AVerMedia

NVIDIA Elite Partner



Empowering AI at the Edge

Stability / Manageability / Security

Pioneering Edge AI Solutions, Connecting Unlimited Possibilities

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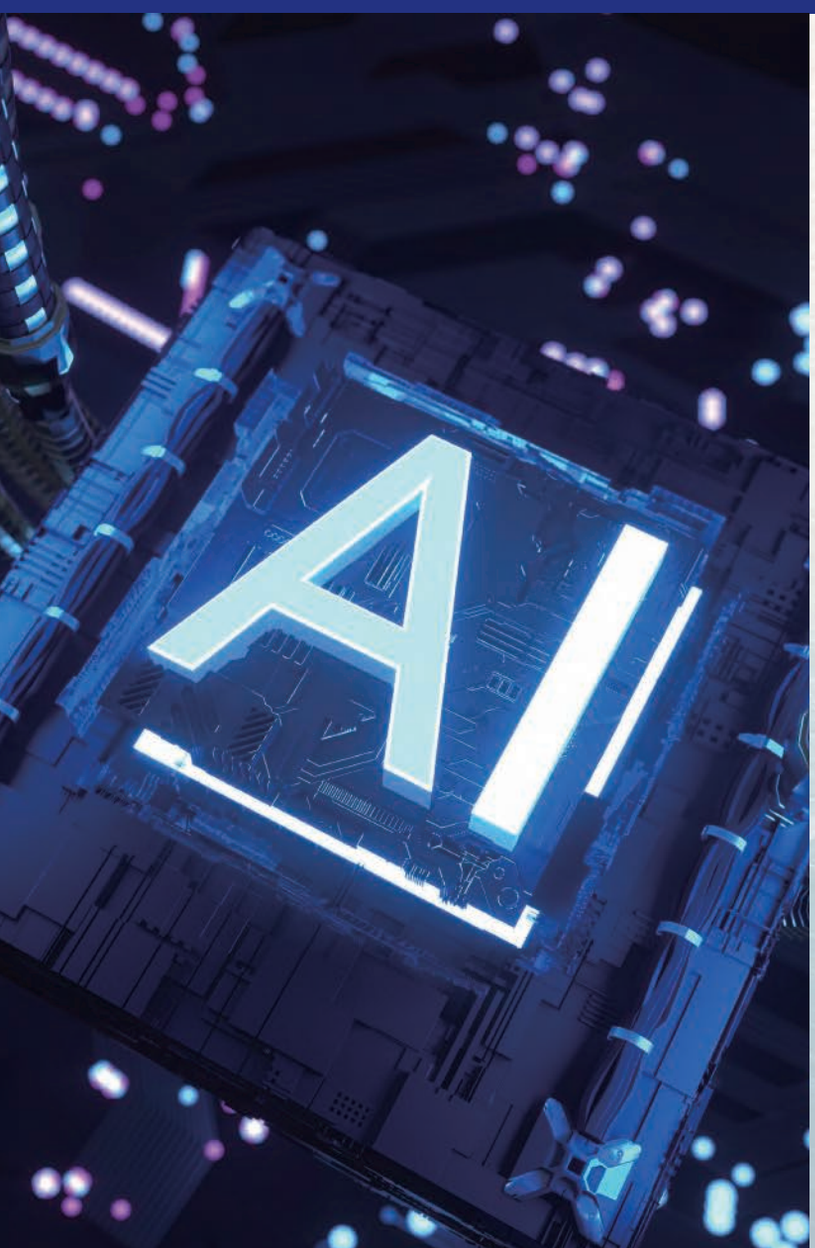
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ABOUT US

Established in 1990, AVerMedia is a Taiwanese multinational company specializing in hardware and software for image capturing and video transmission solutions. These solutions aim to enrich customer experiences and provide effective communications across a wide range of professional fields.

Currently, AVerMedia holds more than 359 audiovisual patents and has recently moved into providing high-quality audiovisual products for Edge AI solutions, including AI Box PCs, Carrier Boards, and Frame Grabbers, built around Jetson™ SOM from NVIDIA® for a variety of vertical market use cases.



Strategic Partnership with NVIDIA

AVerMedia's status as an Elite Level NVIDIA OEM Partner underscores its excellence in the industry. The company's support-driven team is dedicated to providing expedited support, ensuring faster project deployment, especially when compared to Preferred-level partners.

This partnership allows AVerMedia to offer its customers benefits such as rapid deployment, flexible collaboration, and reliable devices, further solidifying its reputation as a trusted provider of cutting-edge technology solutions.

NVIDIA Elite Partner

Empowering AI at the Edge

AVerMedia provides cutting-edge solutions and services that empower AI at the edge, delivering enhanced stability, security, and manageability. By leveraging our deep expertise in both hardware and software, we deliver comprehensive solutions tailored for Independent Software Vendors (ISVs), addressing the unique challenges of edge AI deployments with smooth and integrated support. With a robust partnership ecosystem spanning both technical and operational domains, AVerMedia ensures flawless compatibility and exceptional capabilities for edge AI applications, offering tailored support to meet specific customer requirements and establishing itself as a trusted solution provider.

To make it successful, we have identified three essential pillars: **Stability**, **Manageability**, and **Security**. These pillars act as the foundation for achieving scalable deployments:



STABILTY

Ensuring consistent and reliable performance for mission-critical edge AI deployments.



MANAGEABILITY

Simplifying device monitoring, configuration, and maintenance to optimize operational efficiency.



SECURITY

Protecting data integrity and system functionality through advanced security measures.

