



Company Profile

About BIOSTAR



1986

BIOSTAR
founded



2005

VGA BU
established



2008

Taiwan
Top 20
Global Brand



2021

VALKYRIE
motherboard
introduced



2024

ESG &
ISO 14064-1
certified



Bring Solution into Reality



Publicly
listed on
TWSE

1999

IPC BU
established

2006



ISO 14001
certified

2010

AMD Radeon
VGA
introduced

2017



Nvidia AI
IPC
introduced

2025



ISO 9001



ISO 14001

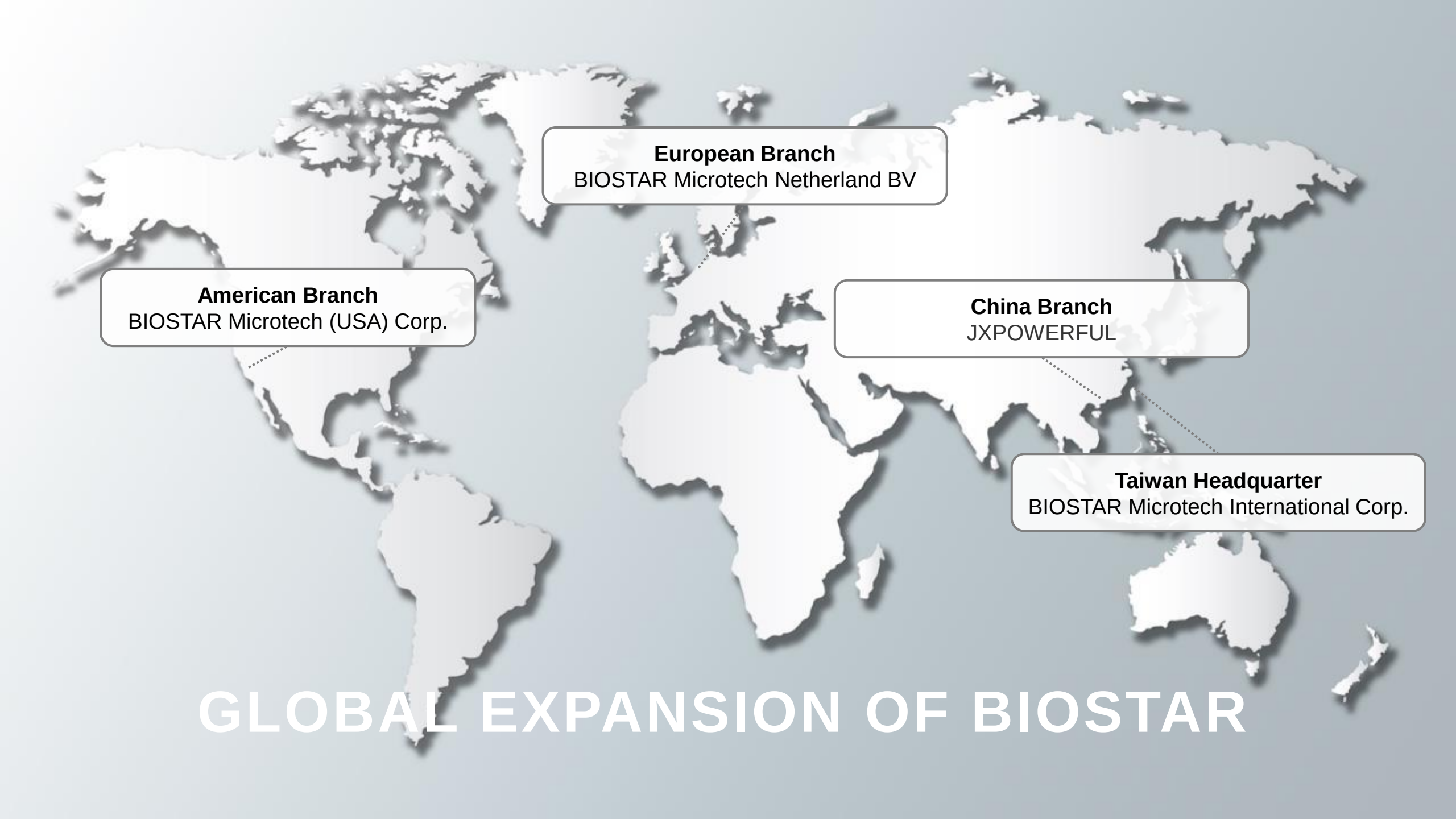


ESG



ISO 14064-1



A stylized world map in white with a drop shadow on a blue background. Four callout boxes are positioned over different continents: North America, Europe, China, and Taiwan. Each box contains the name of the branch and the company name. Dotted lines connect the boxes to their respective locations on the map.

European Branch
BIOSTAR Microtech Netherland BV

American Branch
BIOSTAR Microtech (USA) Corp.

China Branch
JXPOWERFUL

Taiwan Headquarter
BIOSTAR Microtech International Corp.

