



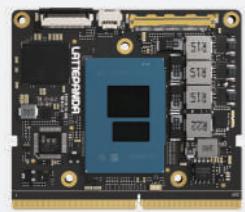
Innovative Compact Computing

Solution Provider



LattePanda Families

Compute Module



LattePanda Mu

Intel® N100

4 Cores **3.4** GHz MAX

Intel® N305

8 Cores **3.8** GHz MAX

• Memory: **8GB/16GB**

• Storage: **64GB**

Single Board Computer



LattePanda Sigma

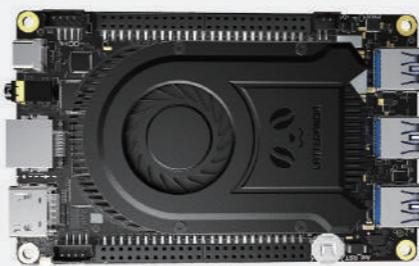
Intel® Core™ i5-1340P

12 Cores / **16** Threads

4.6 GHz MAX

• Memory: **16GB/32GB**

• Storage: **M.2 NVMe SSD**



LattePanda 3 Delta

Intel® Celeron® N5105

4 Cores / **4** Threads

2.9 GHz MAX

• Memory: **8GB**

• Storage: **64GB**



LattePanda V1

Intel® Atom® x5-Z8350

4 Cores / **4** Threads

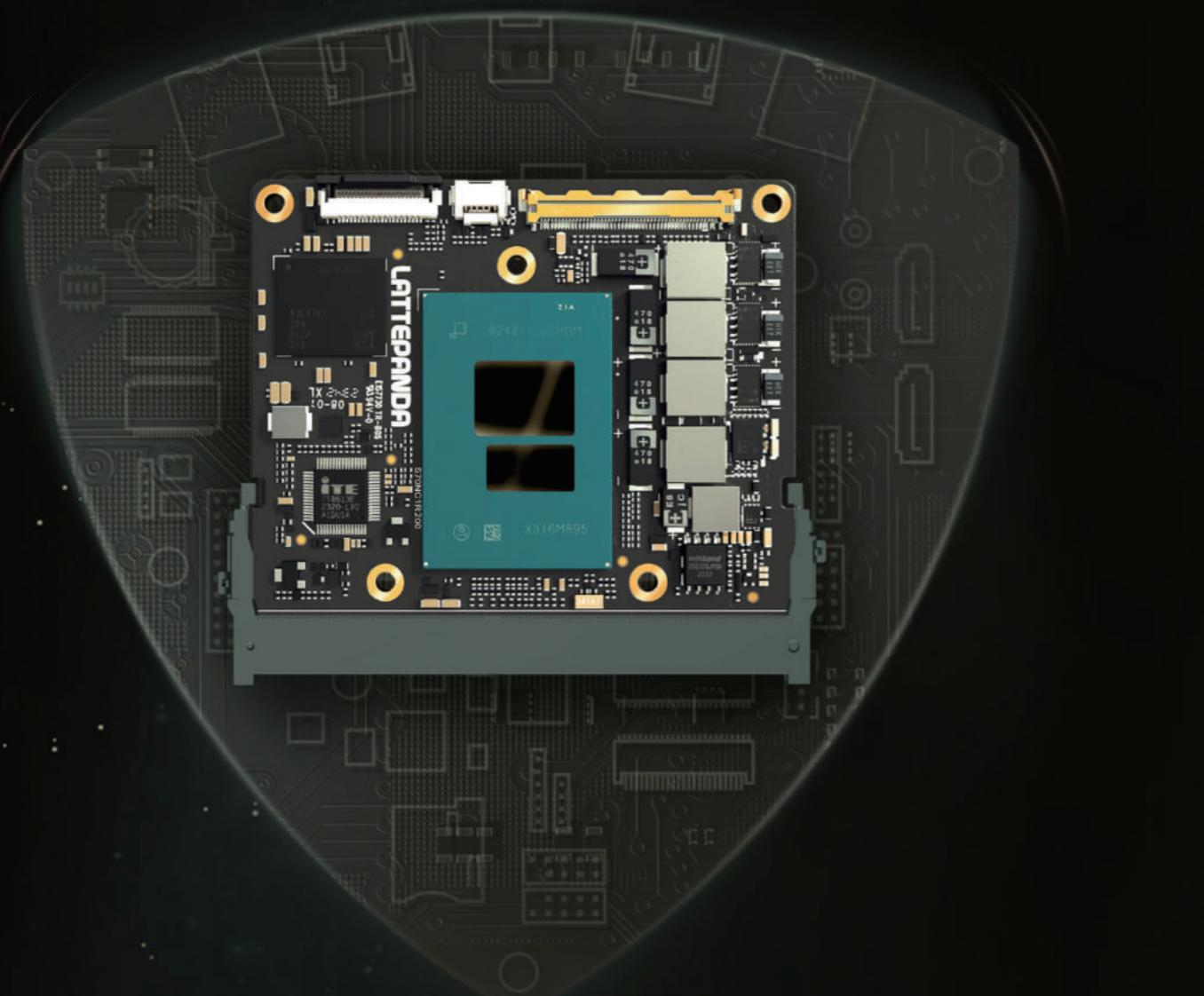
1.92 GHz MAX

• Memory: **2GB/4GB**

• Storage: **32GB / 64GB**

LATTEPANDA MU

A micro x86 compute module
fits unique solutions.