Security is a critical pillar of AVerMedia's edge AI solutions, ensuring reliability and resilience in real-world deployments. To achieve comprehensive security protection, we collaborate with key partners across three essential areas:

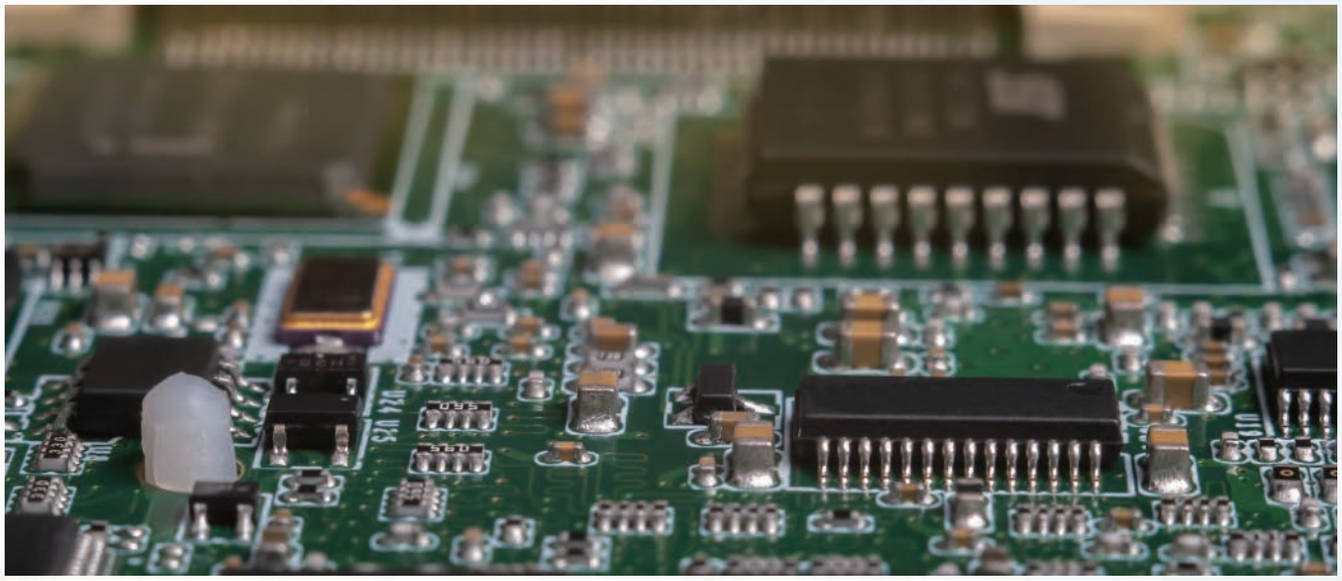
- **Detection** – Partnering with AI-driven threat detection providers, we enable real-time monitoring and anomaly detection to identify potential security risks at the edge.
- **Protection** – Working with hardware and software security experts, we integrate encryption, secure boot, and access control mechanisms to safeguard edge devices against cyber threats.
- **Recovery** – Collaborating with device management and remote recovery partners, we ensure rapid system restoration, minimizing downtime and maintaining operational continuity in the face of attacks or failures.

AVerMedia strengthens edge AI solutions against evolving threats, providing **a secure, resilient, and intelligent platform** for mission-critical applications.

Let AVerMedia streamline your edge AI deployment, enabling a highly scalable and efficient operation. From ensuring the reliability of mission-critical systems to driving advanced AI applications, our solutions and services empower you to succeed in today's fast-paced technological landscape.



Manufacturing & Customization



A comprehensive set of manufacturing capabilities

With decades of experience in developing award-winning products, AVerMedia prides itself on supplying technically demanding Edge AI solutions to globally recognized companies. Our team continually enhances our products and equipment to meet the dynamic standards of the industry and the expectations of our customers. Our competitive edge and agility stem from our quick innovation, decades of R&D and manufacturing expertise, and flexible production lines.

A reliable partner for your custom solutions

We recognize that each project is distinct, and an off-the-shelf product may not meet your specific needs. For custom projects, AVerMedia offers a comprehensive range of customization services, with a service-driven team dedicated to working with you to craft a high-performance and reliable solution that meets your specifications.

- Hardware: Offering PCB Dimensions, I/O, and certifications.
- Software: Including BSP, Driver, MCU firmware, algorithms, and applications.
- Design: Covering ID/ME/UX/UI/GUI.
- Thermal: Functioning across a broad temperature spectrum.
- Solid Verification: Extending from System, HW to BSP validation.

Video processing technology is one of the core competencies we apply to custom projects. AVerMedia provides support for multiple cameras with a variety of I/O ports to accommodate a broad spectrum of camera types, including AHD, MIPI, HDMI, USB, SDI, and IP cameras. Moreover, we efficiently address video quality issues, such as black screens, FPS drops, screen freezes, flickering, and latency.

AVerMedia has collaborated with numerous international companies on many successful projects. This track record of success showcases our innovative design technologies and in-depth industry expertise, which gives us the confidence to guarantee the success of your project.

Comprehensive Services for Edge AI

Next-Generation OOB Management

Breakthrough Remote Encoding, Streaming, and Low-Latency Control for Edge AI

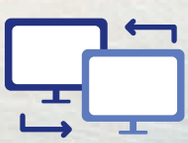
AVerMedia redefines OOB management with high-performance encoding and ultra-low latency streaming, enabling real-time remote system analysis and teleoperation. Unlike traditional OOB solutions that offer only basic remote access, our advanced technology provides seamless live video feeds for precise diagnostics and full remote control—even when the primary system is unresponsive.

