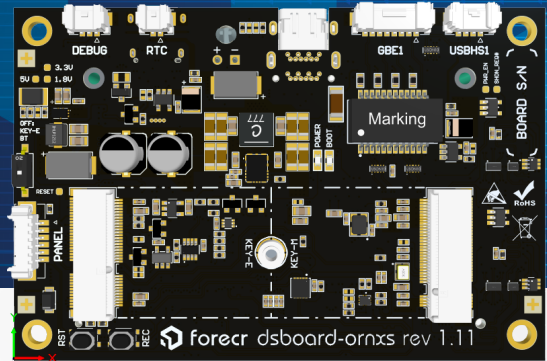# DSBOARD-ORNXS
ORIN NX & ORIN NANO COMPACT CARRIER BOARD

HIGHLIGHTS

› Supports NVIDIA Jetson Orin Nano and Orin NX SOMs

› Stay connected effortlessly with built-in WiFi and Bluetooth capabilities

› Lightning-fast LPDDR5 memory options (up to 16 GB) ensure seamless multitasking

› Enjoy stunning visuals with the Mini DisplayPort supporting up to 4K Ultra HD resolution

› Customize and expand your setup with multiple extension sockets

› Gigabit Ethernet and USB 2.0 interfaces for fast and reliable data transfer

› Ubuntu Linux 20.04 and JetPack 5.1.1 support for a reliable and optimized operating system

› Wide voltage input range

› M.2 Key-M SSD slot for convenient mass storage solutions

TECHNICAL SPECIFICATIONS

Supported Modules	NVIDIA Jetson Orin Nano 4GB / 8GB NVIDIA Jetson Orin NX 8GB / 16GB
Memory	4 GB 64-bit LPDDR5 / 8 GB 128 bit LPDDR5 8 GB 256-bit LPDDR5 / 16 GB 128 bit LPDDR5
Graphics Interfaces	1x Mini DisplayPort(max resolution 3840x2160)
Interfaces	2x Gigabit Ethernet 2x USB 2.0 1x CAN Bus 2X CSI 4-LANE 1x 3.0 Type-C (Recovery) 1x UART (Debug - 3.3V) 1x RTC
Wireless Communication	WiFi/Bluetooth Connectivity by extension sockets
Power Supply	9-28 VDC
Extension Sockets	1x M.2 Key-E, 1x 5V FAN, 1x SPI, 1x I2S, 2x I2C, 2x UART
Mass Storage	1x M.2 Key-M 2230
Ambient Conditions	-25°C ... +85°C
Form Factor / Dimensions	60.5 mm x 91 mm
Operating Systems	Ubuntu Linux 20.04
JetPack Support	JetPack 5.x

DSBOARD-ORNXS is a game-changing innovation that redefines the concept of productivity and connectivity. Powered by the NVIDIA Jetson Orin Nano and Orin NX, this compact and versatile device brings unmatched processing power. With its seamless WiFi and Bluetooth connectivity, you can effortlessly collaborate and communicate with your team, breaking down barriers and unlocking new levels of efficiency.

Equipped with impressive memory options ranging from 4 GB to 16 GB of lightning-fast LPDDR5, the DSBOARD-ORNXS ensures smooth multitasking and effortless data handling. Its graphics interfaces, including a Mini DisplayPort with a maximum resolution of 3840x2160, deliver stunning visuals that elevate your work to a whole new level. Plus, with multiple extension sockets, including M.2 Key-E and 5V FAN, you have the flexibility to customize and expand your device to suit your specific needs.