Specification



up to	up to	up to	up to
9	4	2	8
PCIe 3.0	USB 3.2	SATA 3.0	USB 2.0



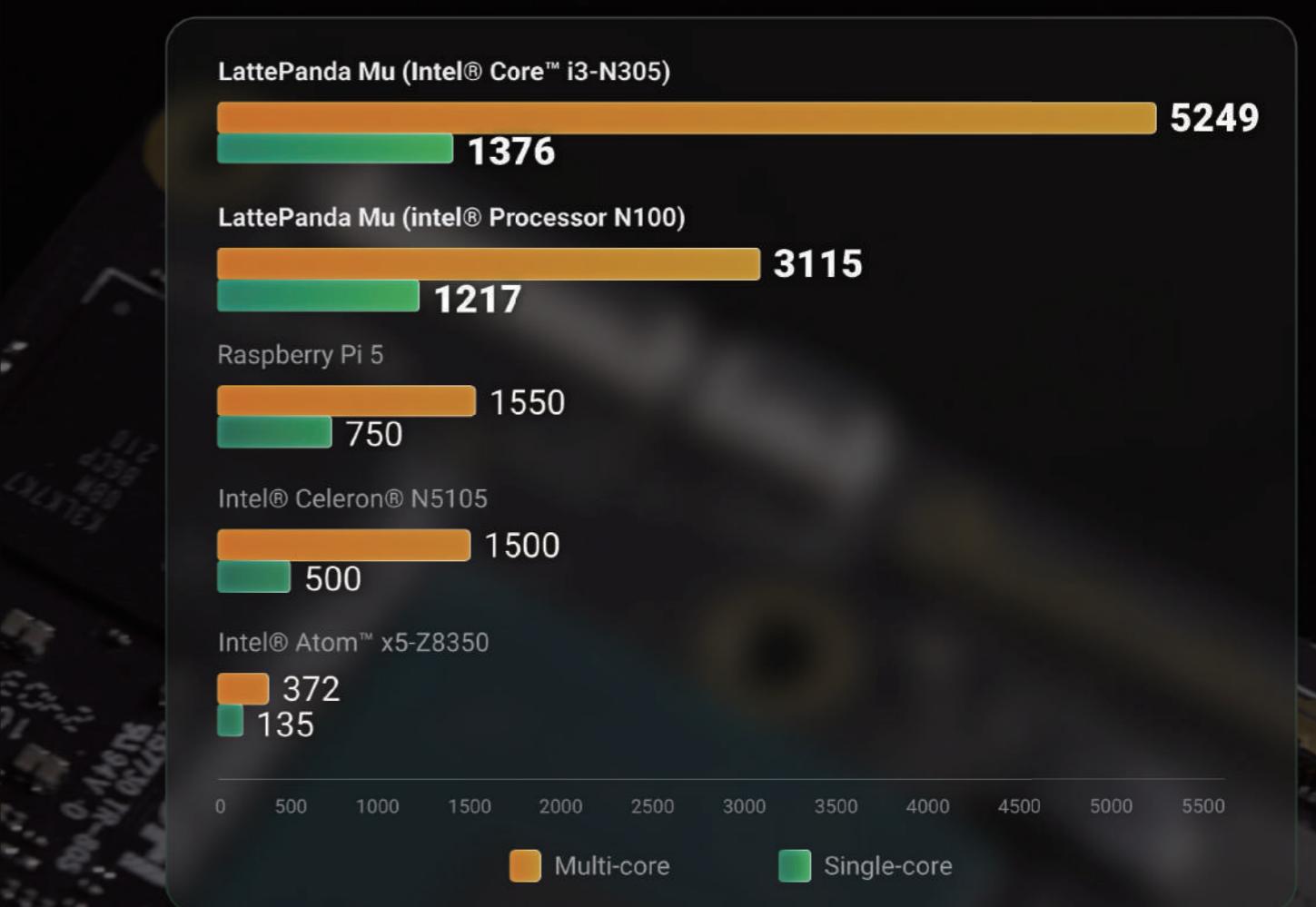
4	4	64
UART	I2C	GPIOs

8GB / 16GB
LPDDR5
Memory

64GB
eMMC
Storage

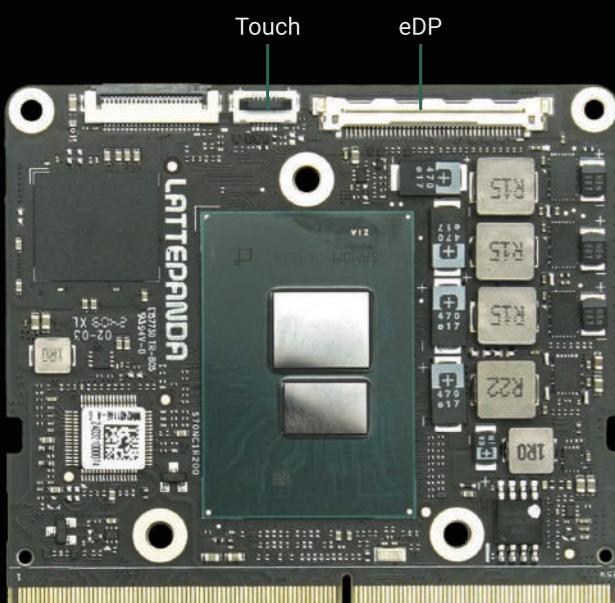
Open-source Carrier Design

Benchmark



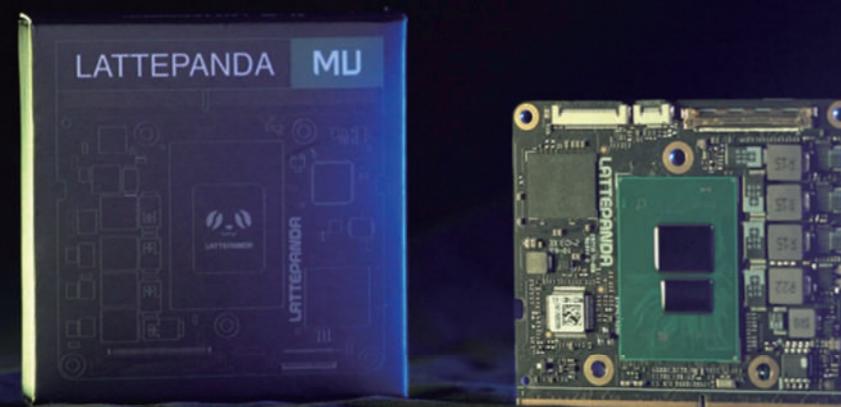
LattePanda Mu N100 benchmark with 15W TDP setting
LattePanda Mu N305 benchmark with 30W TDP setting

From Geekbench 6



Custom Design Service

Personalise effortlessly with our design service



Contact us at

 solution@lattepanda.com

Product Specification

Product Name	LattePanda Mu N100		LattePanda Mu N305
Model Number	DFR1146	DFR1147	DFR1149
Processor	<ul style="list-style-type: none"> Intel® Processor N100 4-Core, 4-Thread 3.4GHz Max Turbo Frequency Configurable TDP: 6~35W 		<ul style="list-style-type: none"> Intel® Core™ i3-N305 8-Core, 8-Thread 3.8GHz Max Turbo Frequency Configurable TDP: 9~35W
Graphics	<ul style="list-style-type: none"> Intel® UHD Graphics 750MHz Max Dynamic Frequency 24 Execution Units 		<ul style="list-style-type: none"> Intel® UHD Graphics 1.25GHz Max Dynamic Frequency 32 Execution Units
Memory	• 8GB LPDDR5 4800MT/s With In-band ECC	• 16GB LPDDR5 4800MT/s With In-band ECC	• 16GB LPDDR5 4800MT/s With In-band ECC
Storage	64GB eMMC		
Operating System	<ul style="list-style-type: none"> Windows 10 & 11 Ubuntu 22.04 & 24.04 		
Expansion	<ul style="list-style-type: none"> Up to 9x PCIe 3.0 Lane Up to 4x USB 3.2 10Gbps Up to 2x SATA 6Gbps 8x USB 2.0 4x UART 4x I2C Expandable to 64x GPIO 		
Display	<ul style="list-style-type: none"> 1x eDP 1.4(onboard), up to 4K 60Hz 3x HDMI 2.0/DisplayPort 1.4, up to 4K 60Hz Triple displays with each display combinations 		
Power	DC 9~20V		
Dimension	60mm x 69.6mm		
Form Factor	DDR4 SODIMM Connector Compatible		
Operating Environment	<ul style="list-style-type: none"> Temperature: 0 ~ 60 °C Humidity: 0%~80% 		
Certificate	FCC, CE, UKCA, RoHS, KC, Safety		

Carrier boards for LattePanda Mu



Lite Carrier

- Wide Voltage Input
- PCIe 3.0 x4
- 3.5-inch Standard Size
- Open-source Design



Full Evaluation Carrier

- Wide Voltage Input
- Standard PCIe Slots
- Support WWAN Module
- ITX Standard Size



AGV Controller Carrier

- Designed by Chengdu Beaver

LattePanda Mu Micro x86 Compute Module



- Intel N100 / Core i3-N305
- 8GB/16GB Memory
- 64GB Storage
- Credit Card Size



NVMe Carrier

- Designed by El-Luhb



Mini Carrier

- Designed by AlphaArea



PXIe Controller Carrier

- Designed by YMZDS

Product Specification

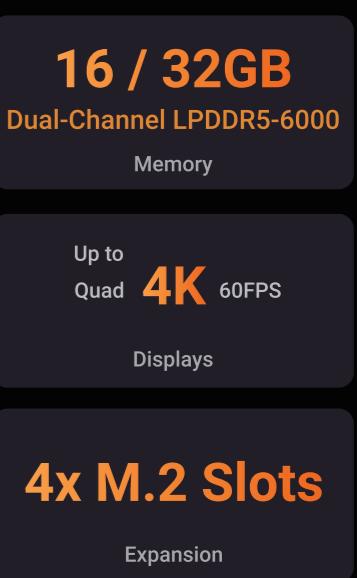
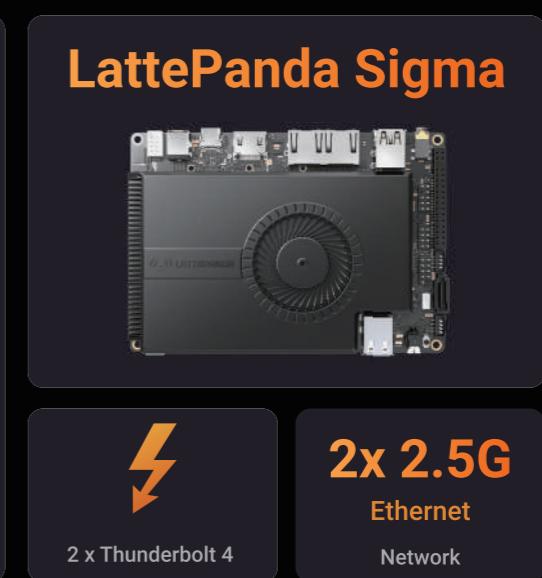
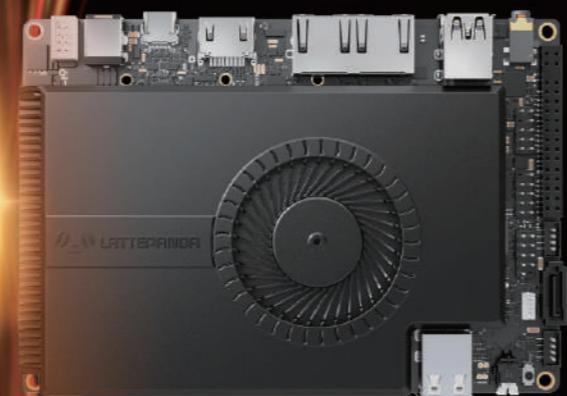
Product Name	Lite Carrier Board	Full-Function Evaluation Carrier Board
Model Number	DFR1142	DFR1141
Power Input	<ul style="list-style-type: none"> • 1x USB Type-C: 15V (Max 3A) • 1x DC 5.5x2.5mm: 12~20V (Max 10A) 	<ul style="list-style-type: none"> • 1x DC 5.5x2.5mm: 9~20V (Max 10A) • 1x DC Power 5.08mm Screw terminal plug: 9~20V (Max 15A)
Expansion Slots	<ul style="list-style-type: none"> • 1x PCIe 3.0 x4 slot (only available when using 12V power supply) • 1x M.2 M Key 2230 (PCIe 3.0 x1) • 1x M.2 E Key 2230 (PCIe 3.0 x1, USB2.0) 	<ul style="list-style-type: none"> • 1x PCIe 3.0 x1 slot • 1x PCIe 3.0 x4 slot (signal sharing with the SATA interface) • 1x M.2 E Key slot: Supports 2230 Type wireless network card (PCIe 3.0 x1, USB 2.0; signal sharing with the Ethernet port 2 (RJ45_2)) • 1x M.2 B Key slot: Supports 3042/3052 Type 4G/5G network card (USB 3.0, USB 2.0)
SATA Interface	None	<ul style="list-style-type: none"> • 2x SATA 6Gb/s interfaces • (signal sharing with the PCIe 3.0 x4 interface)
Ethernet Interface	<ul style="list-style-type: none"> • 1x Gigabit Ethernet 	<ul style="list-style-type: none"> • 2x Intel i225-V 2.5GbE Ethernet interfaces • (Ethernet port 2(RJ45_2) shares signal with the M.2 E Key interface)
Audio Interface	None	Realtek ALC269 HD audio codec
External Interfaces	<ul style="list-style-type: none"> • 2x USB 3.2 10Gbps • 2x USB 2.0 • 1x HDMI 2.0 	<ul style="list-style-type: none"> • 1x 3.5mm microphone interface • 1x 3.5mm headphone interface • 2x USB 2.0 • 4x USB 3.0 • 1x USB Type-C(supports USB 2.0, USB 3.0, DisplayPort) • 1x RS232 • 1x SIM card slot • 2x HDMI 2.0 interfaces
Pins/Jumpers/Buttons	<ul style="list-style-type: none"> • 1x RTC battery socket (CR1220 3V) • 1x CPU fan socket • 3x Gravity-4P UART • 4x Gravity-4P I2C 	<ul style="list-style-type: none"> • 1x CPU fan interface (CPU_FAN) • 1x System fan interface (SYS_FAN) • 1x I2S header (I2S1) • 1x TPM header (TPM) • 1x eSPI header (ESPI_CON) • 1x Auto power-on jumper (AUTO_PWR) • 1x Temperature sensor header (TMP) • 1x USB 2.0 header (F_USB1) • 1x Front panel header (F_PANEL1) • 1x UART and I2C header (UART_I2C_1) • 1x SoC GPIO header (GPIO_1) • 1x Speaker interface (SPEAKER) • 1x HD Audio header (F_AUDIO) • 1x Function setting DIP switches (ID_SW) • 1x USB header power control jumper (F_USB_PWR) • 1x Front USB power control jumper (R_USB_PWR) • 1x PoE power header (POE_IN) • 1x Hard disk power interface (HDD_PWR1) • 1x Power input header (POE_OUT)
Dimension	3.5 inches, 146mm×102mm	ITX 170 x 170mm