Key Capabilities

1. **OOB Accessibility & Manageability – Reliable & Uninterrupted Remote Control**
   - **OOB API** – Integrate seamlessly with existing platforms for automated remote device management.
   - **OOB Serial Console** – Securely access system logs and execute commands remotely, even if the OS is unresponsive.
   - **Remote Power & I/O Control** – Power on/off or reset devices remotely, ensuring continuous operation without physical intervention.
2. **OpenBMC Compliant – Industry-Standard System Visibility, Security & Management**
   Comprehensive System Monitoring – Gain deep insights into hardware status and performance metrics.
   - **Remote Firmware Management** – Securely update, configure, and control devices at the firmware level.
   - **Industry-Standard Security** – Encrypted communication, access control, and secure boot mechanisms to protect system integrity, ensuring compliance with modern cybersecurity requirements.
3. **High-Performance Encoding & Streaming with Low Latency – Live Monitoring & Precision Teleoperation**
   - **Encoding & Streaming** – Enables real-time, high-quality video transmission for precise remote diagnostics and system analysis.
   - **Ultra-Low Latency** – Delivers near-instantaneous video feedback for smooth teleoperation and rapid troubleshooting.
   - **Seamless System Insights** – Provides uninterrupted, high-resolution visibility into device operations, ensuring efficient remote control.

Empowering Smarter, More Secure, and More Efficient OOB Management

By combining advanced encoding, ultra-low latency streaming, and OpenBMC compliance, AVerMedia delivers a highly efficient, secure, and scalable OOB management solution with benefits below:



Reliable & Uninterrupted Remote Access



Industry-Standard OpenBMC Compliance



Breakthrough Encoding & Streaming



Scalable API Integration



Enhanced Security & Compliance

Unlock the future of OOB management—where real-time encoding, ultra-low latency streaming, and seamless remote access redefine edge AI control.

Customized Linux Solutions with Yocto

AVerMedia's Yocto service supports customized Linux distributions tailored for edge AI devices, providing a flexible and scalable foundation for wide range of applications. This service ensures your edge AI devices run optimally with:

- **Flexible, lightweight, and optimized OS builds** – Tailored to meet the specific requirements of edge AI applications, reducing overhead and enhancing performance.
- **Accelerated development cycles with pre-configured tools** – Streamlining software development and deployment by offering ready-to-use configurations, enabling faster prototyping and production.
- **Ongoing support for long-term maintenance and security updates** – Ensuring device security and performance over time with regular updates, bug fixes, and compliance with evolving security standards.

By leveraging our Yocto service, you can focus on innovation while we handle the complexity of building and maintaining a customized Linux environment for your edge AI solutions.

Bringing Power Efficiency & Wireless Connectivity to Far-Edge AI

As AI applications continue to expand to far-edge environments, we recognize the growing need for lower power consumption and seamless wireless connectivity.

To address these challenges, AVerMedia is launching a **new product line based on Qualcomm solutions**, designed specifically for remote and power-sensitive edge AI applications. Qualcomm's advanced AI processing, combined with its **integrated 5G and Wi-Fi connectivity**, enables **real-time data processing and transmission** without relying on wired networks. This makes our new solutions ideal for applications such as:

- **Smart security** – Deploy AI-powered cameras in remote areas with real-time analytics.
- **Autonomous systems** – Enable drones, robots, and unmanned vehicles with efficient AI inferencing.
- **Smart city** – Enhance urban infrastructure with AI-powered traffic management, environmental monitoring, and public safety solutions
- **Smart retail & kiosks** – Deliver AI-driven insights with low power consumption and always-on connectivity.z

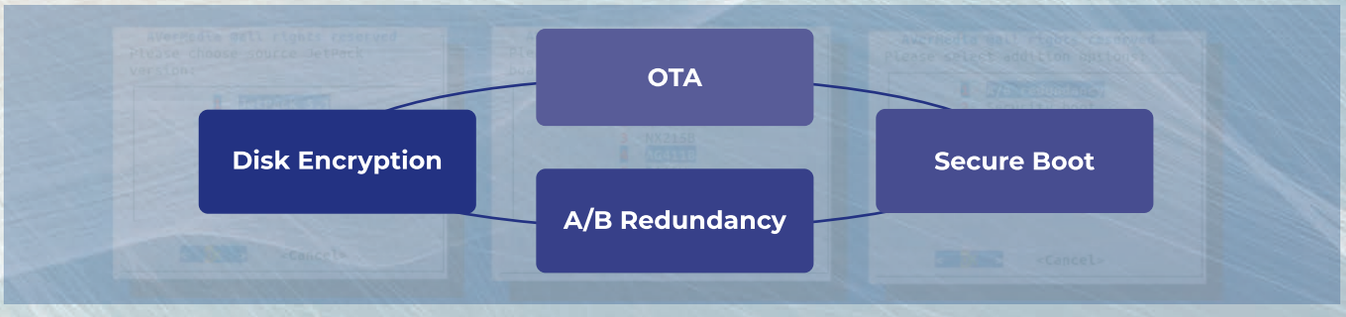
With this expansion, AVerMedia continues to **empower AI at the edge**, providing flexible and scalable solutions for industries that require **efficient, always-connected AI computing.**

AVerMedia BSP GUI Tool

Effortless customization for Jetson BSP makes streamlining BSP customization easy. Tailor your BSP effortlessly with a user-friendly GUI tool—minimizing errors and maximizing efficiency. Simply follow the SOP steps for a smooth setup and reduced learning time

Tailor your BSP with just a few clicks! Our GUI tool supports:

- **OTA Updates** – Enables seamless software upgrades without manual intervention.
- **Disk Encryption** – Ensures data protection and security compliance.
- **Secure Boot** – Prevents unauthorized software from running during the boot process.
- **A/B Redundancy** – Guarantees reliability with dual system partitions.