Autonomous Vehicles   Smart City   Healthcare
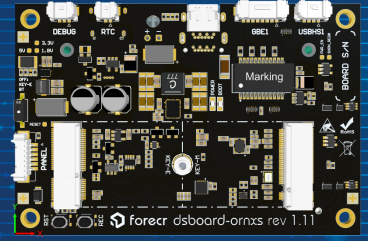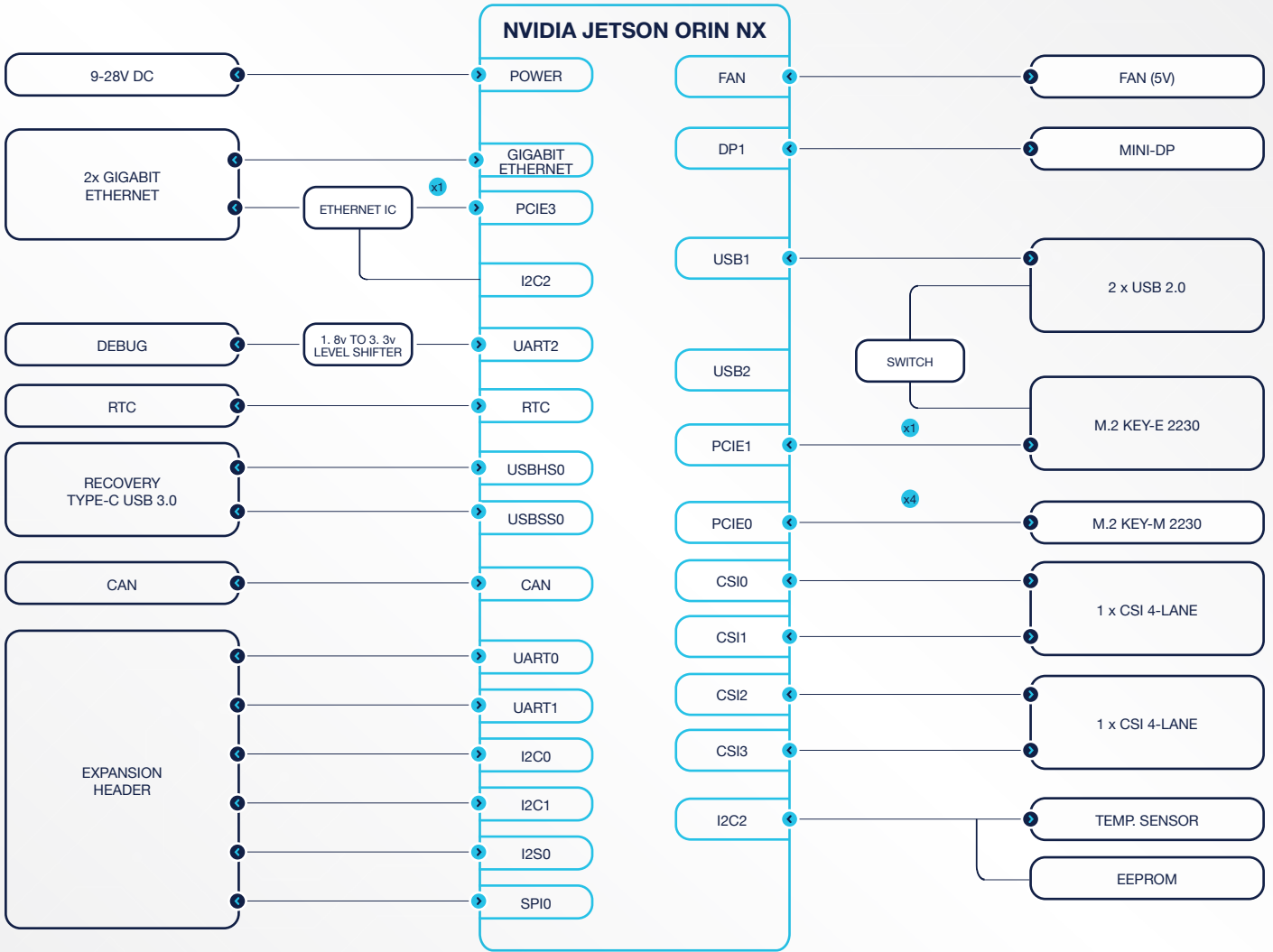
Industrial Automation   Robotics   Transportation

Drones/UAVs

NVIDIA | Preferred Partner

DSBOARD-ORNXS
ORIN NX & ORIN NANO COMPACT CARRIER BOARD

BLOCK DIAGRAM

NVIDIA JETSON ORIN NX

- 9-28V DC → POWER
- 2x GIGABIT ETHERNET → GIGABIT ETHERNET
- 2x GIGABIT ETHERNET → ETHERNET IC (x1) → PCIE3
- ETHERNET IC → I2C2
- DEBUG → 1.8v TO 3.3v LEVEL SHIFTER → UART2
- RTC → RTC
- RECOVERY TYPE-C USB 3.0 → USBHS0
- RECOVERY TYPE-C USB 3.0 → USBSS0
- CAN → CAN
- EXPANSION HEADER → UART0
- EXPANSION HEADER → UART1
- EXPANSION HEADER → I2C0
- EXPANSION HEADER → I2C1
- EXPANSION HEADER → I2S0
- EXPANSION HEADER → SPI0

- FAN → FAN (5V)
- DP1 → MINI-DP
- USB1 → 2 x USB 2.0
- USB2 → SWITCH
- PCIE1 (x1) → M.2 KEY-E 2230
- SWITCH → 2 x USB 2.0
- SWITCH → M.2 KEY-E 2230
- PCIE0 (x4) → M.2 KEY-M 2230
- CSI0 → 1 x CSI 4-LANE
- CSI1 → 1 x CSI 4-LANE
- CSI2 → 1 x CSI 4-LANE
- CSI3 → 1 x CSI 4-LANE
- I2C2 → TEMP. SENSOR
- I2C2 → EEPROM

ORDERING INFORMATION

DSBOARD-ORNXS-AA	DSBOARD-ORNXS carrier board without SOM
DSBOARD-ORNXS-AB8	DSBOARD-ORNXS carrier board with Orin NX 8GB SOM
DSBOARD-ORNXS-AB16	DSBOARD-ORNXS carrier board with Orin NX 16GB SOM
DSBOARD-ORNXS-AC4	DSBOARD-ORNXS carrier board with Orin Nano 4GB SOM
DSBOARD-ORNXS-AC8	DSBOARD-ORNXS carrier board with Orin Nano 8GB SOM

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