Specification

LattePanda Sigma

Compact x86 Single Board Server with Mighty Power

LATTEPANDA
SIGMA



Benchmark

Intel Core i5-1340P (LattePanda Sigma)

Intel Core i9-9900K

Apple M2

AMD Ryzen 7 2700X

Core i5

8745

12000

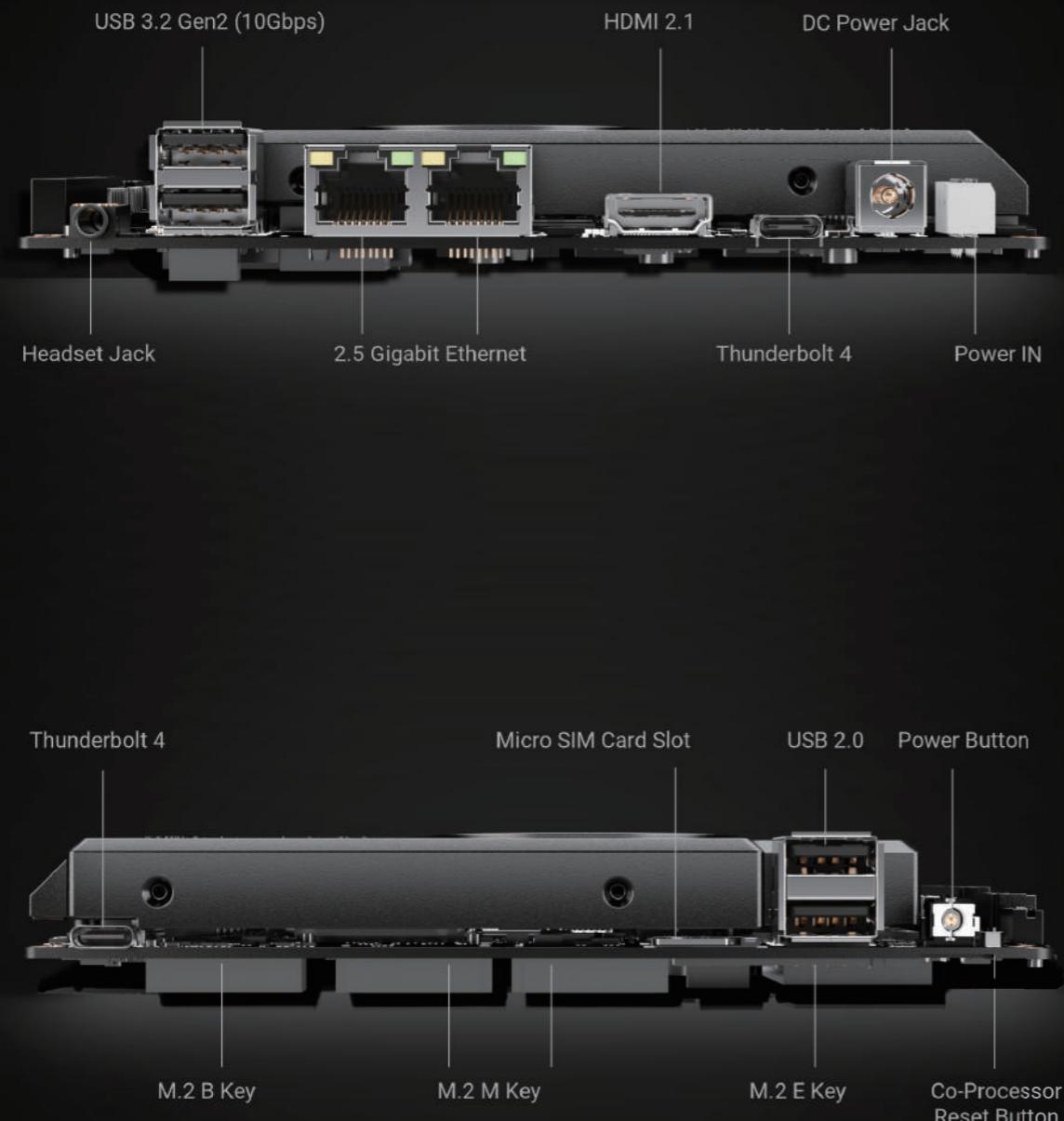
11623

9823

*Cinebench R23 Multi Core Score



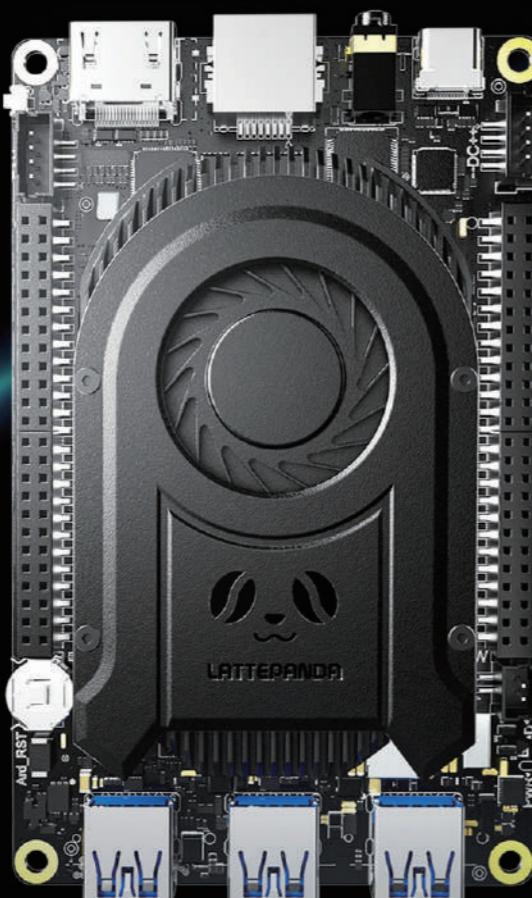
Product Specification



Product Name	LattePanda Sigma			
Model Number	DFR1080	DFR1081	DFR1090	DFR1091
Processor	CPU	Intel® Core™ i5-1340P		
	Cores / Threads	12C(4P+8E) / 16T		
	Max Turbo Frequency	4.60 GHz(Performance-core), 3.4 GHz(Efficient-core)		
	Base Power	28 W		
	Graphics	Intel® Iris® Xe Graphics		
Memory	Co-processor	Microchip® ATmega32U4-MU		
		Dual-Channel, 16GB LPDDR5-6400	Dual-Channel, 16GB LPDDR5-6400	Dual-Channel, 32GB LPDDR5-6000
	Capacity	None	500GB WD SN770 PCIe 4.0 x4 SSD	None
		None	Intel AX211 WiFi 6E Module	None
		HDMI Port	HDMI 2.1, Up to 4096 x 2304 @ 60Hz	
Display	USB Type-C Port	DP 1.4a, Up to 7680 x 4320 @ 60Hz (One Monitor)		
	eDP (Embedded Display Port)	eDP 1.4b, 4 Lanes, Up to 4096 x 2304 @ 120Hz		
	USB Type-A	2 x USB2.0 (480Mbps), 2 x USB3.2 Gen 2 (10Gbps)		
	USB Type-C	2 x Thunderbolt™ 4 (40Gbps)		
	HDMI	HDMI 2.1		
External I/O	Ethernet	2 x 2.5GbE RJ45 Ports		
	Power	5.5mm x 2.5mm DC Jack		
	Audio	3.5mm Microphone Headphone Combo Connector		
	Sim Card	Micro Sim Card Slot		
		2.0mm Pitch 4-Pin Connector, 480Mbps		
Internal I/O	Fan	1.27mm Pitch,12V 4-Wire Fan Connector, PWM Control		
	SATA	SATA 6 Gbps Data Connector, 2.0mm Pitch 4-Pin Power Connector		
	Front Panel	2.54mm Pitch 9-Pin Header, Supports Power, Reset, Power LED, HDD LED		
	Front Audio Panel	2.54mm Pitch 9-Pin Header, Supports High Definition Audio (HD), Line-Out, Mic-in		
	COM	2.54mm Pitch 9-Pin Header,Supports RS232, RS485		
Expansion Slot	GPIO	2.54mm Pitch 34-Pin Header, Including ATmega32U4 I/O Pins, 5V Power Pins, S0/S3/S4 State Pins		
	eDP	0.5mm Pitch 40-Pin Connector, 4 Lanes		
	M.2 M Key	Type 2280, Supports PCIe 3.0 x4 Type 2280, Supports PCIe 4.0 x4		
	M.2 B Key	Type 2242/2252/2280, Supports SATA 6Gbps/PCIe 3.0 x1, USB2.0, USB3.0, SIM		
	M.2 E Key	Type 2230, Supports PCIe 3.0 x1,USB2.0, Intel CNVio		
Security	TPM	Processor's Built-in TPM (2.0)		
