

D131

Standard Carrier Board D131 for NVIDIA® Jetson Orin NX/
Xavier™ NX/Nano Module

Suggested Vertical Markets

AMRs / Smart Security/ Smart Inspection

PRELIMINARY



Enterprise-Leading Features

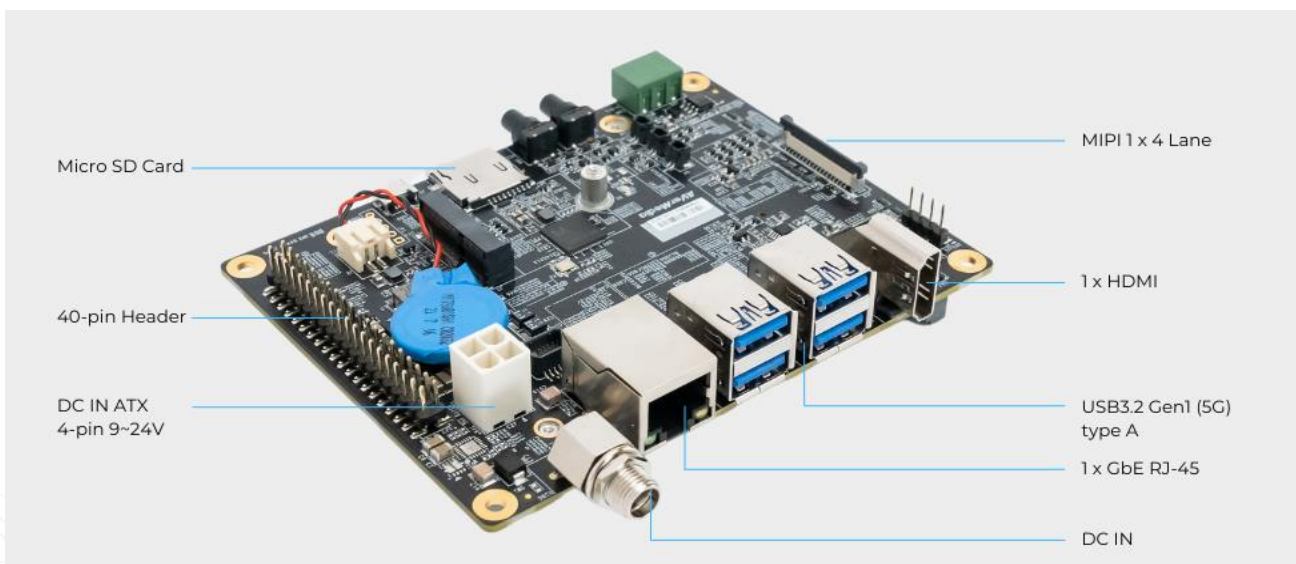
- 2 x 2 Lane MIPI CSI-2 Camera input/ 1 x 4 Lane MIPI CSI-2 Camera Input
- 2 x M.2. for Wi-Fi, SSD and Capture card
- 1 x GbE RJ-45 (Option PoE), 40-pin expansion header
- 4 x USB 3.2 Gen1 (5G) type A and 1 x 4Kp60 HDMI output
- 1 x micro-SD card slot
- Operating temperature: 0°C ~ 70°C (TBD)
- Dimension: 113mm(W) x 105mm(L) x 28.53mm(H) / Weight: 95g

Expandability for Xavier™ NX Module

In addition to the default selection of interfaces, frame grabbers can be added for expanded functionality.

| Model | Host Interface | Video Interface | Max Input Resolution |
|---------|----------------|-----------------|---|
| CN312MW | M.2 M key 2280 | 1x SDI; 1x HDMI | 2Kp60 in (SDI) 1920 x 1200p60 in (HDMI) 1080p out |
| CN312SW | M.2 M key 2280 | 2x SDI | 2Kp60 in - 1080p out |
| CN311-H | M.2 M key 2280 | 1x HDMI | 4096 x 2160p30 |

Interface



MIPI Camera Compatibility

| | | |
|-------------|-----------------------|---|
| MIPI Camera | 15-pin MIPI connector | <ol style="list-style-type: none"> raspberry pi camera v2 Manufacturer: APPRO.PHO <ul style="list-style-type: none"> B-04: IMX179 (8M) MIPI, 1080P (30fps) C-04: IMX290 (2M) MIPI, 1080P (30fps) C-05: IMX290 (2M) +ISP (YUV), 1080P (30fps) Manufacturer: e-con Systems <ul style="list-style-type: none"> e-CAM131_CUNX - 4K Camera e-CAM50_CUNX - 5.0 MP e-CAM24_CUNX - Color Global shutter Camera |
| | 36-pin MIPI connector | <p>Manufacturer: APPRO.PHO</p> <ul style="list-style-type: none"> B-03: IMX334 (4K) MIPI, 4K (30fps) A-06: IMX334 (4K) V-by-One® HS x1, 4K (30fps) |

Specifications

| | | |
|--------------------|---|---|
| Model | D131 | |
| NVIDIA Jetson SoM | Jetson Orin NX/ Xavier™ NX/Nano Module | |
| Networking | 1x GbE RJ-45 (PoE option) 1xM.2. key E 2230 for Wi-Fi (Nano doesn't support) | |
| Display Output | 1x HDMI 2.0 (3840 x 2160 at 60Hz) | |
| Temperature | Operating temperature 0°C~70°C (TBD) Option 0°C~60°C (PSE 802.3 AF) Storage temperature -40°C ~ 85°C Relative humidity 40% @ 95%, Non-Condensing | |
| MIPI Camera Inputs | 2x 2 lane MIPI CSI-2, 15 pin FPC 1mm Pitch Connector 1x 4 lane MIPI CSI-2, 36 pin FPC 0.5mm Pitch Connector | |
| USB | 1 x USB 2.0 Micro-B for recovery 4 x USB 3.2 Gen1 (5G) type A | |
| Storage* | 1x M.2. key M 2280 for SSD | |
| Expansion Header | 40-pin: 1x UART, 2x SPI, 2x I2C, 1x I2S, GPIOs 1xCAN (3-pin terminal block) 1xDip Switch button | |
| Power requirement | Voltage | DC 9~24V |
| | Current | DC IN Jack on board: 7A~2.6A ATX 4pin: 7A~2.6A |
| Power Cord | 12V/5A adapter andUS/JP/EU/UK/TW/AU/CNpower cord (optional) | |
| Thermal Solution | Heat sink with fan(optional) | |
| Buttons | Power and Recovery | |
| RTC Battery | Support RTC Battery and Battery Life Monitoring by MCU | |
| Dimensions | 113mm(W) x 105 mm(L) x 28.53 mm(H) Weight: 95g | |
| Certifications | CE, FCC, KC | |

*D131 have one mSD slot, but NVIDIA Orin NX/Orin Nano doesn'tsupport mSD function. It's SOM limitation.

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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