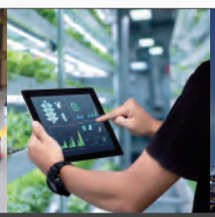
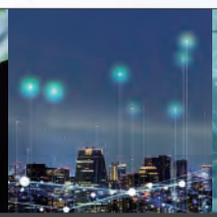


BSP Optimized Service

Equipping with NVIDIA® Jetson™ modules, AVerMedia provides AI edge computing solutions aiming at vertical focus markets, such as Robotics, Smart Cities, Smart Security. Furthermore, as an add-on value of a hardware provider, the optimized service of the Board Support Package(BSP) is one of the cores of AVerMedia. From PCB design to verification, we ensure to provide a dedicated solution to every single vertical market and provide customized service to optimize the BSP to fulfill the various demand of the application.

Industrial solutions & BSP optimized services for vertical markets

Vertical Markets / Recommended BSP Optimization / Hardware Solution

VERTICAL MARKETS		 AMR	 Agriculture	 Smart City	 Medical Imaging
PRODUCTION		Pre-install SDK or SW / Install Image & Test			
SYSTEM	Boot Sequence				
	Change Logo	V	V		V
	One Button to Default	V	V	V	V
	Boot from SD/SSD	V	V	V	V
	Simplification		V		
	Software Secure	V	V	V	V
	OTA	V	V		
	Config Change			V	
	Expansion Header Config	V	V		
DEVICE	Driver/Core Customize	V	V		V
	DMS	V			
	Wi-Fi	V	V	V	
	Thermal			V	
	4G/5G	V	V	V	
ENGINEERING KIT/BOX PC/CARRIER BOARD WITH NVIDIA JETSON MODULE / VIDEO CAPTURE CARD					









Accelerate Edge AI with AVerMedia's Ecosystem

Boost Edge AI with AVerMedia's IHV Ecosystem

Integrating edge AI solutions can be complex and time-intensive. AVerMedia simplifies this process with our robust Independent Hardware Vendor (IHV) ecosystem, offering:

- A wide range of compatible expansion boards, converter boards, camera modules, and peripheral sensors.
- Seamless integration with AVerMedia's NVIDIA Jetson Platforms to streamline your AI development.

The benefits of AVerMedia's IHV Ecosystem?

- Reduce development time with pre-validated components.
- Ensure compatibility with a variety of hardware options.
- Empower your AI solutions with reliable and scalable technology.

Camera Partners	Expansion Boards	Peripheral Sensors
Compatible with a wide range of cameras, our solutions support various camera interfaces, including GMSL-2, MIPI-CSI, USB, and PoE.	Ready for specific applications in the field, our solutions integrate with various expansion boards and frame grabbers.	Designed for seamless integration, our solutions support various peripheral sensors, including TOF, gesture sensors, and force array sensors.

The Value of AVerMedia's ISV Ecosystem

AVerMedia partners with a dynamic ecosystem of Independent Software Vendors (ISVs) to deliver cutting-edge solutions that revolutionize edge AI. We ensure seamless solution integration with all the partner solutions, enabling enhanced deployment, advanced management, and robust security to meet the rapidly evolving needs of edge AI environments.
With AVerMedia's ISV ecosystem partners, customers benefit from:

- **Efficient Operations** – Optimized processes, advanced automation, and tailored tools that accelerate time-to-market for AI solutions.
- **Optimized Management** – Comprehensive solutions for monitoring, configuring, and overseeing edge AI devices, paired with AI orchestration to optimize workloads and boost scalability.
- **Robust Security** – Cutting-edge technologies that protect data and maintain system integrity, covering everything from device-level root of trust to secure network communication.

AVerMedia fully equipped to support diverse edge AI solutions, empowering you to maximize the potential of your AI applications. Leveraging cutting-edge technology and tailored solutions from our software partners, we ensure your specific requirements are met with exceptional precision and performance.

Application

From intelligent cities to autonomous robotics and smart spaces, AVerMedia turns advanced AI technologies into practical applications. Built on decades of video processing, hardware engineering, and system integration experience, our application-ready platforms provide a reliable foundation for AI solutions from concept to production.



SMART CITY

- Intelligent Traffic & Intersection Management
- AI-Powered Urban Safety
- Smart Street Lighting
- Smart Parking Management
- Intelligent Infrastructure Inspection



ROBOTICS

- Drones | Infrastructure & Power Line Inspection
- Drones | Construction Site Surveying
- AMRs | Work-in-Process Transport
- AMRs | Warehouse Inventory Scanning
- Humanoids | Bin Picking & Item Manipulation
- Humanoids | Assembly-Line Assistance



INFERENCE SERVERS FOR SMART SPACES

- Multi-Camera Video Analytics
- Crowd & Occupancy Analytics
- Retail Intelligence
- Loss Prevention & Asset Protection
- AI Video Search & Summarization

Transforming Jetson Orin with NVIDIA Super Mode

AVerMedia's product lineup integrates seamlessly with Super Mode, empowering users to unlock its advanced capabilities. Optimized for the NVIDIA® Jetson™ Platforms, Super Mode enhances AI workloads with faster data processing, efficient multitasking, and superior AI inferencing. With the latest NVIDIA JetPack, Super Mode is fully supported.
Our Edge AI solutions are designed to support Super Mode, ensuring compatibility and peak performance across applications like AI robotics, industrial automation, and advanced video analytics. AVerMedia provides the robust foundation you need to maximize Super Mode's potential.