	Power Input	5.5mm x 2.5mm DC Jack: DC 12~20V USB Type C: PD 20W		
	Attached Power Adapter	19V DC, 4.74A, 90W		
Operating System	RTC Battery	CR1220 Battery Holder: 3V		
	Microsoft Windows	Windows 10, Windows 11		
Environment	Linux	Ubuntu, Promox VE, etc.		
	Operating Temperature	0~45°C		
Dimension	Relative Humidity	0%~80%RH		
	Form Factor	3.5", 146 x 102 mm		
Compliance	Certification	CE, FCC, KC, RoHS, UKCA		

LATTEPANDA DELTA 3

Pocket-sized x86 Single Board Computer



Specification

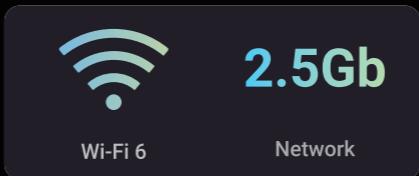


Intel® Celeron® N5105
4-core

CPU

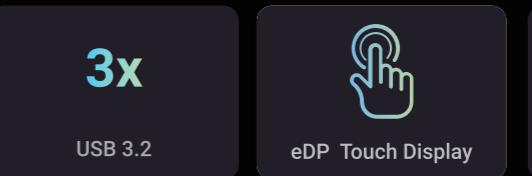


LattePanda 3 Delta



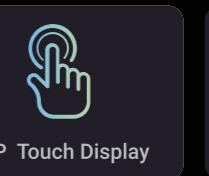
2.5Gb

Network



3x

USB 3.2



8GB 64GB

Memory Storage

Ultra-thin Thickness

M.2 M Key &
M.2 B Key Slot

Benchmark

ASUS ExpertBook P2451

LattePanda 3 Delta

Previous LattePanda Delta

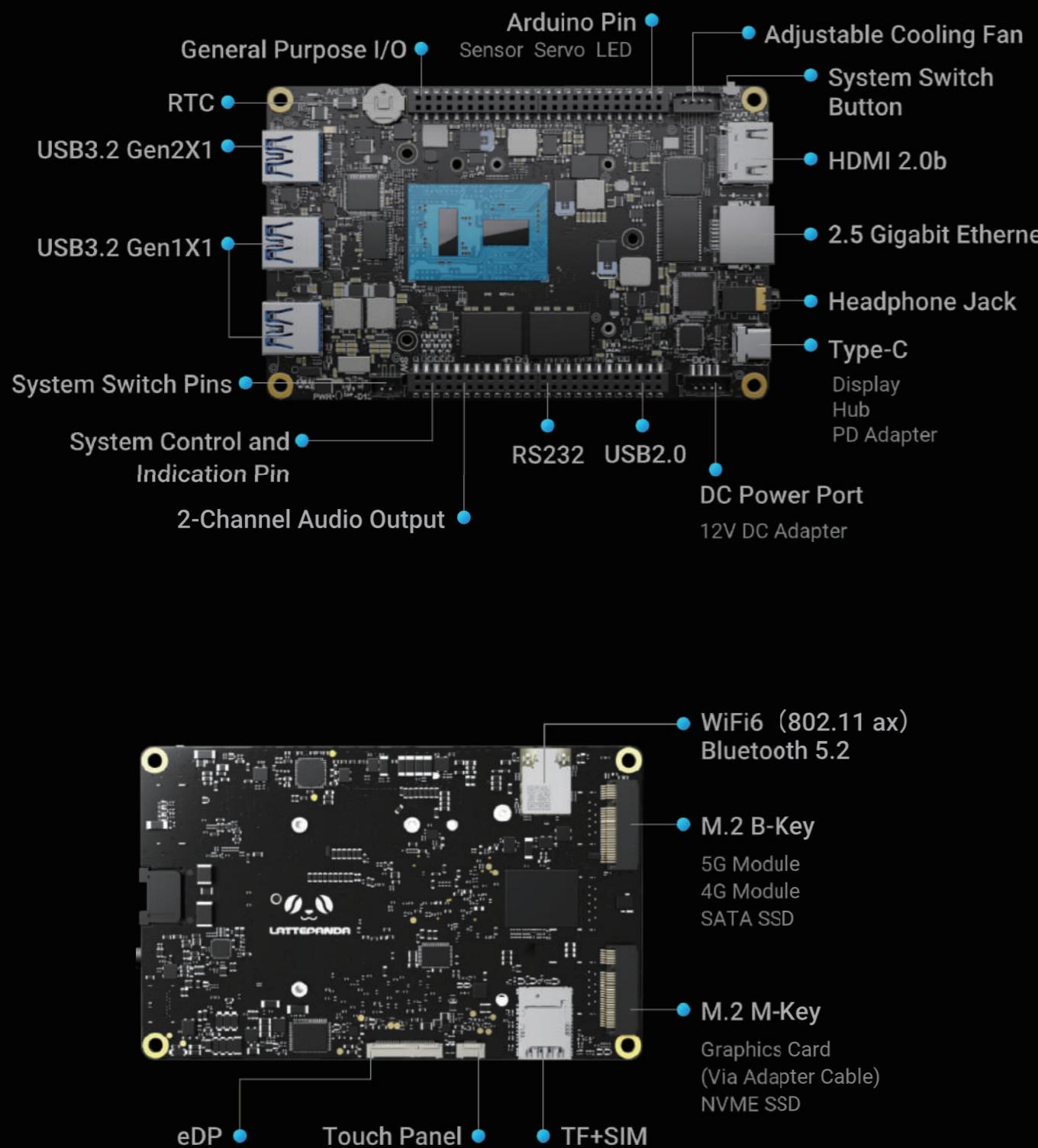
Acer A114-32-C3N0

294

793

928

370



Product Specification

Product Name	LattePanda 3 Delta	
Model Number	DFR0981	DFR0982
Processor	Intel® Celeron® Processor N5105 4-Core, 4-Thread 2.9 GHz Max Turbo Frequency 10W TDP	Intel® UHD Graphics 800MHz Max Dynamic Frequency 24 Execution Units
Graphics		
Memory	8GB LPDDR4 2933MT/s	
Storage	64GB eMMC	
Wireless	Intel® AX201 WiFi 6 (802.11ax), 2.4GHz and 5GHz (160MHz) Bluetooth® 5.2	
Ethernet	Intel® I225-V PCIe Gigabit LAN (Wake-On-LAN)	
Video	HDMI 2.0b, up to 4K 60Hz DP 1.4 via USB Type-C, up to 4K 60Hz eDP 30Pin (two lanes), up to 1080P 60Hz	
Audio	3.5mm Microphone & Headphone Combo Connector	
USB	1x USB 3.2 Gen1 10Gbps Type-A 2x USB 3.2 Gen1 5Gbps Type-A	
Expansion Slots	M.2 Key B(2242/2252/2280): SATA 6 Gbps, USB2.0, USB3.0, SIM; M.2 Key M(2280): PCIe 3.0 x2; Micro-SD & Micro-SIM Combo Card Connector	
Coprocessor	Microchip® ATmega32U4-MU	
GPIO Female Headers	Atmega32U4 Pinout BIOS Flash Pinout 5V & 3.3V Output 12V DC Input USB 2.0 RS232 Audio Status Control & Indication	
TPM	Built-in TPM (2.0)	
Power	PH2.0-4Pin Input: 12V DC USB Type-C PD Input: 15V DC	
RTC	CR927 3V	
Dimension	125mm x 78mm x16mm	
Default Built-in OS	Windows 10 Pro	Windows 10 IoT Enterprise 2021 LTSC
Compatible OS	Windows 10, Windows 11, Ubuntu	
Environment	Operating Temperature: 0~60°C Relative Humidity: 0%~80%	
Certification	CE, FCC, KC, RoHS	

