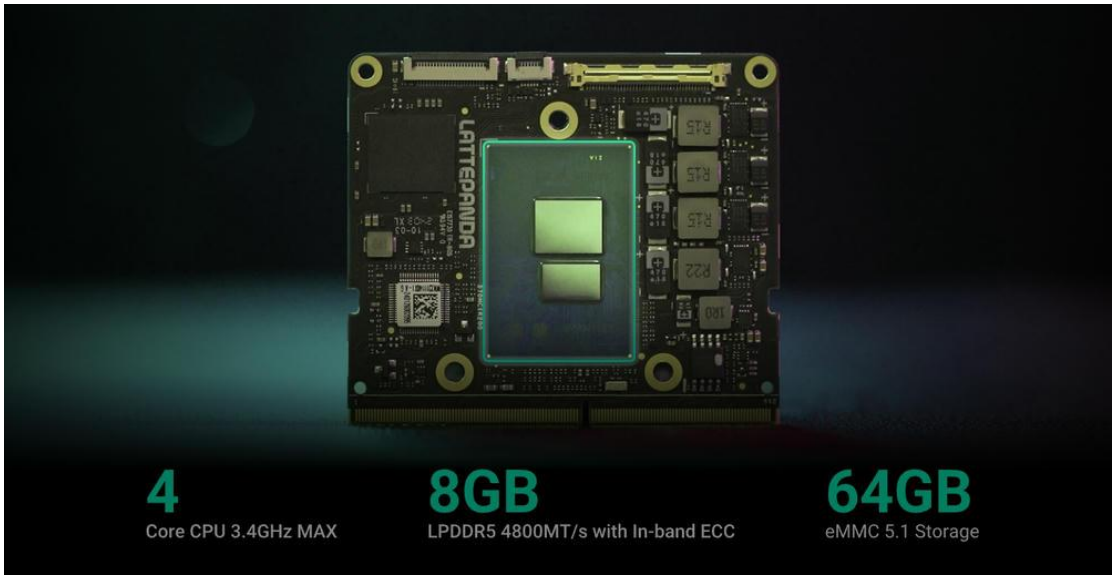
Introduction

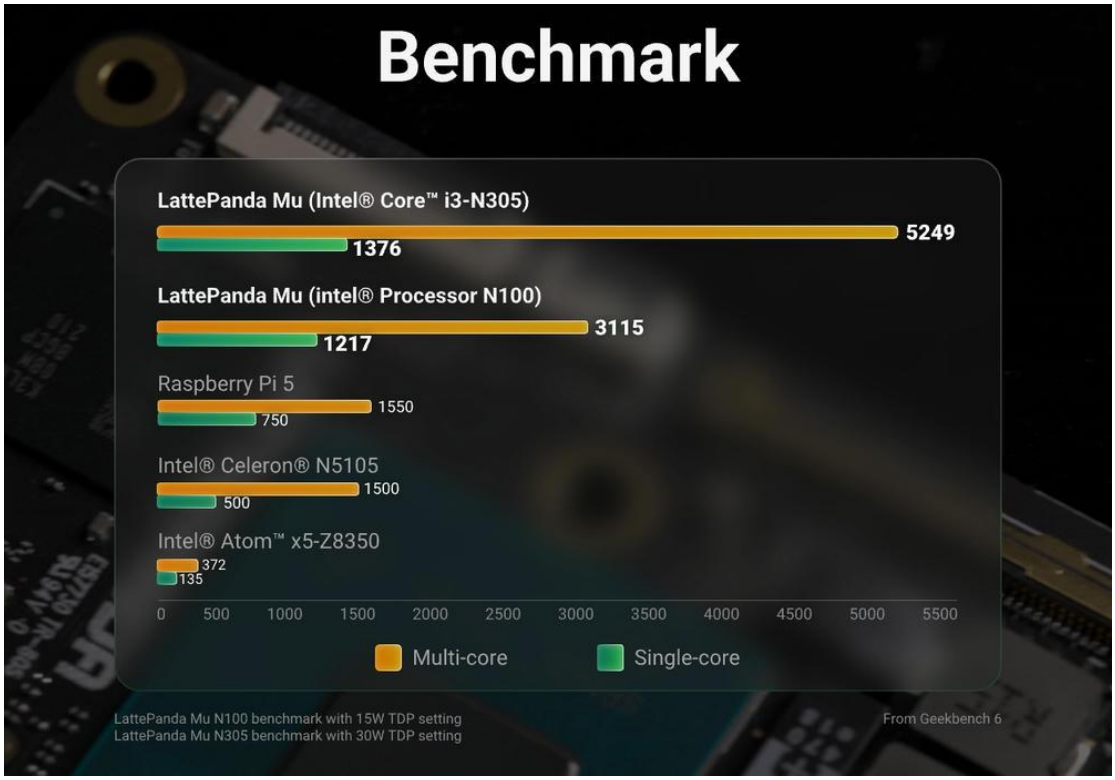
LattePanda Mu is a micro x86 compute module featuring Intel N100 quad-core processor, 8GB LPDDR5 memory and 64GB storage. LattePanda Mu exposes extensive pins, including 3 HDMI/DisplayPort, 8 USB 2.0, up to 4 USB 3.2, and up to 9 PCIe 3.0 lanes. These flexible ports and open-source carrier board files enable users to effortlessly design custom carrier boards to meet their unique requirements.