Benefits of Super Mode with AVerMedia Solutions

- **Enhanced Performance** – Super Mode optimizes processing power, enabling faster data handling, efficient multitasking, and improved AI inferencing.
- **Broad Compatibility** – Our Edge AI solutions are designed to support Super Mode, ensuring smooth operation across a wide range of applications, from AI-driven robotics to industrial automation and advanced video analytics.
- **Future-Ready Innovation** – With Super Mode, achieve new performance benchmarks and elevate your AI workloads without altering hardware configurations.

D133-1
(support NVIDIA Jetson Orin Nano Super mode)



D133S
(support NVIDIA Jetson Orin Nano/Orin NX Super mode)



- Wide temperature -40~85°C
- 1x GbE,2x USB3.2, 1x 4Kp60 HDMI output
- 2x M.2 key for SSD and wifi, 2x4 lane MIPI CSI-2
- Optional M.2 B key for 5G/OOB support

D115W-1
(support NVIDIA Jetson Orin Nano Super mode)



D115S
(support NVIDIA Jetson Orin Nano/Orin NX Super mode)



- Wide temperature -40~85°C
- 2x GbE,2x USB3.2, 1x 4Kp60 HDMI output
- 2x M.2 key for SSD and wifi, 2x4 lane MIPI CSI-2
- Optional M.2 B key for 5G/OOB support

D131/D131L
(support NVIDIA Jetson Orin Nano Super mode)



D131S
(support NVIDIA Jetson Orin Nano/Orin NX Super mode)



- 1x GbE(POE optional), 4x USB3.1
- 1x 4Kp60 HDMI output and 40pin expansion header
- 2x M.2 key for SSD and wifi
- OOB support optional

Carrier Board






Model name	D137 Super Mode support	D115W-1 D115S	D131 D131L D131S	D133-1 D133S
NVIDIA Jetson Super Mode support	•	•	•	•
Jetson Orin NX Jetson Orin Nano	•	•	•	•
Jetson AGX Orin and Industrial				
Jetson Thor T5000/T4000				
HDMI Output	1x Micro HDMI	1x 4Kp60 for Orin NX, 4Kp30 for Orin Nano	1x 4Kp60 for Orin NX, 4Kp30 for Orin Nano	1x 4Kp60 for Orin NX, 4Kp30 for Orin Nano
USB3.0/USB2.0	3/0 (3x Type-C, 10G)	3/0	4/0	2/0
Networking	· 2x GbE	· 2x GbE(1x PSE optional) · 1x M.2 E key	· 1x GbE(PSE optional) · 1x M.2 E key	· 1x GbE · 1x M.2 E key
Storage	1x M.2 M key (2230)	1x M.2 M key	1x M.2 M key	1x M.2 M key
4G/5G support	-	1x M.2 B key for 4G/5G (daughter board)	4G/5G (Need adapter card)	1x M.2 B key for 4G/5G (daughter board)
Others	· 2x I2C, 4x UART, 2x SPI · 1x GPIO, 1x CAN, 1x PWM · USB Type-C for flash · XT30 power input · 12V~48V	· 20 pins: 2x I2C, 2x UART, 4x GPIOs, 1xCAN · 1x OOB support optional	· 40pin(UART, SPI, I2C, I2S, GPIOs) · 1x CAN with transceiver (for D131/D131S) · 1x OOB support optional	· 20 pins: 2x I2C, 1x UART, 9x GPIOs · 1x OOB support optional
Camera support	· 2x I2C, 4x UART, 2x SPI · 1x GPIO, 1x CAN, 1x PWM · USB Type-C for flash · XT30 power input · 12V~48V	· 2x 4 lane MIPI CSI-2 · USB camera · SDI/HDMI camera via capture card	· 2x 2 lane MIPI CSI-2(D131L support 1x 2 lane) · 1x 4 lane MIPI CSI-2(for D131/D131S) · USB camera · IP camera	· 2x 4 lane MIPI CSI-2 · USB camera · SDI/HDMI camera via capture card
Capture card support	-	CN311H, CN312SW, CN312MW (via daughter board)	-	CN311H, CN312SW, CN312MW (via daughter board)
Operating temperature	-25°C~60°C	-40°C~85°C	0°C~70°C	-40°C~85°C
Adaptor/Power cord included	-	12V/5A (Optional)	12V/5A (Optional)	12V/5A (Optional)
Dimensions (LxW) mm	90 x 60	126 x 96	113 x 105	90 x 76