GLOBAL EXPANSION OF BIOSTAR



EV Charger



Surveillance System



Edge Computing



Smart Parking



POS



Digital Signage



Visual Analysis



KIOSK



Industrial Automation



Human Machine Interface



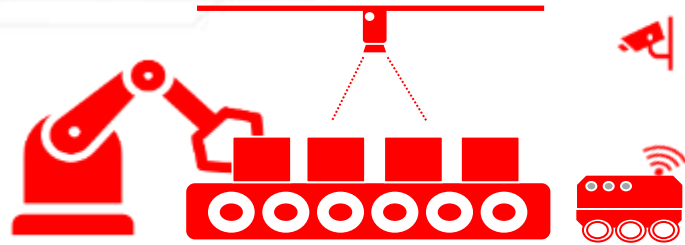
Edge AI Work Station



Smart WMS

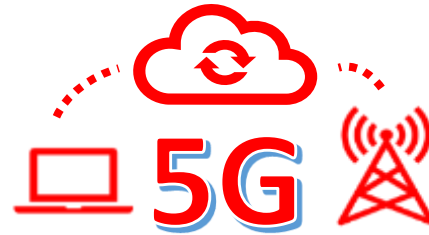


IPC Focused Markets



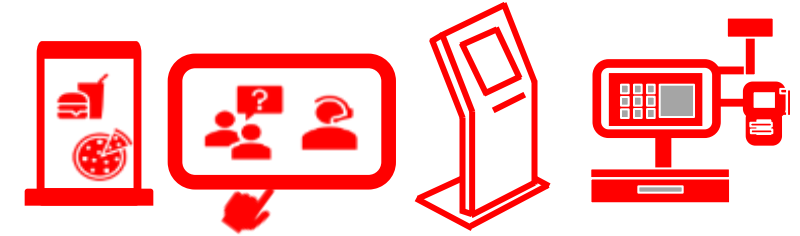
Factory Automation

- Robot Guidance Systems
- Machine Operation Terminal/ Gateway
- Security Surveillance
- Machine Vision



Smart City

- Electric Vehicle Charging
- Smart Logistics
- Smart Parking
- Agriculture automation



Smart Retail

- Outdoor Display Wall
- In-door Information Display
- Public Sectors Information Display Stand
- Tickets Vending Machine
- Self-Check in/out machine
- POS/ Self ordering kiosk

IPC MB Summary

Form Factor	Platform	Current main proposal	Feature	Upcoming	Application
ATX (305*244 mm)	Intel W680 support LGA1700 12/13/14 th / Bartlett lake-L	BIW68-AHP	4* ECC D4 U-DIMM 2*LAN,6*COM,,8*SATA,2*HDMI,1*DP, 1*VGA, 8*U3,4*U2		1. Industrial Automation 2. Industrial AI HPC 3. Security Surveillance
	Intel Q670 support LGA1700 12/13/14 th / Bartlett lake-S	BIQ67-AHP	4* D4 U-DIMM 2*LAN,6*COM,,8*SATA,2*HDMI,1*DP, 1*VGA,8*U3,4*U2		
	Intel H610 support LGA 1700 12/13/14 th / Bartlett lake-S	BIH61-AHA	4* D5 U-DIMM 2*LAN, 10*COM ,,8*SATA,2*HDMI,1*DP, 1*VGA,8*U3,4*U2	Planning	
	Intel W880 support LGA 1851 Intel® Core™ Ultra Processors	BIW88-AHS	4* ECC D5 U-DIMM 4*LAN ,6*COM,,4*SATA,1*HDMI,1*DP, 1*VGA, 10*U3,3*U2	W890(26)	
	Intel Q870 support LGA 1851 Intel® Core™ Ultra Processors	BIQ87-AHS	4* D5 U-DIMM 4*LAN ,6*COM,,4*SATA,1*HDMI,1*DP, 1*VGA,9*U3,3*U2		
Thin Mini-ITX (170*170 mm)	Intel H610 support LGA1700 12/13/14 th / Bartlett lake-S	BIH61-IHP6+	2* D4 S-DIMM 2*LAN, 4*COM ,,1*SATA,2*HDMI, 1*EDP/LVDS,1*VGA,2*U3,5*U2	Planning	1 .Kiosk 2. Panel PC 3. Industrial box PC 4. Self Ordering machine 5. Digital Signage 6. Non-Management Gate Way
	Alder Lake-N	BIADN-IHT-N97 BIADN-IHT-N305	1* D4 S-DIMM, 2*LAN, 6*COM ,,1*SATA, 2*HDMI,1*LVDS,1*USB-C,2*U3,6*U2,1*UC	Pantherlake	
	Elkhart Lake	BIELK-IHT-J6412/J6413	2* D4 S-DIMM, 2*LAN, 6*COM ,,1*SATA, 1*HDMI,1*EDP/LVDS,1*VGA,2*U3,6*U2		
3.5" SBC (148*102 mm)	Elkhart Lake	BIELK-PAT-J6412/X6413E	2* D4 S-DIMM, 2*LAN, 4*COM ,,1*SATA, 1*HDMI,1*EDP/LVDS,1*VGA,2*U3,4*U2		1. HMI 2. EV charger/ Smart Parking 3. KIOSK 4. Outdoor Panel PC 5. AIOT
	Alder Lake-N/ Amston Lake	BIAST-PAT-N97/X7433RE	1* D5 S-DIMM , 2*LAN, 4*COM ,,1*SATA, 1*HDMI,1*EDP/LVDS,1*DP,2*U3,4*U2	BIAST-PAT-N150	
	12 th - 13 th Core i Core 100U/120U	BIRPL-PAT -i3/i5 1335U	2* D5 S-DIMM , 2*LAN, 4*COM ,,1*SATA, 1*HDMI,1*EDP/LVDS,1*DP,2*USB-C,4*U3,2*U2		