Small but Powerful

LattePanda Mu x86 compute module features Intel N100 quad-core processor with 3.4GHz turbo frequency, offering ample performance and multitasking capabilities for the majority of applications.

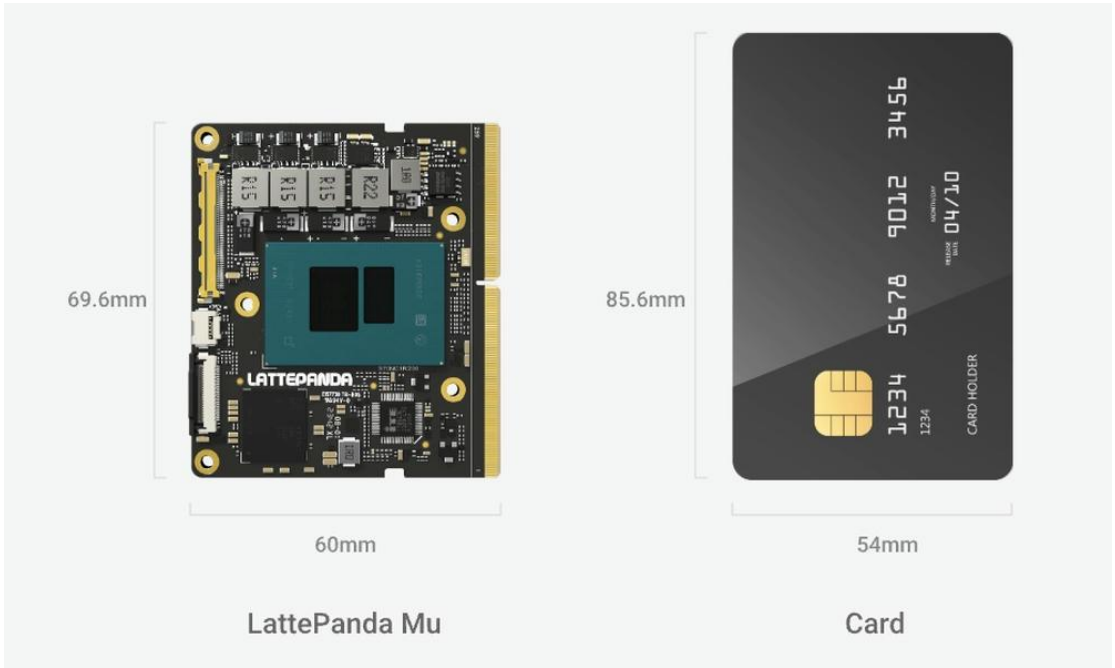
Equipped with an Intel Processor N100, LattePanda Mu compute module offers a multi-core score of 3115 and a single-core score of 1217 on Geekbench 6, outperforming the Raspberry Pi 5, Intel Celeron N5105, and Atom x5-Z8350. Its CPU performance doubles the Raspberry Pi 5.





