	1x USB3.0 Type A	
Other Interface	1 x UART, 1 x SPI, 1 x I2S, 1x I2C, 7 GPIOs	
TX2 only	2 nd HDMI Out Type A, 4096 x 2160 p60	
Power Supply	+12VDC/5A	
Battery Power	Support with power management	
Operating Temperature	$0^{\circ}C \sim +55^{\circ}C$ (standard version); -10°C $\sim +70^{\circ}C$ (with fan module)	
Operating Humidity	10% ~ 90% (RH)	
Storage Temperature	-10°C ~ +85°C	
Dimension	Pico-ITX, 100mm x 72mm (3.9" x 2.8")	
Daughter Board: PCle	2x M.2 Key B+M slots	
Daughter Board: SATA	1x SATA 3Gb/s and SATA Power	

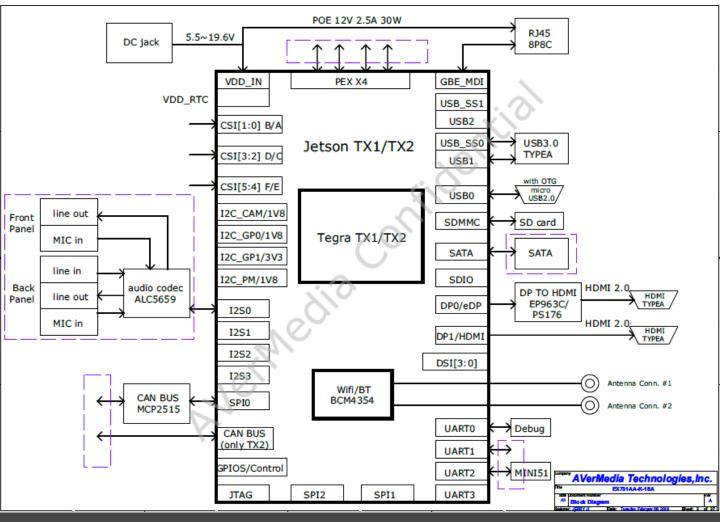
AVer/Media

©2018 by AVerMedia Technologies, Inc. All rights reserved. No part of this document may be reproduced or transmitted in any form, or by any means (electronic, mechanical, photocopy, recording, or otherwise) without prior written permission of AVerMedia Technologies. Information in this document is subject to change without notice. Made in Taiwan Version 1.4 08/08/2018

TX1 and TX2 Comparison

	Jetson TX1	Jetson TX2
GPU	256-core Maxwell	256-core Pascal
CPU	Quad Core ARM Cortex A57	Dual Core NVIDIA Denver 2.0 + Quad Core ARM Cortex A57
Memory	4GB 64-bit LPDDR4, 25.6 GB/s	8GB 128-bit LPDDR4, 58.4 GB/s
Storage	16 GB e.MMC	32GB e.MMC
Wi-Fi	802.11 b/g/n/ac 2x2 MIMO	802.11 b/g/n/ac 2x2 MIMO
Bluetooth	Bluetooth 4.1	Bluetooth 4.1
Ethernet	Gigabit Ethernet	Gigabit Ethernet
HDMI 2.0 a/b	1x	2x
Video Encode	Up to 2160p, 30 fps	Up to 2160p, 60 fps
Video Decode	Up to 2160p, 60 fps	Up to 2160p, 60 fps
Mechanical	50mm x 87mm, 400-pin board to board connector	50mm x 87mm, 400-pin board to board connector

Block Diagram



AVer/Media

©2018 by AVerMedia Technologies, Inc. All rights reserved. No part of this document may be reproduced or transmitted in any form, or by any means (electronic, mechanical, photocopy, recording, or otherwise) without prior written permission of AVerMedia Technologies. Information in this document is subject to change without notice. Made in Taiwan Version 1.4 08/08/2018

Perspective View







©2018 by AVerMedia Technologies, Inc. All rights reserved. No part of this document may be reproduced or transmitted in any form, or by any means (electronic, mechanical, photocopy, recording, or otherwise) without prior written permission of AVerMedia Technologies. Information in this document is subject to change without notice. Made in Taiwan Version 1.4 08/08/2018