IPC Board Major Items



BIW68-AHP



BIQ67-AHP



BIADN-IHT



BIAST-PAT



ERX93-AXP



BIH61-AHA



BIELK-IHT



BIRPL-PAT



RASL-D5DE

Model	Model Name	Platform	Feature	Working Temperature/Voltage	Dimension
MT series	MT-J6412	Elkhart Lake-J6412	Entry level Fanless	0 °C ~ 60°C/9~24V	196.5 x 193 x 45 mm(LxWxH)
	MT-N97	Alder Lake-N97/N305	2 x HDMI®, 1 x DP (USB Type C) with power delivery(max. 100W 20V/5A), 1*COM, 6*USB, 2*LAN	0 °C ~ 60°C/9~24V	
MT Pro	MT PRO-J6412	Elkhart Lake-J6412	1 x HDMI®, 1 x VGA, 6*COM, 6*USB, 2*LAN	-20 °C ~ 60°C/9~24V	200 x 182 x 50 mm(LxWxH)
	MT PRO-N97	Alder Lake-N97/N305	2 x HDMI®, 1 x USB-C, 6*COM, 6*USB, 2*LAN	-20 °C ~ 60°C/9~24V	
MS Series	MS-1335U	Raptorlake 12 th - 13 th Core i Core 100U/120U	4*COM, 1 x HDMI®, 1 x DP, 2*USB-C, 6*USB	0 °C ~ 60°C/9~24V	182 x 150 x 48.5 mm(LxWxH)
	MS-N97	Alder Lake-N97/N305	4*COM, 1 x HDMI®, 1 x DP, 6*USB	0 °C ~ 60°C/9~24V	160 x 130 x 50 mm(LxWxH)
	MS-X7433RE	Alder Lake-x7433RE	4*COM, 1 x HDMI®, 1 x DP, 6*USB	-40 °C ~ 60°C/9~24V	
	MS-J6412	Elkhart Lake-J6412	4*COM, 1 x HDMI®, 1 x GA, 6*USB	0 °C ~ 60°C/9~24V	
	MS-X6413E	Elkhart Lake-X6413E	4*COM, 1 x HDMI®, 1 x GA, 6*USB	-40 °C ~ 60°C/9~24V	
Nvidia	MS-NANO 4G/8G	NVIDIA Jetson ORIN NXP i.MX93	AI-NONAS1/ AI-NONXSP	-20~50 °C/12V~20V	160 x 102 x 80 mm(LxWxH)
	MS-NANX 8G/16G	NVIDIA Jetson ORIN NXP i.MX93	AI-NONAS1/ AI-NONXSP	-20~50 °C/12V~20V	

Edgecom box pc



MT-J6412/N97



MT Pro-J6412/N97



MS-NANO 4G/8G



MS-J6412/N97



MS-1335U



POS/ Panel PC- BP1500/1501



Model Name	BP1500	BP1501
Processor	Intel® Alder Lake-N N97/	Intel i5-1335U/i3-1315U
Chipset	Intel® Integrated	
Graphics	Intel® UHD Graphics	Intel® Iris® Xe Graphics
Memory	1 x DDR4 3200Mhz SO-DIMM, up to 16 GB	1 x DDR5 4800Mhz SO-DIMM, up to 32 GB
Storage	1 x M.2 key M (2280) PCIe2 1 x M.2 key M (2242) SATAIII	1 x M.2 key M (2280) PCIe4 1 x M.2 key M (2242)) PCIe4 RAID 0/1 Support
Display Panel	15” TFT LCD (LED backlight) / eDP	
Display Panel Resolution	1024 x 768	
Touch Panel	15" Projected Capacitive Touch	
Display Port	1 x HDMI (3840 x 2160 @30Hz)	
Cash Drawer Port	1 x RJ11 (Default 24V, 12V/24V change with jumper)	
Serial Ports	4 x RJ50 ports for RS232 COM (Defaul 0V, Support 5V/12V change by BIOS)	
USB	2 x USB 2.0/4 x USB 3.0	
Ethernet	1 x RTL8111H-CG GbE LAN	
Audio Port	1 x Audio Jack	
DC Jack	1 x DC-IN 12V	
Speaker	2 x 2W/4Ω	
TPM2.0	TPM2.0 on board	
Power Supply	12V/5A 60W adapter	12V/8A 96W adapter
Dimension (LxWxH)	358.45 x 223.5 x 420 mm	
Operating Temperature	0°C ~ 40°C Humidity: 5% ~ 90%	
EMC / Safety	CE / LVD / FCC / BSMI	
OS Support	WIN10 IoT 22H2/Linux Ubuntu 22.04	