Specification



Intel® Atom® x5-Z8350

4
Core

4
Thread

up to
1.92
GHz

CPU



Wi-Fi 4



MIPI Touch Display

2 / 4GB

Memory

32 / 64GB

Storage

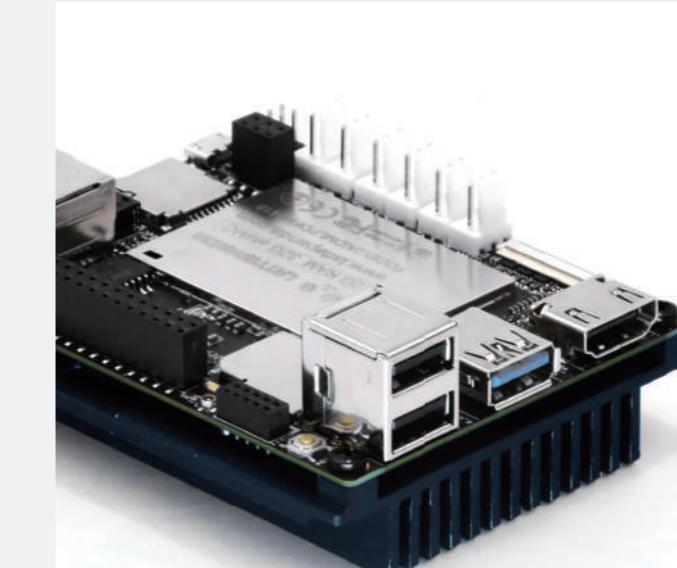
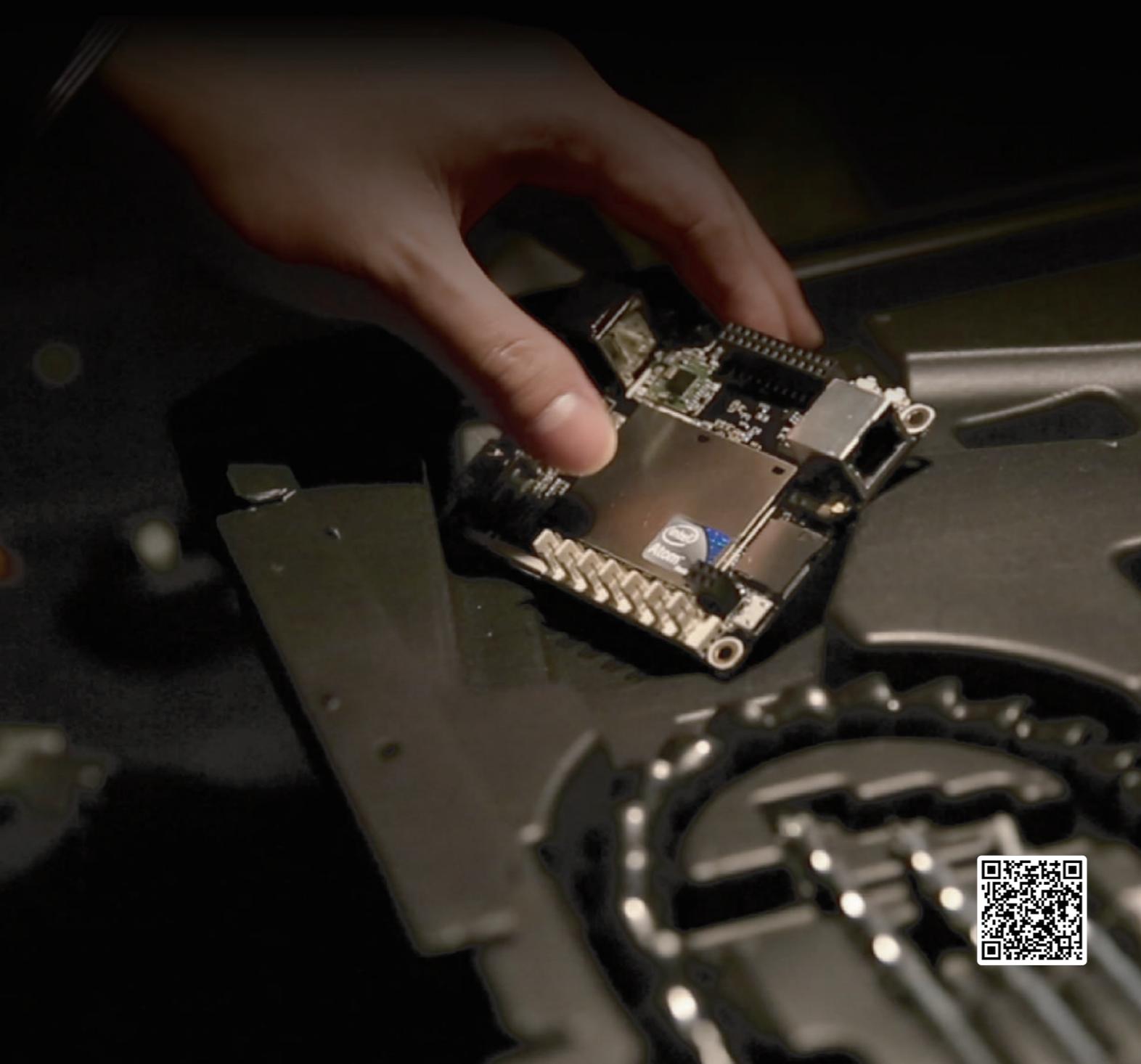
Fanless
2W TDP

Low Power Consumption



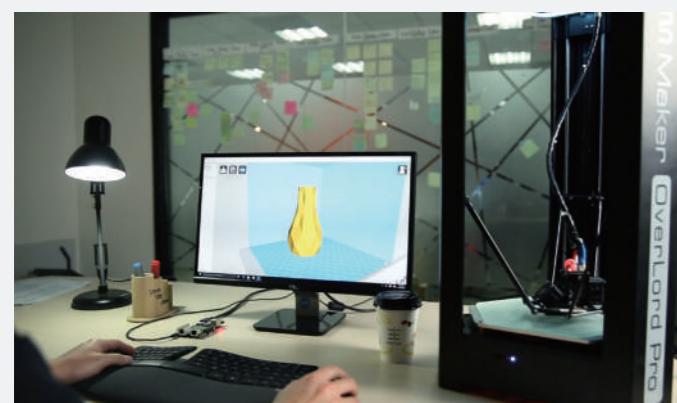
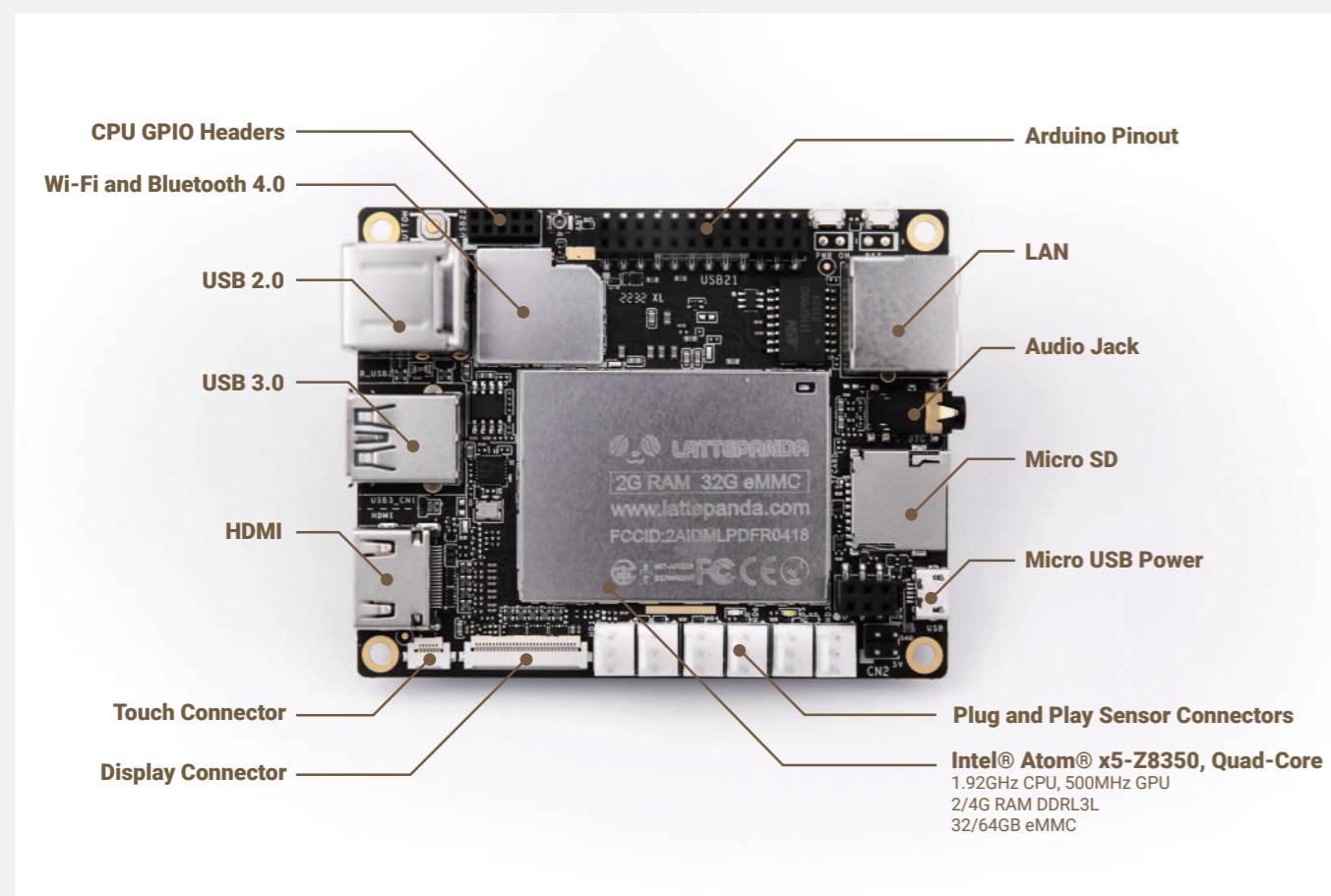
LATTEPANDA V1