Card-Sized

Despite its small size of 69.6mm x 60mm, the pocket size of the LattePanda Mu computer-on-module allows for integration into space-constrained devices, delivering powerful computation without occupying much space.



Flexibility in Performance and Energy

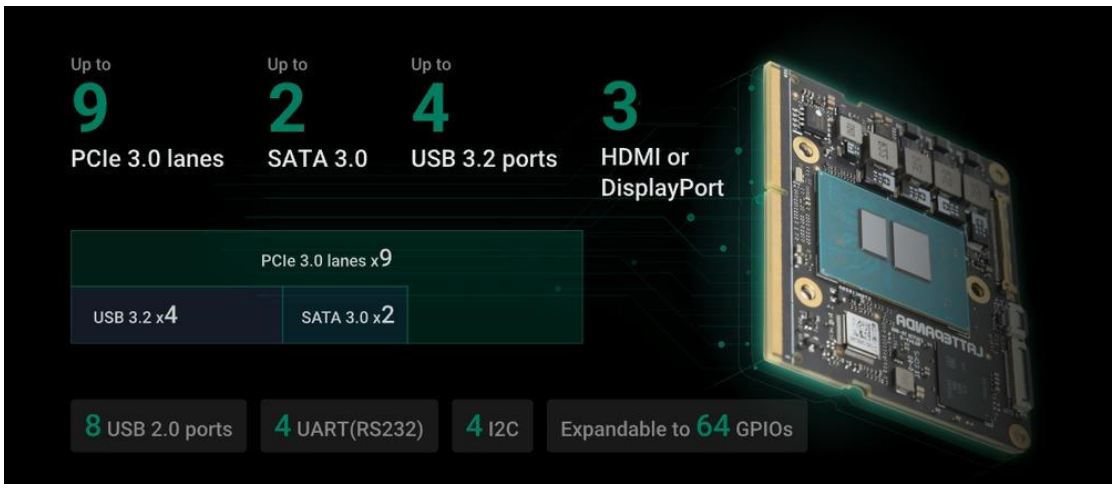
The processor's TDP can be adjusted from 6W to 35W, providing flexibility in power

usage and heat output. The 6W setting enables efficient operation with minimal heat and silent passive cooling, while the 35W setting offers robust performance but requires active cooling.

Product			
SKU	FIT0981	FIT0989	FIT0982
Heat dissipation capacity	35W	10W (Fanless) 35W (with external fan)	15W (with external fan) Must be used with an external fan
Feature	LattePanda Mu standard cooler	Huge heatsink for fanless designs	Ultra-thin heatsink for compact spaces

Flexible Expansion Pins

LattePanda Mu compute module exposes extensive pins, such as 3 HDMI/DisplayPort, 8 USB 2.0, up to 4 USB 3.2, 9 PCIe 3.0 lanes, 2 SATA 3.0 and 64 expandable GPIOs. This offers unparalleled flexibility and expandability, allowing you to create the specific solution.



Carrier Boards - Expanding Infinite Possibilities

DFRobot offers a lite carrier board for the LattePanda Mu, offering a fast development platform with essential interfaces for efficient design verification. Additionally, a full-function evaluation carrier board is available, exposing all pins of the LattePanda Mu for extensive hardware and software testing.