EMPOWER YOUR SOLUTION

By BIOSTAR INSIDE

Biostar Inside – Parking Kiosk

- ATX MB: W680/ Q670/ H610(8*USB,10*COM)



Biostar Inside – Self Ordering Kiosk

- Mini-ITX MB: BIELK-IHT-J6412
- 3.5" SBC: BIRPL-PAT Core i5-1235U /BIADN-IHT-N305/N97
- 3.5" SBC: BIRPL-PAT Core i5-1235U /i5-1335U



Biostar Inside – Stainless Panel PC/POS

- 3.5" SBC:
BIRPL-PAT Core i5-1335U
BIELK-PAT-J6412-X6413E
BIAS-PAT-N97-X7433RE



Biostar Inside – Electric Vehicle Charging

- ERX93-AXP



Biostar Inside – Self-Checkout Kiosk

- MS-J6412/ N97/ 12th~13th
Core i3/5/7 U series
- Reason :operating stably
with compact size.



Biostar Inside – Vending Machine

- MTPRO-J6412/ N97
- Reason :equipped with 6 COM ports



Biostar Inside – Self-service ID photo KIOSK

- MTPRO-J6412/ N97
- Reason :equipped with 6 COM ports



Biostar Inside – Gas Station

- MTPRO-J6412/ N97
- Reason :equipped with 6 COM ports



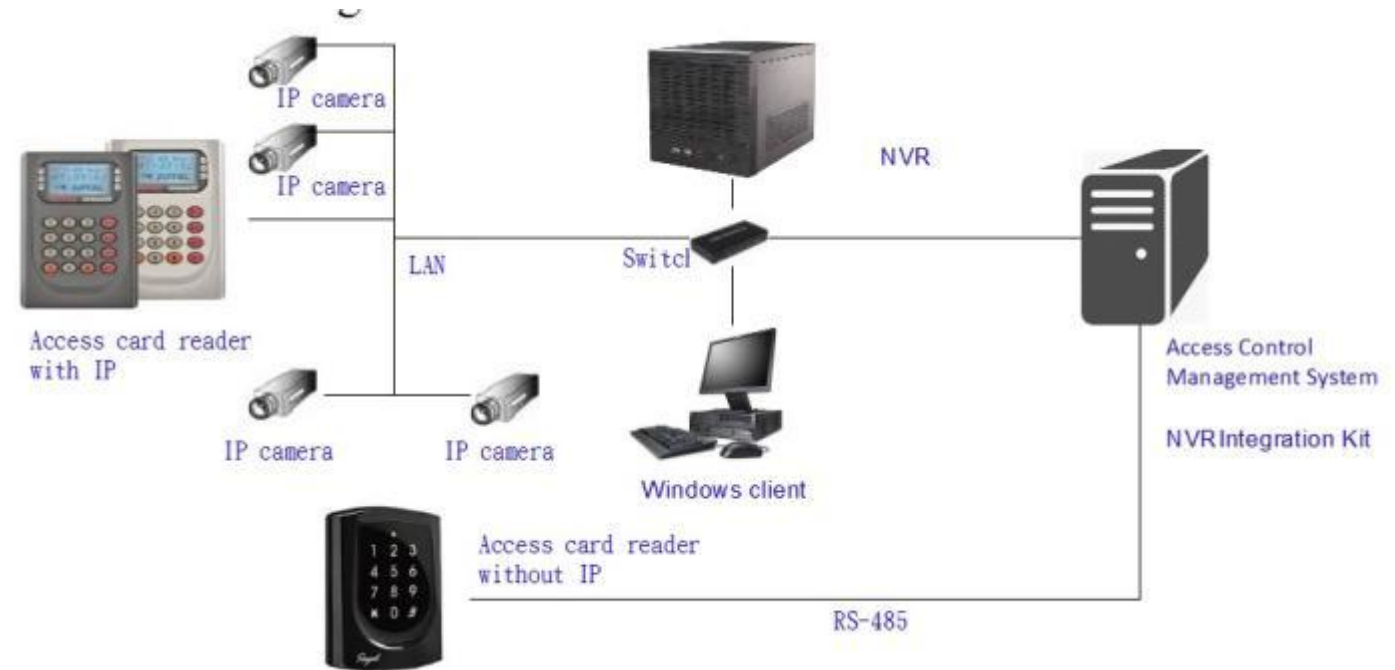
Biostar Inside – Hospital broadcasting system

- MS-1335U / MT-J6412
- Compact Size with COM ports



Biostar Inside – Surveillance NVR

•BIQ67-AHP / MS-J6412



Biostar Inside – Industrial HPC

- ATX MB: W680/ Q670/ H610



Biostar Inside – Point of Sale

- Customized M/B: N97 / 12th ~14th Core i3/i5/i7



Why BIOSTAR?