Model name	D315 5G	D317	D333 Thor support	D331 Thor support
NVIDIA Jetson Super Mode support				
Jetson Orin NX Jetson Orin Nano				
Jetson AGX Orin and Industrial	•	•		
Jetson Thor T5000/T4000			•	•
HDMI Output	1x 4Kp60	1x 4Kp60	1x HDMI output	2x HDMI output
USB3.0/USB2.0	2/2	2/0 (typeC)	3/0 (2x Type-A + 1x Type-C, 10G)	6/0 (4x Type-A + 2x Type-C, 10G)
Networking	· 1x GbE · 1x 10G · 1x M.2 E key	· 1x GbE · 1x M.2 E key · Optional 2x 10GbE via daughter board	· 2x GbE · 1x 100G QSFP · 1x M.2 E key	· 2x GbE · 1x 100G QSFP · 1x M.2 E key
Storage	· 1x Micro SD · 1x M.2 M key	2x M.2 M key	1x M.2 M key	2x M.2 M key (NVMe 2280)
4G/5G support	1x M.2 B key for 4G/5G	Optional 1x M.2 B key for 4G/5G	-	-
Others	· 1x SIM slot · 1x PCIe (x16) · 1x CAN with transceiver · 40pin (UART, SPI, I2C, I2S, CAN, GPIOs) · 1x OOB support optional	· Built in Infineon SLB 9672 TPM Chip · 30pin (UART, I2C, GPIO, CAN, I2S, 5V) · 12pin (12V, 5V, 3.3V, USB, DMIC) · 16pin (UART, power, reset, power detect) · Temperature sensor · Optional Dual-RTK GNSS via daughter board	· 2x I2C, 1x I2S, 1x UART, 1x SPI · 4x GPIO, 4x CAN · 4x PWM optional · 1x OOB support via sub board · Optional crypto chip · Optional sub-board: 8x USB3.2 Type-A / 8x PoE / 8x GMSL / Dual-RTK GNSS · Type-C flash, ATX 6-pin, 12V~36V	· 2x I2C, 8x I2S, 4x UART, 2x SPI · 22x GPIO, 4x CAN, 4x PWM · 1x JTAG, 1x Audio · 1x OOB support via sub board · Optional crypto chip · Optional sub-board: 8x USB3.2 Type-A / 8x PoE / 8x GMSL / Dual-RTK GNSS · Type-C flash, terminal block 3-pin, 9V~36V
Camera support	· 1x 120 pin for mipi/GMSL/FDP link/V-by-ONE® HS camera · SDI/HDMI camera via capture card · USB camera	· 1x 120pin for mipi/GMSL/FPD link/V-by-One® HS camera · USB camera	· 1x 120pin for mipi/GMSL/FPD link/V-by-One® HS camera · USB camera	· 1x 120-pin / 16-lane MIPI camera interface · Optional 8x GMSL via sub board · USB camera
Capture card support	CN311H, CN312SW, CN312MW	-	-	-
Operating temperature	-40°C~85°C	-40°C~85°C	-40°C~85°C	-40°C~85°C
Adaptor/Power cord included	54V/2.78A	-	-	Adapter included
Dimensions (LxW) mm	141.5 x 133.5	107 x 92	107 x 92	190 x 190

Box PC







Model name	D115OXB/ONB D115WOXB/ONB 5G D115SOXB/ONB	D135OXB IP65 (IP 67 by request)	D133OXB 5G D133ONB 5G D133SOXB D133SONB
NVIDIA Jetson Super Mode support	•	•	•
NVIDIA Jetson Orin NX Jetson Orin Nano	•	•	•
NVIDIA Jetson AGX Orin and Industrial			
NVIDIA Jetson Thor T5000/T4000			
HDMI Output	1x 4Kp60 for Orin NX, 4Kp30 for Orin Nano	1x 4Kp60 for Orin NX	1x 4Kp60 for Orin NX, 4Kp30 for Orin Nano
USB3.0/USB2.0	3/0	3/0	2/0
Networking	· 1x GbE with optional PSE (not available on D115OXB/ONB) · 1x M.2 E key	· 2x GbE w/PSE (waterproof) · 1x M.2 E key	· 1x GbE · 1x M.2 E key
Storage	1x M.2 M key (256G SSD preinstalled on box PC)	1x M.2 M key(256G SSD Preinstalled)	1x M.2 M key (256G SSD preinstalled on box PC for Orin NX)
4G/5G support	1x M.2 B key for 4G/5G not available on D115OXB/ONB (daughter board)	1x M.2 B key for 4G/5G	1x M.2 B key for 4G/5G (daughter board)
Others	· 20pins: 2x I2C,2x UART, 4x GPIOs, 1x Can) · 1x OOB support optional (not available on D115OXB/ONB)	· 1x mPCIe (IMU/GPS) · 2x Nano SIM slot · 1x OOB support(option) **WaterProof** · 8x GMSL+2x PoE or 6x PoE · 2x CAN BUS with transceiver · 1x 12 pin (GPIO, RS485) · SuperCAP	· 20 pins: 2x I2C, 1x UART, 9x GPIOs · 1x OOB support optional
Camera support	· 2x 2 lane MIPI CSI-2 for D115OXB / ONB, 2x 4 lane MIPI CSI-2 for D115WOXB / ONB and D115SOXB / ONB · USB camera · SDI/HDMI camera via capture card	· GMSL camera · IP camera · USB camera	· 2x 4 lane MIPI CSI-2 · USB camera · SDI/HDMI camera via capture card
Capture card support	CN311H, CN312SW, CN312MW via daughter board (not available on D115OXB / ONB)	-	CN311H, CN312SW, CN312MW (via daughter board)
Operating temperature	· D115OXB / ONB: 0°C~60°C · D115WOXB / ONB, D115WOXB / ONB: -25°C~60°C	· -40~70℃ for 8xGMSL+2xPoE · -40~50℃ for 6xPoE	-25°C~60°C
Adaptor/Power cord Included	12V/5A	-	12V/5A
Thermal solution	Fanless	Fanless	Fan
Dimensions (LxWxH) mm	126 x 96 x 74	300 x 153 x 103	93 x 81.2 x 74.4