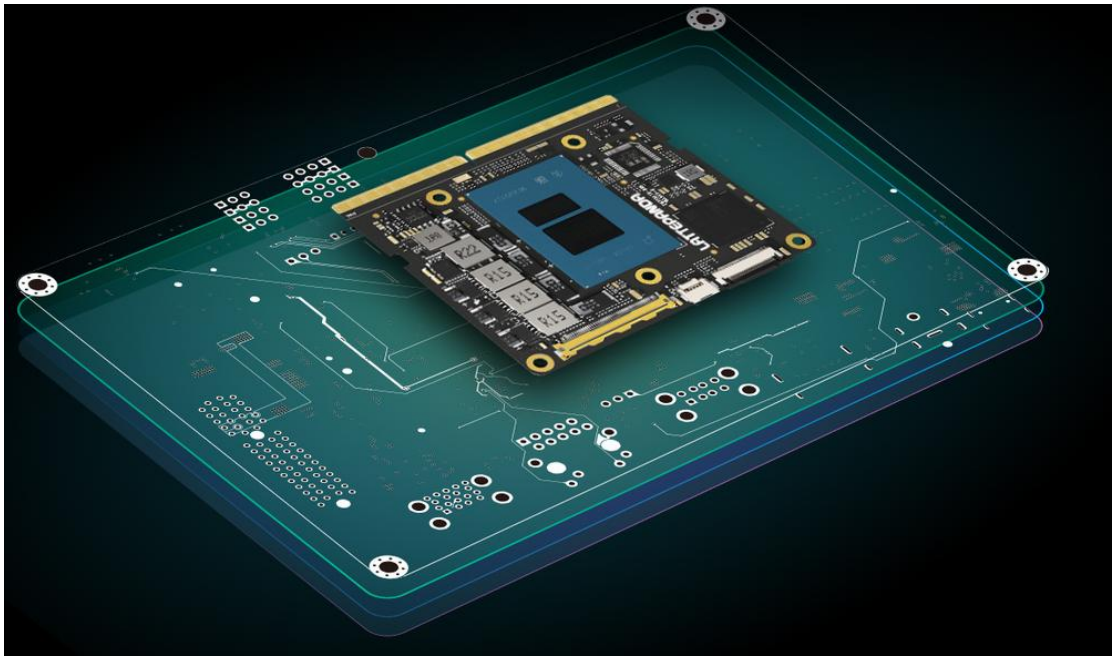
Note: The PCIe slot of the lite carrier is available only when using a 12V power supply.