Excellent R&D Team

Built to order & short developing lead time

Gold Partner with Major Suppliers

Intel, and AMD direct account with up-to-date support

Excellent C/P value

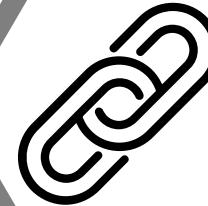
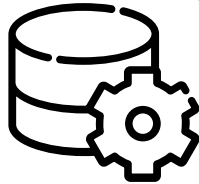
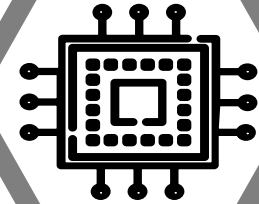
Good quality with the balance of cost and performance

Excellent Services

- Dedicated FAE support
- BIOS customization
- Strong financial support

Flexible Logistic Control

Inventory for on-time delivery





BIOSTAR

Your reliable partner

URL: [Biostar](https://www.biostar.com)



[E-Catalogue](#)

Appendix

Edge Computing system



Variety of
Applications

-45 ~85°C
Operation Temp



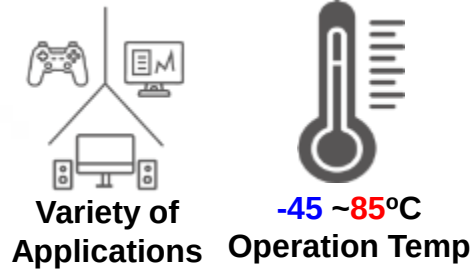
Digital Signage



/ KIOSK

MS-J6412/ MS-X6413E	
Processor Options	Intel® Elkhart Lake J6412/ X6413E (wide range: temperature: X6413E only)
System Memory	DDR4 3200Mhz SO-DIMM, up to 32GB
USB	2 x USB3.2 4 x USB2.0
Expansion Slot	1 x Full size Mini-PCI-E for WIFI/BT 1 x M.2 (key B, 3042/3052) for 3G/4G/5G w/ SIM slot 1 x M.2 (Key M 2242/2280) for PCI-E storage
Storage Expansion	1 x SATAIII for 2.5 inch SSD
Networking Ethernet	2 x 2.5G LAN(Intel I226)
Serial Interface	2 x RS232/422/485 (COM1/COM2) 2 x RS232 (COM3/COM4)
Graphics	1 x HDMI 1 x VGA (opt., not support Wide Temp)
Edge IO	1 x DC 9~24V Jack 1 x HDMI 1 x VGA (opt., not support Wide Temp) 2x USB3.2 2xUSB2.0 2 x RJ45 (2.5G) 4 x COM DB9 1 x Power Key
Dimension (LxWxH)	160 x 130 x 50 mm
Net Weight	1 kg
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90% (Wide Range Temperature -40°C ~ 85°C Humidity : 10% ~ 90% by function option)
OS Support	Windows 10 LTSC Linux Ubuntu 20.04

Edge Computing system



Digital Signage



Edge AI

MS-RPL	
Processor Options	Intel 13 th Raptor Lake-U series CPU (i3-1315U/1315URE) (i5-1335U/1345URE) (wide range: temperature: URE series only)
System Memory	DDR5 4800Mhz SO-DIMM, up to 64GB
USB	4 x USB3.2 (2 Type A + 2 Type C) 2 x USB2.0
Expansion Slot	1 x M.2 (key B, 3042/3052) for 3G/4G/5G w/ SIM slot 1 x M.2 (Key M 2242/2280) for PCI-E storage 1x M.2 Key E for WIFI/BT
Storage Expansion	1 x SATAIII for 2.5 inch HDD/1x M.2 (Key M 2242/2280)
Networking Ethernet	2 x 2.5G LAN(Intel I226)
Serial Interface	3 x RS232/422/485 (COM1/COM2) 1 x RS232 (COM3/COM4)
Graphics	1 x HDMI2.0 1x DP 2x DP Type C
Edge IO	1 x DC 9~24V Jack 1 x HDMI 2x Type C w/ USB3.2 + DP 2 x USB3.2 2 x USB2.0 2 x RJ45 (2.5G) 4x COM DP9 1 x Power Key
Dimension (LxWxH)	182 x 150 x 45 mm
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90% (Wide Range Temperature -40°C ~ 85°C Humidity : 10% ~ 90% by function option)
OS Support	Windows 10 LTSC Linux Ubuntu 20.04