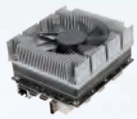





Model name	ON135B	D315AOB 5G D315AOP 5G	D331ATB Thor support	D337 Inference Server
NVIDIA Jetson Super Mode support	•			
NVIDIA Jetson Orin NX Jetson Orin Nano	•			
NVIDIA Jetson AGX Orin and Industrial		•		
NVIDIA Jetson Thor T5000/T4000			•	2× NVIDIA® Jetson AGX Thor™ T5000
HDMI Output	1x 4Kp60 for Orin NX, 4Kp30 for Orin Nano	1x 4Kp60	2x 4Kp60	2× HDMI 2.0 Type-A (4K @ 60Hz; 1 per zone)
USB3.0/USB2.0	2/0	2/2	6/0	2× USB Gen 2 Type-A (1 per zone)
Networking	· 2x GbE · 1x M.2 E key	· 1x GbE · 1x 10G · 1x M.2 E key	· 2x GbE · 1x 100G QSFP · 1x M.2 E key	· 2× QSFP28, 100GbE fiber (1 per zone) · 4× Gigabit Ethernet RJ45 (2 per zone; 1 designated OOB)*
Storage	· 1x micro SD · 1x M.2 M key (256G SSD preinstalled on box PC)	· 1x micro SD · 1x M.2 M key	2x M.2 M key	2× M.2 2280 NVMe M-Key SSD slots (Default: 2× preinstalled 1TB SSD)
4G/5G support	1x mPCIe for 4G module	1x M.2 B key for 4G/5G	1x M.2 B key for 4G/5G	Not specified
Others	· 3x RS232,1x RS485 · 2x UART · 2x CAN, 6x GPIO with Isolated · 1x Mic in, 1x Line out · 1x half mPCIe for GPS · 5x LED Indicator	· 1x SIM slot · 1x PCIe (x16) · 1x CAN with transceiver · 40pin (UART, SPI, I2C, I2S, CAN, GPIOs) · 1x OOB support optional	· 4x CAN with transceiver, 4x PWM · 2x I2C, 8x I2S, 4x UART, 2x SPI · 22x GPIO, 1x audio, 1x JTAG · 2x SIM slots · 1x OOB support via sub board · Optional crypto chip · Optional sub-board: 8x USB3.2 Type-A / 8x PoE / 8x GMSL / Dual-RTK GNSS · Terminal block 3-pin, 9V~36V	· 2× D333 carrier boards (1 per Jetson T5000) · OOB management and ERMI support · TPM security (1 per D333) · RTC battery and MCU battery-life monitoring · 2× USB Type-C ports for BSP flashing · 2U rackmount chassis with rack ears
Camera support	· 3x AHD/TVI/CVI Input Max.1080p30 · USB camera	· 1x 120pin for mipi/GMSL/FPD link/V-by-One® HS camera · SDI/HDMI camera via capture card · USB camera	· 1x 120pin for MIPI/GMSL/FPD-Link/ V-by-One® HS camera · Optional 8x GMSL via sub board · USB camera	Not specified
Capture card support	-	CN311H, CN312SW, CN312MW	-	Not specified
Operating temperature	0°C~40°C	D315AOB:-25°C~65°C D315AOP:-25°C~50°C D315AOB-industrial: -25°C~65°C	-25°C~60°C	0°C–40°C (IEC 60068; airflow 0.7 m/s)
Adaptor/Power cord Included	-	54V/2.78A	Adapter + power cord included	· Hot-swap redundant 550W power supply · 2× power cords (by region)
Thermal solution	Fanless	Fan/Fanless	Fan	4× fans (2 per D333 carrier board; 12V / 24W)
Dimensions (LxWxH) mm	235 x 160 x 70	D315AOB (Fan): 145 x 136.4 x 88 D315AOP (Fanless): 160 x 136.9 x 65	211 x 194 x 120	451.1 × 438 × 88.9 (without mount & power) 509.5 × 482.6 × 88.9 (with mount & power)

Engineering Kit & Peripheral






Model name	D131LOX/D131LON D131SOX/D131SON (Apply NVIDIA BSP with manual setting)	D315AO 5G	D317AO	D331AT support
NVIDIA Jetson Super Mode support	•			
NVIDIA Jetson Thor T5000/T4000 support				•
Jetson Module	NVIDIA Jetson Orin NX/Orin Nano	NVIDIA Jetson AGX Orin and Industrial	NVIDIA Jetson AGX Orin and Industrial	NVIDIA Jetson Thor T5000/T4000
HDMI Output	1x 4Kp60 for Orin NX, 4Kp30 for Orin Nano	1x 4Kp60	1x 4Kp60	2x 4Kp60
USB3.0/USB2.0	4/0	2/2	2/0 (type C)	6/0
Networking	· 1x GbE(PSE optional) · 1x M.2 E key	· 1x GbE · 1x 10G · 1x M.2 E key	2x M.2 M key	· 2x GbE · 1x 100G QSFP · 1x M.2 E key
Storage	1x M.2 M key (optional 256G SSD Preinstalled	· 1x Mirco SD slot · 1x M.2 M key	Optional 1x M.2 B key for 4G/5G via daughter board	2x M.2 M key
4G/5G support	4G/5G (need adapter card)	1x M.2 B key for 4G/5G	1x M.2 B key for 4G/5G	1x M.2 B key for 4G/5G
Others	· 40pin (UART, SPI, I2C, I2S, GPIOs) · 1x OOB support optional	· 1x SIM slot · 1x PCIe (x16) · 1x CAN with transceiver · 40pin(UART,SPI,I2C,I2S, CAN, GPIOs) · 1x OOB support optional	· Built in Infineon SLB 9672 TPM Chip · 30pin(UART, I2C, GPIO, CAN, I2S, 5V) · 12pin(12V, 5V, 3.3V, USB, DMIC) · 16pin(UART,power,reset,power detect) · Temperature sensor · Optional Dual-RTK GNSS via daughter board	· 4x CAN with transceiver, 4x PWM · 2x I2C, 8x I2S, 4x UART, 2x SPI · 22x GPIO, 1x audio, 1x JTAG · 2x SIM slots · 1x OOB support via sub board · Optional crypto chip · Optional sub-board: 8x USB3.2 Type-A / 8x PoE / 8x GMSL / Dual-RTK GNSS · Terminal block 3-pin, 9V~36V
Camera support	· 1x 2 lane MIPI CSI-2 · USB cam era · IP camera	· 1x 120pin for mipi/ GMSL/ FPD link/ V-by-One® HS camera · SDI/HDMI camera via capture card · USB camera	· 1x 120pin for mipi/GMSL/FPD link/V-by-One® HS camera · USB camera	· 1x 120pin for MIPI/GMSL/FPD-Link/ V-by-One® HS camera · Optional 8x GMSL via sub board · USB camera
Capture card support	-	CN311H, CN312SW, CN312MW	-	-
Operating temperature	0°C~70°C	-25°C~70°C	-40°C~85°C	-40°C~85°C
Adaptor/Power cord Included	12V/5A (Optional)	54V/2.78A (Optional)	-	-
Fan	Yes	Yes	Yes	Yes
Dimensions (LxWxH) mm	113 x 105 x 50	135.5 x 130 x 54.6	98.3 x 111x 63	98.3 x 111x 63