Micro x86 Single Board Computer



Fanless Design
Passive Cooling

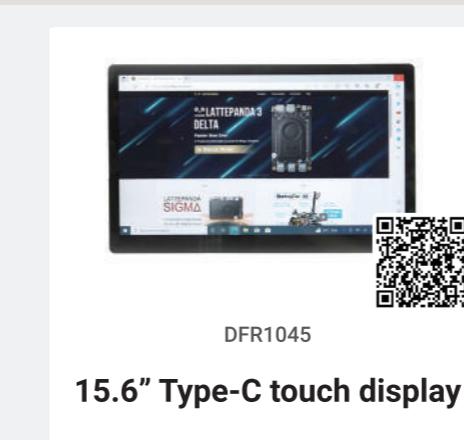
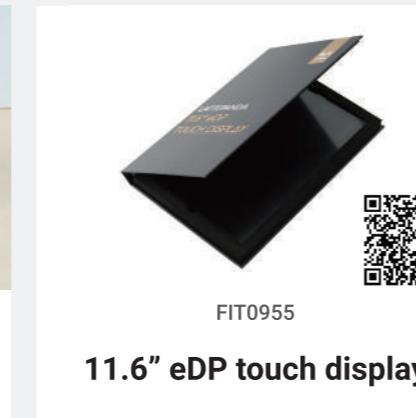
Product Specification



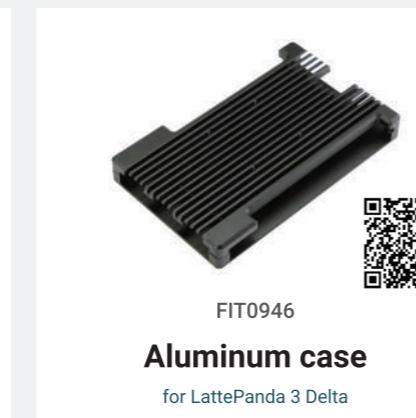
Product Name	LattePanda V1			
	LattePanda V1 2GB/32GB	LattePanda V1 2GB/32GB (Windows Home License)	LattePanda V1 4GB/64GB	LattePanda V1 4GB/64GB (Windows Enterprise License)
Model	DFR0444	DFR0418	DFR0419	DFR0470-ENT
Processor	Intel® Atom® x5-Z8350 Processor 4-Core, 4-Thread 1.92 GHz Max Turbo Frequency 2W TDP			
Graphics	Intel® HD Graphics 500MHz Max Dynamic Frequency			
Memory	2GB DDR3L	2GB DDR3L	4GB DDR3L	4GB DDR3L
Storage	32GB eMMC	32GB eMMC	64GB eMMC	64GB eMMC
Default Built-in OS	Windows 10 Home	Windows 10 Home with License	Windows 10 Home	Windows 10 Enterprise LTSB with License
Co-processor	Microchip® ATmega32U4-MU			
USB	2x USB2.0 ports 1x USB3.0 port			
Ethernet	100Mbps Ethernet LAN			
Wireless	Wi-Fi 802.11n 2.4G Bluetooth 4.0			
Video	HDMI, up to 1080P 60Hz MIPI-DSI, up to 1080P 60Hz			
Audio	3.5mm Microphone & Headphone Combo Connector			
GPIO Female Headers	Intel® Processor GPIOs x 6 ATmega Processor GPIOs x 20 Gravity 3-Pin Connectors x 6			
Power	microUSB, 5V@2A 2.54mm Header Pin, 5V@2A			
Compatible OS	Windows 10, Ubuntu			
Operating Environment	Temperature: 0~60°C Relative Humidity: 0%~80%			
Dimension	88 x 70mm / 3.46 x 2.76"			
Certification	CE, FCC, KC, RoHS, TELEC			

LattePanda Accessories

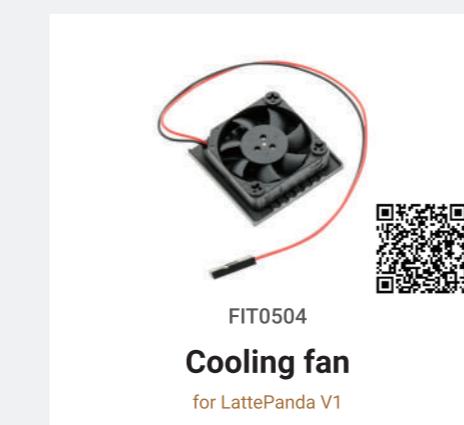
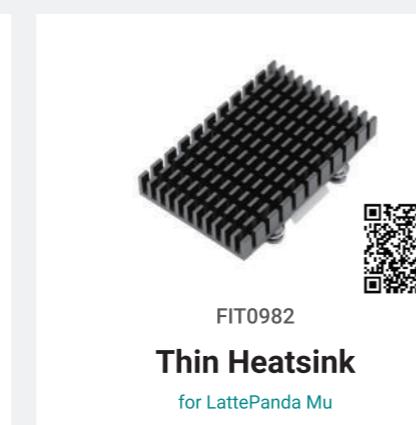
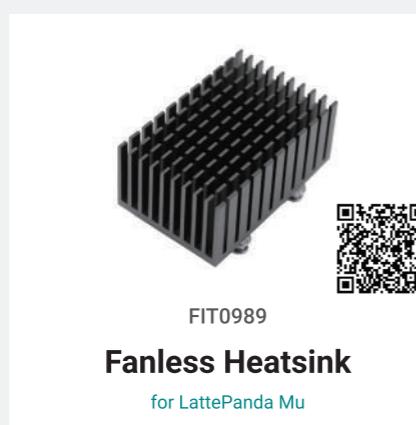
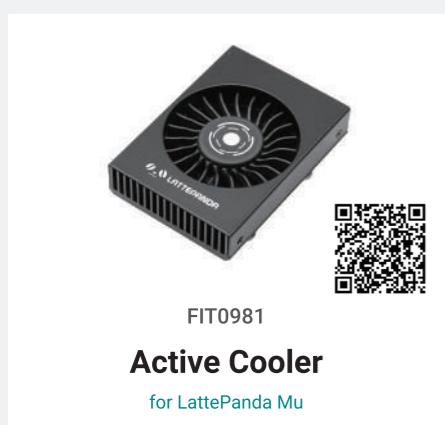
Touch Display