Edge Computing system



Digital Signage

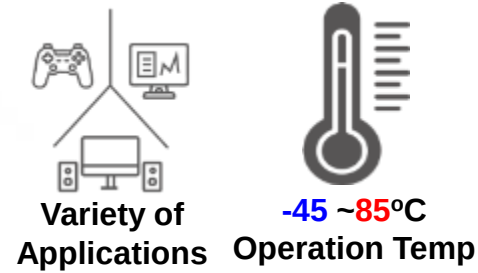


KIOSK

MT-J6412	
Processor Options	Intel® Elkhart Lake J6412 (QC, TDP 10W)
System Memory	DDR4 3200Mhz SO-DIMM, up to 32GB
USB	2 x USB3.0 4 x USB2.0
Expansion Slot	1 x Full size Mini PCI-E for SATA Storage 1 x M.2 (key B 2242/3042/3052) for 3G/4G/5G w/ SIM slot 1 x PCIe x4 Slot with PCIe2 Signal
Storage Expansion	1 x SATAIII for 2.5 inch HDD
Networking Ethernet	2 x GbE LAN (RTL8111H)
Serial Interface	1 x RS232/422/485 1 x RS232 (Option)
Graphics	1 x HDMI 1 x VGA
Edge IO	1 x DC 9~24V Jack 1 x HDMI 1 x VGA 2 x RJ45 (GbE) 1 x Audio Jack (Line-out) 1 x Earphone & MIC Jack 1 x Power Key
Dimension (LxWxH)	196.5 x 193 x 45 mm
Net Weight	1.15 kg
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Linux Ubuntu 20.04



Edge Computing system



Smart Retail

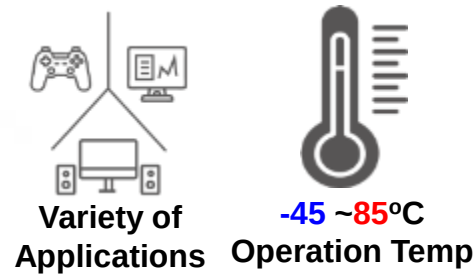


Smart City

Model Name	EdgeComp MS-N97
Processor Options	Intel Alder Lake N
Chipset	Intel® N97 (4core, up to 3.6GHz, TDP 12W)
Graphic	Intel® UHD Graphics
Display	1 x HDMI 1 x DP++ 1.4
Memory	1 x DDR5 4800MHz SO-DIMM, up to 16GB
Expansion Slots	1 x Mini-PCIe slot for WIFI/BT module 1 x M.2 key B type 3042/3052 for SIM card slot
Storage	1 x SATAIII 1 x M.2 M Key type 2242/2280 for NVMe/ SATA storage
Serial Ports	2 x RS232/422/485 (COM1/COM2) 2 x RS232 (COM3/COM4)
USB	2 x USB 3.0 4 x USB 2.0
Ethernet	2 x 2.5GbE LAN (Intel I226V)
Audio	ALC897
External I/O	1 x HDMI 2.0. 1 x DP 1.4 2 x RJ45 (2.5GbE). 2 x USB 3.2 Gen1. 4 x USB 2.0. 1 x Power LED / 1 x HDD LED. 1 x Power Key. 1 x DC 9~24V Jack.
Dimension (LxWxH)	160 x 130 x 50 mm
Net Weight (kg)	1.06kg
Operating Temperature	0°C ~ 50°C Humidity: 5% ~ 90%
OS Support	Windows 10/11 64bit Windows 10 IoT Enterprise 21H2 Windows11 IoT Enterprise 24H2 Linux Ubuntu 22.04



Edge Computing system



Industrial Automation



Smart City

Model Name	EdgeComp MS-X7433RE
Processor Options	Intel Amston Lake
Chipset	Intel Atom™ X7433RE (4core, up to 3.4GHz, TDP 9W)
Graphic	Intel® UHD Graphics
Display	1 x HDMI 1 x DP++ 1.4
Memory	1 x DDR5 4800MHz SO-DIMM, up to 16GB
Expansion Slots	1 x Mini-PCle slot for WIFI/BT module 1 x M.2 key B type 3042/3052 for SIM card slot
Storage	1 x SATAIII 1 x M.2 M Key type 2242/2280 for NVMe/ SATA storage
Serial Ports	2 x RS232/422/485 (COM1/COM2) 2 x RS232 (COM3/COM4)
USB	2 x USB 3.0 4 x USB 2.0
Ethernet	2 x 2.5GbE LAN (Intel I226-IT)
Audio	ALC897
External I/O	1 x HDMI 2.0. 1 x DP 1.4 2 x RJ45 (2.5GbE). 2 x USB 3.2 Gen1. 4 x USB 2.0. 1 x Power LED / 1 x HDD LED. 1 x Power Key. 1 x DC 9~24V Jack.
Dimension (LxWxH)	160 x 130 x 50 mm
Net Weight (kg)	1.06kg
Operating Temperature	-40℃ ~ 60℃ Humidity: 5% ~ 90%
OS Support	Windows 10/11 64bit Windows 10 IoT Enterprise 21H2 Windows11 IoT Enterprise 24H2 Linux Ubuntu 22.04