Peripheral	PoE board	OOB module (Out-Of-Band Management)	GMSL board	5G board	RTK-GNSS module
Applicable product	D131 / D131L / D131S / D115W 5G / D115S	D131 / D131L / D131S / D133 5G / D133S / D115W 5G / D115S / D135 / D315 5G	D317 / D315 5G	D133 5G / D133S / D115W 5G / D115S	D135 / D317
Connector type	6pin connector	1x 15pin wafer and 1x 10pin wafer	120pin board to board connector	1x 5pin wafer Amd 1x 30pin wafer	mPCIE or 4pin USB wafer
Chip solution	-	Nuvoton NUC980	MAX96712GTB/V+	-	U-blox ZED-F9P U-blox ZED-F9P+F9H
Function	1x 802.3af (PSE) IP camera support	· Power cycling · Serial console	8 port GMSL2 camera support	supports 4G/5G modules and capture cards	· 6-axis IMU · High-precision positioning with centimeters grade · Heading function

Peripheral Comparison

Peripheral	F8G11 GMSL Board	F8P1M PoE Board	F8U1M USB Board	10G Ethernet Board
Applicable product	D317 / D315-2 / D331 / D333	D317 / D331 / D333 D115S/D131S also listed*	D317/D331/D333	D317
Connector type	120-pin board-to-board connector 2 × Mini FAKRA camera connectors	40-pin high-speed micro coaxial connector	Micro coaxial connection Pin count TBC	40-pin high-speed micro coaxial connector
Chip solution	-	Intel I210 Ethernet controllers Diodes PI7C9X2G608GP PCIe switch	-	Marvell AQR113C-B1-I
Function	8 × GMSL cameras Power over Coax	Up to 8 × GbE PoE ports M.2 B key for 4G/5G on selected variants	8 × USB 3.0 Type-A ports M.2 B key for 4G/5G	2 × 10GbE RJ45 ports

Peripheral	PoE Board	ERMI OOB Module	5G Daughter Board	D115S-EXB 5G Daughter Board
Applicable product	D131 / D131L / D115W / D131S / D115S	D131S / D133-1 / D133S / D115W-1 / D115S / D135 / D315-2	D133-1 / D133S / D115W-1	D131S/D115S/D317 / D331 / D333
Connector type	6-pin connector (brochure)	15-pin wafer 10-pin wafer for supported NC-SI configurations	30-pin micro coaxial interface M.2 B key and M.2 M key 5-pin power wafer	40-pin micro coaxial interface M.2 B key and M.2 M key
Chip solution	-	Nuvoton NUC980	-	Marvell AQR113C-B1-I
Function	1 × IEEE 802.3af PoE PSE output Up to 15.4 W	Remote power control, serial console, monitoring and Virtual Media through ERMI API	Expansion for 4G/5G modules and SSD/capture-card configurations	Expansion for 4G/5G and SSD/capture-card configurations Micro SIM UART/RS232

Peripheral	RTK GNSS Module	A113 AIClear Mic	F8G4CF GMSL/CAN Bus & I/O Expansion Board
Applicable product	D135 / D317 / D331 / D333	Compatible USB hosts Platform validation TBC	D333 / D331 / D317
Connector type	Mini PCIe or USB wafer	USB Type-C 3.5 mm audio input/output	120-pin board-to-board connector 2 × Mini FAKRA camera connectors & 40-pin high-speed micro coaxial connector
Chip solution	u-blox ZED-F9P Optional ZED-F9H for heading	-	Maxim MAX96712 FinTech F81601A
Function	Centimeter-level RTK positioning 6-axis IMU Heading with optional expansion	AI noise reduction for voice capture Driver-free USB connection	8 × GMSL 2 × GbE 4 × CAN bus 4 x USB-C
Target mass production	-	-	December 2026

Peripheral	F4G22 GMSL Board	F1F22 FLIR ISP Board
Applicable product	D133S / D131S / D115S / D137	D137 / D115S / D133S
Connector type	2 x MIPI 22pin for D133S/D131S/D115S 120-pin board-to-board connector for D137	50-pin board-to-board connector for Flir Hardron 640 2 x MIPI 22pin for D137/D133S/D131S/D115S
Chip solution	Maxim MAX96712	ISP support
Function	4 × GMSL	2 × MIPI 2 × USB
Target mass production	December 2026	December 2027

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