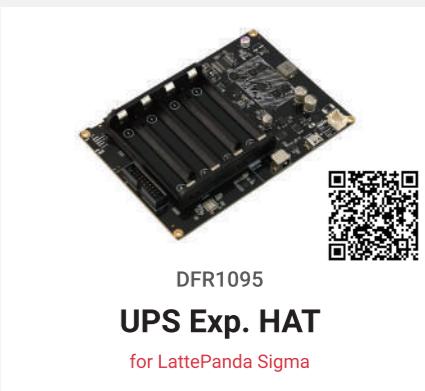
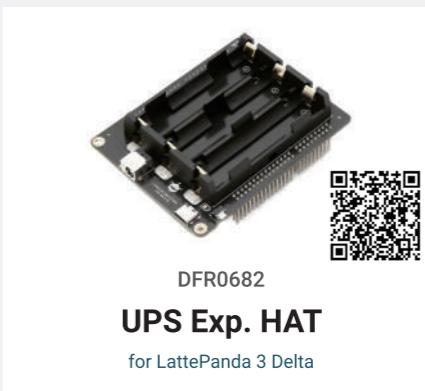
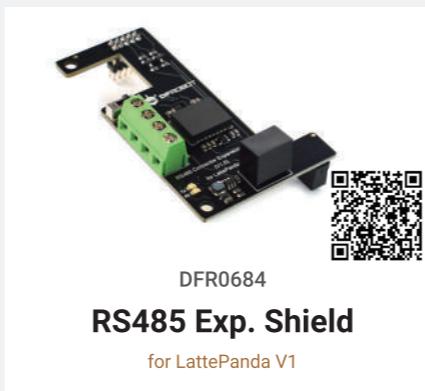
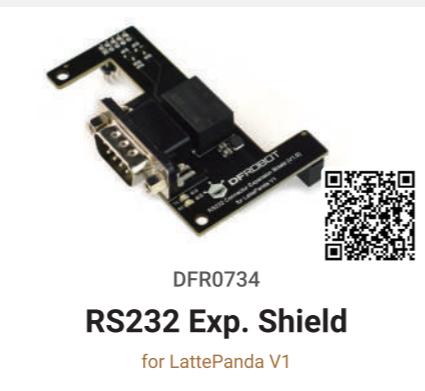
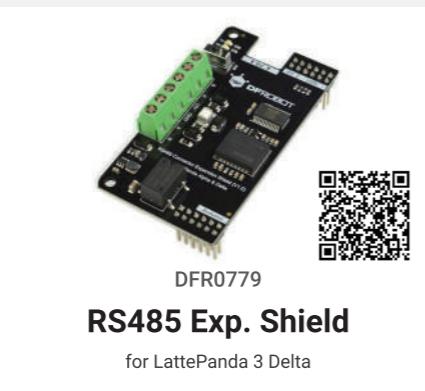
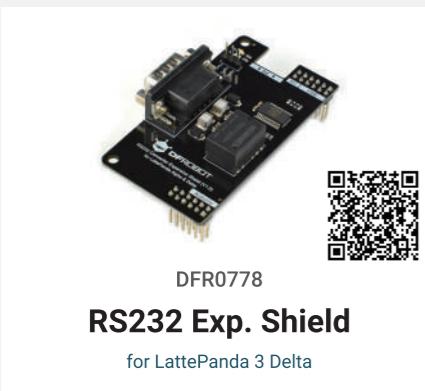
Protective Case



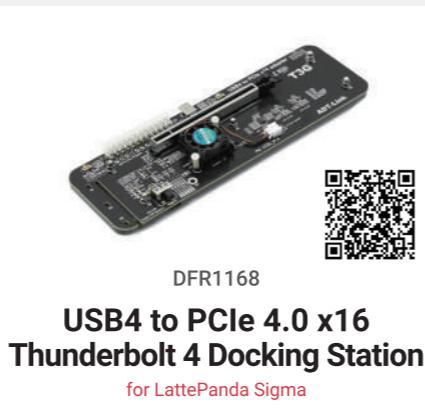
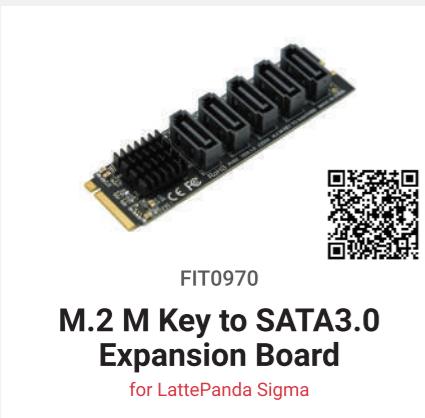
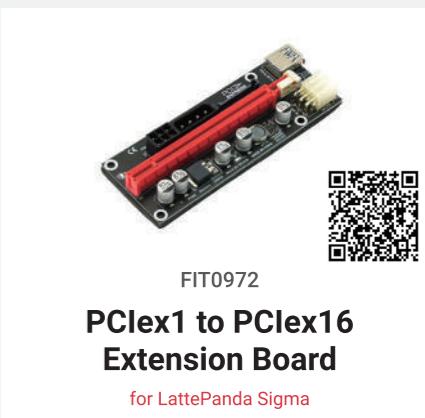
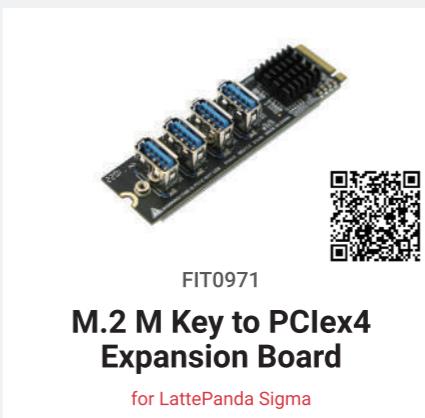
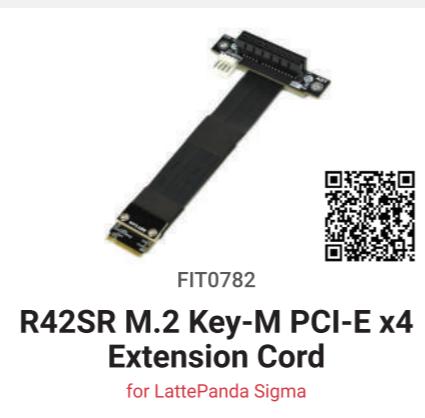
Heatsink



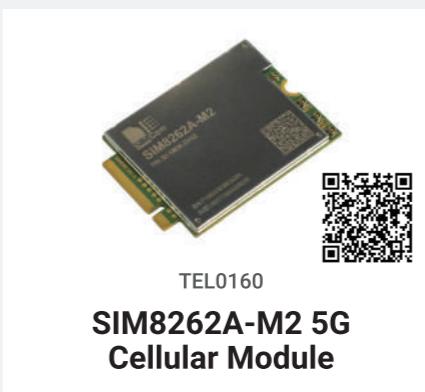
Expansion Shield



Interface Adapter



Wireless Module

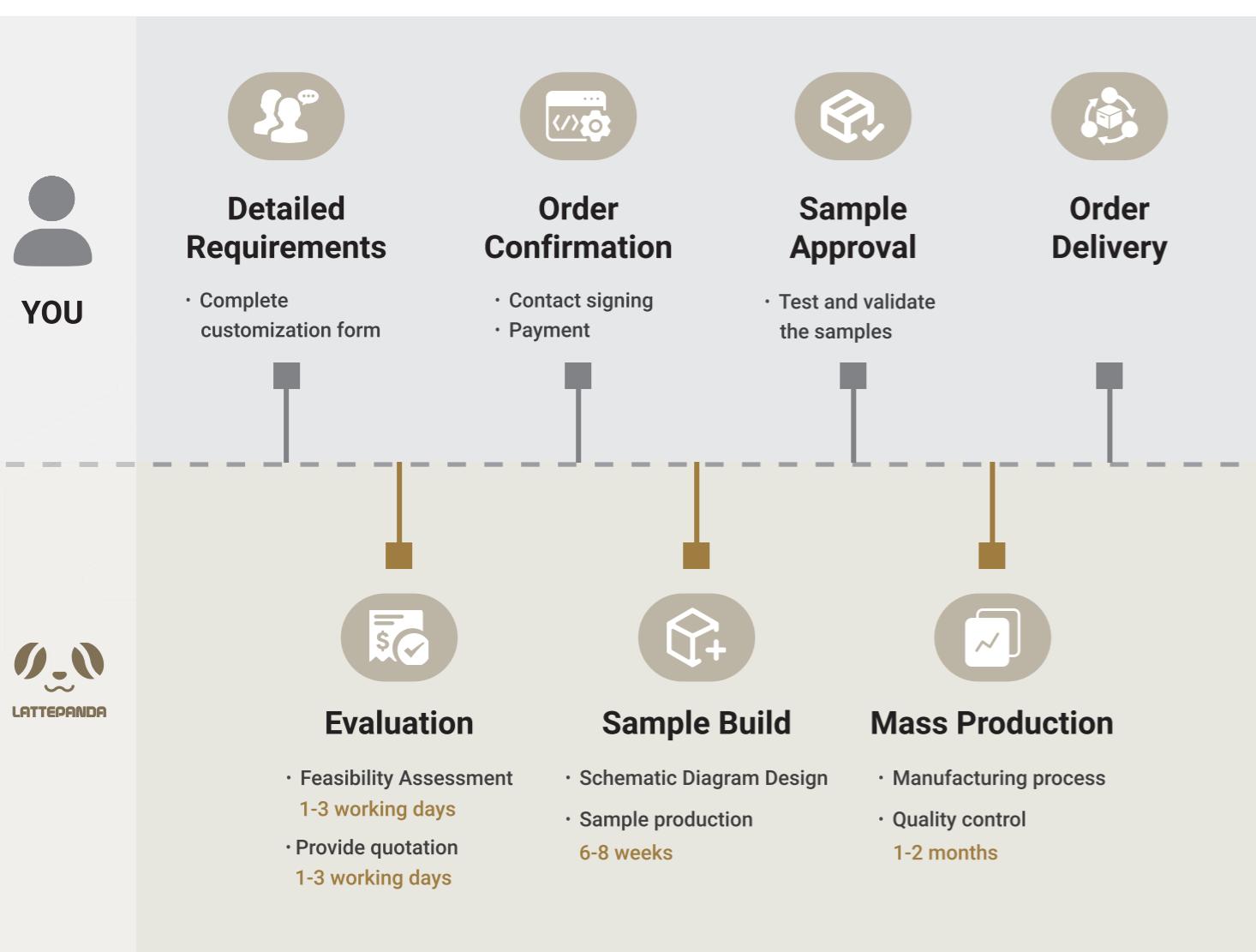


Customization Service

LattePanda Customization Service

LattePanda offers comprehensive product customization services to meet the diverse demands of our customers. We can adjust product hardware and software configurations based on specific customer requirements to ensure seamless integration with existing systems and devices. We are committed to providing flexible and efficient customized solutions to drive our customers' innovation and business success.