Full Evaluation Carrier

Lite Carrier

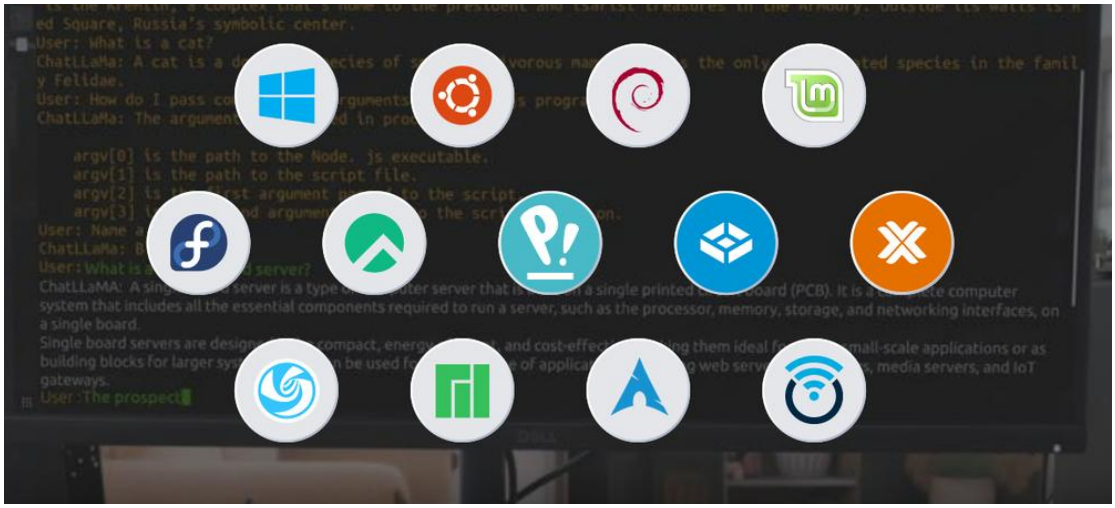
Making Carrier Simpler and Easier

LattePanda offers open-source carrier board files and libraries as reference materials, enabling you to fine-tune the carrier board design to meet your specific needs, significantly reducing development time.



Multi-System Support

LattePanda Mu x86 computer-on-module supports multiple operating systems, including Windows 10, Windows 11, Ubuntu, ensuring that there is always one that suits your needs.



Customized Solutions

LattePanda Team offers customized services, including customized carrier boards, boot screens, BIOS functionality, operating systems, etc. If you have any specific requirements, please feel free to contact us at solution@lattepanda.com.

The LattePanda Team is dedicated to providing timely and professional support to meet your customization needs.

Selection Guide of LattePanda Mu Series

LattePanda Mu			
SKU	DFR1146	DFR1147	DFR1149
CPU	Intel® Processor N100 4 Cores, MAX 3.4GHz Configurable TDP: 6~35W	Intel® Processor N100 4 Cores, MAX 3.4GHz Configurable TDP: 6~35W	Intel® Core™ i3-N305 8 Cores, MAX 3.8GHz Configurable TDP: 9~35W
RAM	8GB LPDDR5 4800MT/s Support IBECC	16GB LPDDR5 4800MT/s Support IBECC	16GB LPDDR5 4800MT/s Support IBECC
eMMC	64GB eMMC 5.1	64GB eMMC 5.1	64GB eMMC 5.1

All LattePanda Mu feature interfaces and form factors that are compatible with each other.
The "ENT" suffix means the product includes a Windows 11 IoT Enterprise activation code.

Features

Intel Processor N100 (Up to 3.4GHz, 4-core, 4-thread)

Onboard 8GB 4800MHz LPDDR5 memory with IBECC supported

64GB eMMC 5.1 storage

Configurable TDP: 6W ~ 35W

Multiple OS Support: Windows 10, Windows 11, Ubuntu

Rich Expansion Pins, including: 3 HDMI/DisplayPort, 8 USB 2.0, up to 4 USB 3.2, 9 PCIe 3.0 lanes, 2 SATA 3.0, 64 expandable GPIOs, etc.

Open-source Design Files (KiCAD) of Carrier Boards

Applications

Handheld Device

AI Interaction Robot

Specification

Processor: Intel Processor N100 4 Cores up to 3.4GHz

Memory: LPDDR5 4800MT/s 8GB with IBECC supported

Storage: eMMC 5.1 64GB

Display: 3 Ouputs; Max Resolution 4096 x 2160@60Hz

I/O

PCIe 3.0: up to 9 lanes
SATA 3.0: up to 2 ports
USB 3.2 (10Gbps): up to 4 ports
USB 2.0 (480Mbps): 8 ports
I2C, UART and GPIOs

Power: 9~20V

Operating System: Windows, Ubuntu

Environment: 0~60°C; 0~80% relative humidity

Size: 69.6 x 60mm

Documents

Official Website

Open-source Repository

Shipping List

LattePanda Mu Compute Module (N100 8GB) x1

Product Manual x1

Activation Code Card (Windows 11 IoT Enterprise) x1

Attention：

1. Windows 11 product key sticker is very important. Please keep it safe before activating the system.

2. Please install the LattePanda Mu on the planned deployment carrier board and update the corresponding BIOS before proceeding with the activation to avoid deactivation due to Windows detecting significant hardware changes.

LattePanda

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LattePanda Documents