Edge Computing system

Variety of Applications

9~24V



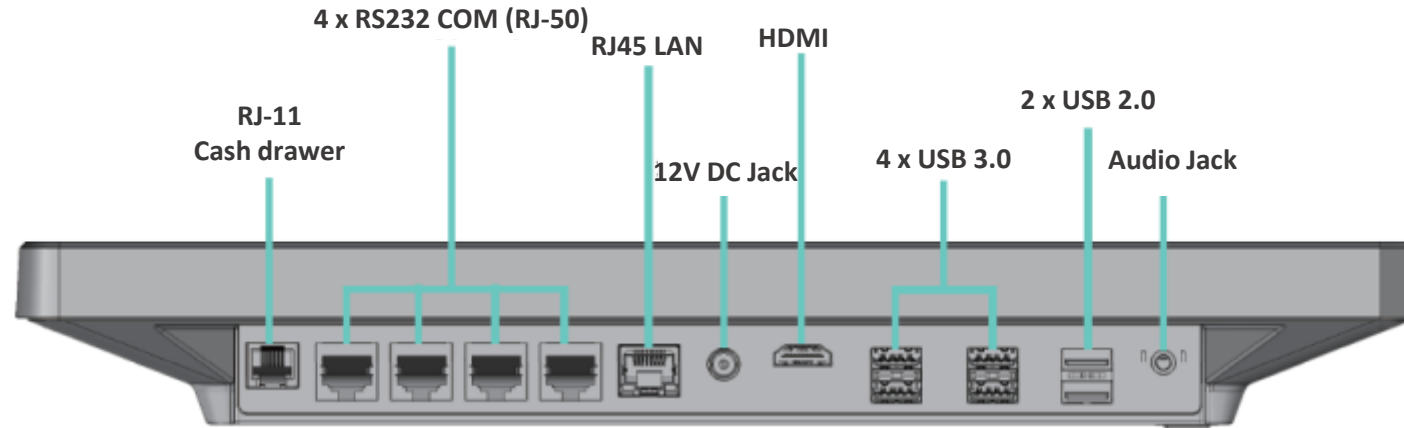
Application Field



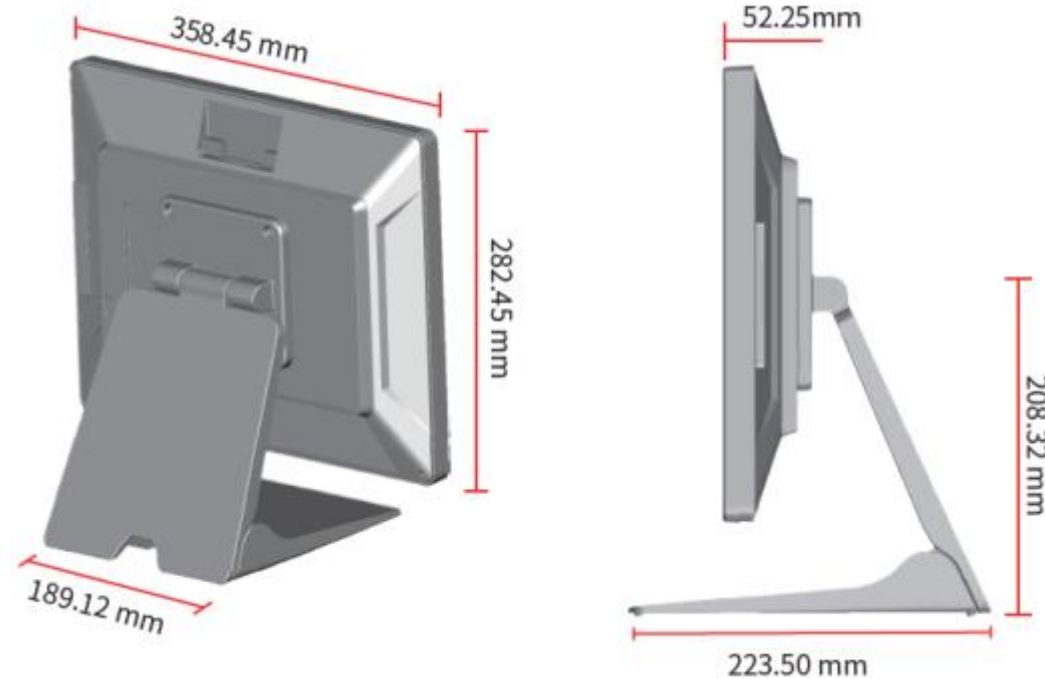
Model Name	AI-NONXS			
nVidia Module	Jetson Orin NX 16GB	Jetson Orin NX 8GB	Jetson Orin Nano 8GB	Jetson Orin Nano 4GB
AI Performance	100 TOPS	70 TOPS	40 TOPS	20 TOPS
GPU	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores		1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores	512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores
CPU	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU	
Memory	16GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 68GB/s	4GB 64-bit LPDDR5 34GB/s
HDMI	2.1 (7680x4320 at 30 Hz: 8K 30fps)		1.4 (3840x2160 at 30 Hz: 4K 30fps)	
Audio	1 x 3.5mm Headset jack with Line-out/MIC-In 1 x digital MIC pin header, 1 x speaker out pin header			
MIPI Camera	2 x 4-lane MIPI CSI 22-pin connector			
Ethernet	1 x GbE (POE opt.), 1 x 2.5GbE (POE opt.)			
USB	4 x USB 3.2 type A & 1 x Micro USB (for OS flash)			
Storage	1 x M.2 Key-M PCIe x4 Gen4 2242/2260/2280 NVMe SSD		1 x M.2 Key-M PCIe x4 Gen3 2242/2260/2280 NVMe SSD	
Expansion	1 x M.2 Key-E for 2230 Wi-Fi & BT module			
	1 x M.2 Key-B for 3042/3052 4G LTE/5G module			
	1 x Nano SIM slot			
Serial Port	1 x RS232/CAN & 1 x RS232/422/485			
Expansion I/O	1 x 14-pin header: SPI, I2C, GND, 3.3V, 5V			
Others	1 x 12-pin header: LED, 5V, UART, LATCH (AT/ATX mode switch), GND, RST, RCV, PWR			
Fan	1 x 4-pin header			
RTC	1 x 2pin header			
Security (Opt.)	TPM 2.0			
Button	1 x Power On button , 1 x Recovery button, 1 x Reset button			
Power Input	1 x DC Power Jack for 12V~20V			
Connector	1 x 2-pin internal power connector			
Operating temp.	-20~60 ℃			
Dimension	130mm x 100mm			
Software	Jetpack 6.2 supports Jetson Orin NX/Nano modules (Super Mode-enabled)			