Customization Process



Customer Cases



Label Inspection & Verification System

In the manufacturing and logistics industries, the accuracy and quality of labels are crucial for product identification, compliance, and brand image. However, many companies face numerous challenges in the label printing process, including inefficiencies in manual inspections, fluctuations in label quality, and compliance risks. These issues not only lead to product defects and legal liabilities but also negatively impact overall production efficiency, highlighting the urgent need for an efficient, real-time solution to enhance label management and monitoring capabilities.

Advantages

- | | |
|---|--|
| <ul style="list-style-type: none"> • Real-time Monitoring • User-Friendly Interface | <ul style="list-style-type: none"> • Data Security and Integrity • Global Connectivity |
|---|--|



Applications



Pharmaceutical Industry



Food Industry



Logistics & Retail

Customer Cases

Multi-Points Dynamic Displacement All-in-One Optical Monitor

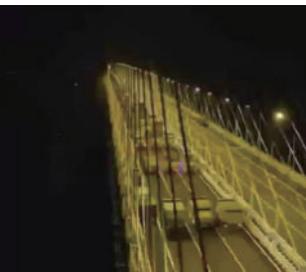
In modern industrial and scientific fields, dynamic displacement monitoring has become increasingly important. Traditional monitoring methods often rely on single measurement points, making it difficult to meet real-time data needs in complex scenarios. The Multi-Points Dynamic Displacement All-in-One Optical Monitor was developed to provide multi-point dynamic displacement monitoring, suitable for various measurement scenes, such as building monitoring, mechanical failure detection, and performance analysis.

Advantages

- Camera and computation all-in-one, up to 130Hz
- Built-in Win10 operation system, multiple external interface
- Remote control enabled
- Multi-Points 2D/3D dynamic displacement monitoring
- Real-time tracking and automatic calibration
- Camera at any shooting angle, Infrared night vision



Applications



Wind Tunnel Test

Bridge Experiment

Building Vibration

Bridge Vortex Vibration

Customer Cases

Store Robot Revolutionize Your Retail Operation

In today's highly competitive retail environment, businesses face multiple challenges such as inventory management, customer service, and operational efficiency. With rising consumer expectations, retailers need to provide fast, personalized services while maintaining accuracy and sufficiency in inventory. Traditional manual management often leads to stock shortages, lengthy customer wait times, and low employee efficiency, adversely affecting customer satisfaction and sales performance.

Advantages

- Enhanced Efficiency for Streamlined Operations
- Timely Restocking: Ensuring Shelves are Always Stocked
- Simplicity in Implementation: Effortless Installation

Applications



Transport

Scan Guide

Navigation Assistant

About LattePanda

Founded in 2015, LattePanda has become a trailblazer in compact computing solutions, empowering industrial applications with innovative hardware.

At LattePanda, we specialize in designing and manufacturing compact single board computers and compute modules. Our unwavering commitment to quality ensures long product life cycles and consistent parameters, meeting the rigorous demands of industrial users.

Beyond hardware, we've cultivated a vibrant global developer community and established robust support systems. These include professional technical assistance, comprehensive documentation, and tailored customization services, ensuring our customers have the tools they need to succeed.

Looking ahead, LattePanda remains steadfast in its mission to drive innovation through flexible and creative technology solutions. We're not just building hardware; we're shaping the future of compact computing for industrial applications worldwide.



Our Journey

2015

LattePanda was founded, and the launch of **LattePanda V1** captured the attention of developers worldwide. Its campaign was a resounding success, with **over 4,000** backers pledging more than **\$600,000** to bring the project to life.

2016

A vibrant global community was established, attracting **over 12,000** registered users. Developers actively collaborated and innovated within this ecosystem, laying the foundation for LattePanda's growing influence.



2018

LattePanda introduced the **Alpha and Delta series**, raising another **\$600,000+** through crowdfunding. The brand also expanded into industrial applications, partnering with businesses to explore new opportunities and deliver tailored solutions.

LATTEPANDA
DELTA

LATTEPANDA
ALPHA

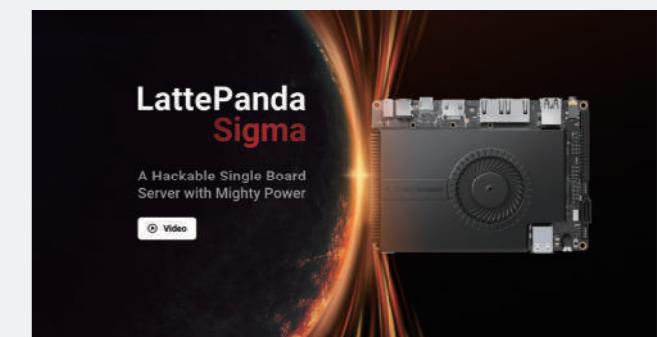
2021

The **LattePanda 3 Delta** was launched, achieving **624%** funding through crowdfunding. This marked a significant leap in performance and versatility, further solidifying LattePanda's position in both the developer and industrial markets.



2023

The groundbreaking **LattePanda Sigma** was unveiled, becoming the most powerful LattePanda board yet. Loved by users for its exceptional performance in servers, AI inference, and virtualization platforms. This set a new benchmark for the brand.



2024

The **LattePanda Mu x86 compute module** debuted as a compact and flexible solution. Praised by users with specialized needs. It further expanded LattePanda's impact in specialized industry applications.



Vibrant online community



We have multiple platforms for users to communicate and share experiences

 **LATTEPANDA®**



LattePanda Forum

3000+ Published Posts

<https://www.lattepanda.com/forum/>

 **GitHub**



GitHub

<https://github.com/LattePandaTeam>

Communicate with developers here

 **Discord**



Discord

<https://discord.gg/Rjg6w2yt8c>

Live Chat with community members

 **X**



X

<https://x.com/LattePandaCN>

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Facebook

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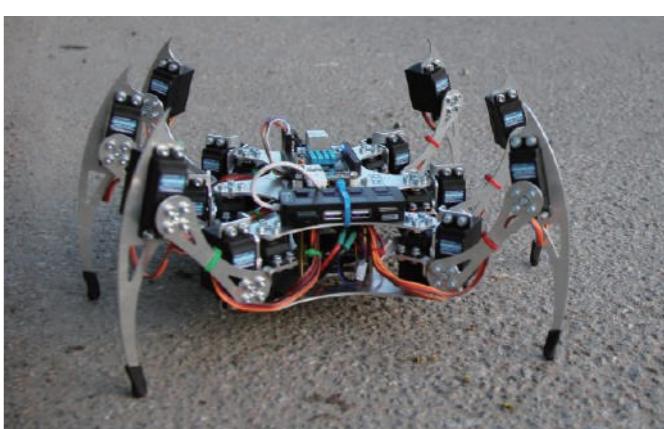
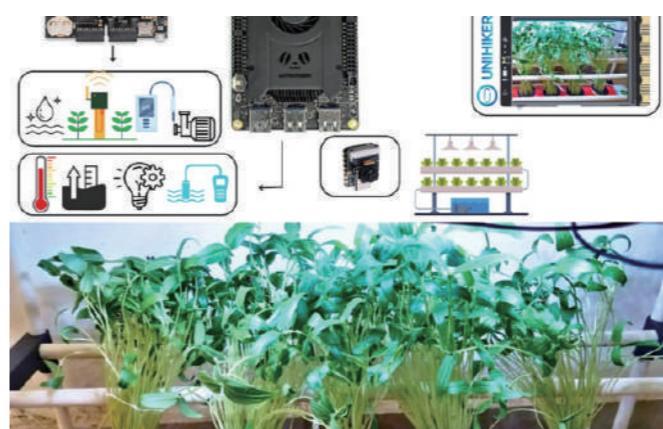
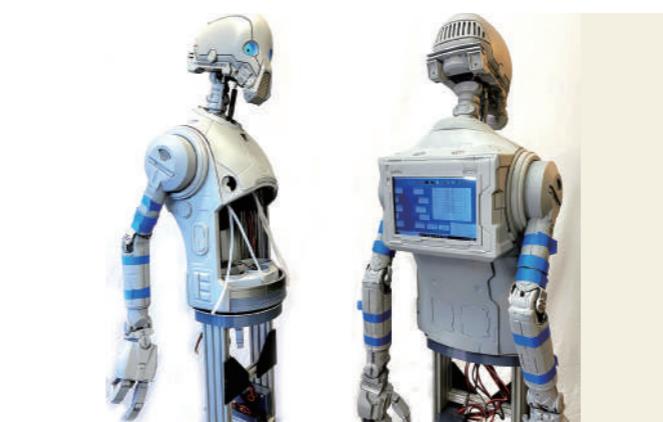
 **Youtube**



Youtube

<https://www.youtube.com/@lattepanda6547>

Check out our tutorials and video demos





Address: Room 603, 2 Boyun Road, Pudong, Shanghai | 201203 P.R.China

Email: Solution@lattepanda.com

Website: www.lattepanda.com

Forum: www.lattepanda.com/forum/

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