I/O Interface



Dimension





Intel® Alder Lake-N N97 Processor



Projected Capacitive Touch Panel (PCAP)



Fanless Design

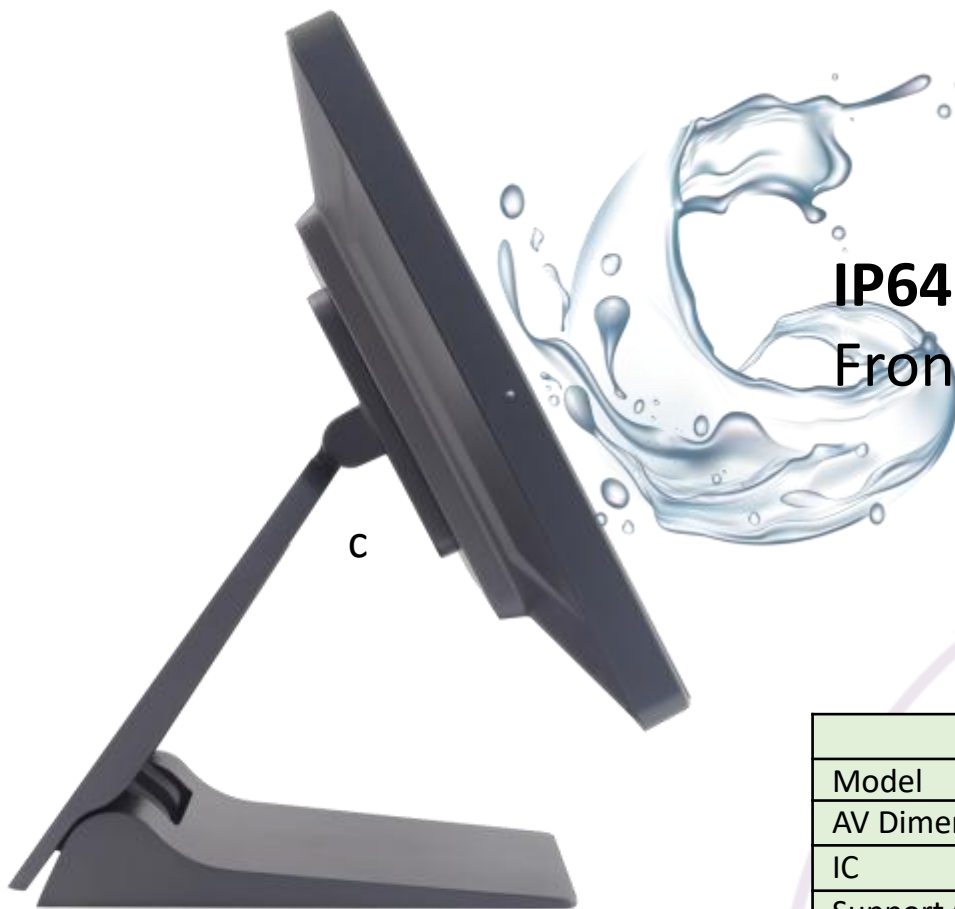
Foldable Stand reduces packing volume



2nd Display
(Optional)

2nd Display (Optional)	
Panel Model	BOE 97M5U
LCD Size	9.7" TFT LCD Display
Resolution	1024 x 768
Interface	USB
Touch	N/A

2nd Display (Optional)	
Panel Model	BOE NV116WHM
LCD Size	11.6" TFT LCD Display
Resolution	1136 x 768
Interface	eDP
Touch	N/A



IP64

Front Panel Protection

Touch Panel	
Model	PC015101-55-JA
AV Dimension	15" (4:3)
IC	WEIDA8752
Support Contact	10
Interface	USB
Power Consumption	Active Mode: <500mW
Work Voltage	5V (USB) $\pm$ 0.3V
Response Time	<10ms
LCD Screen Model	DV150X0M-N12



Aluminum back cover design



IP64 water & dust-proof front panel protection



Cable management



Easy access 2*M.2 SSD for easy installation



Dual hinge stand for versatile adjustment and package saving



MSR optional