

MODEL. I520-BI

Fanless Design Industrial Box PC

Introduction

I520-BI is a solution designed for industrial applications, using Intel processor, supports 1*DDR3/DDR4 RAM slot,1*mSATA,1*M.2 SATA SSD, and 1*Mini PCIe slot. The whole machine uses 9-36V DC power supply. It has 2*Gigabit Ethernet port, 6*COM, and 4*USB, 1*HDMI, 1*VGA display ports and 1*expansion card slot. I520-BI is compatible with mainstream operating systems and embedded operating systems such as Windows 10, Windows 11, Linux, etc., and can run application software and programs based on the above operating systems developed by customers.

IDEETECH

I520-BI

INDUSTRIAL BOX PC

POWERFUL. RELIABLE. BUILT FOR INDUSTRY



All aluminum alloy heat dissipation

FANLESS COOLING
LOW-NOISE DESIGN

The surface of the industrial computer adopts a striped grid pattern and is molded into a sealed, integrated structure, which ensures external air circulation and improves heat dissipation efficiency; the fanless design reduces dust accumulation.

CIRCULATING HEAT DISSIPATION
Efficient air circulation

LOW NOISE DESIGN
Silent • Reliable • Dust-free



TEMPERATURE

WITHSTANDS EXTREME TEMPERATURES:

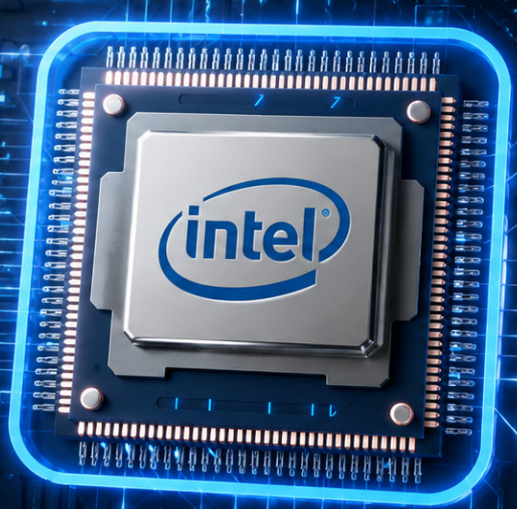
-20°C TO +70°C

WIDE TEMPERATURE -20°C TO 70°C | RUGGED & RELIABLE | DUST RESISTANT | ALL-ALUMINUM ALLOY | LONG-TERM STABILITY



Intel Power Chip
Stable Operation
Faster Than One Step

Through The Controlled High Temperature Test To Test The Product To Adapt To High And Low Temperature, Even In The Harsh Environment Is Not Afraid.



Stable operation

Power on and run 24/7
Stable operation around the clock

Capable of operating around the clock, it can run stably in unstable environments and meets the operational needs of various commercial, automated, and unmanned equipment.



MULTISCREEN DISPLAY

MULTITASK DISPLAY

HDMI + VGA USED TOGETHER (EXTENDED OR COPIED DISPLAY CUSTOMER CHOICE) TO ACHIEVE MULTI-TASK DISPLAY PLATFORM

SAME SCREEN DISPLAY

- 1080P FULL HD Clarity
- SAME VIEW Consistent Experience
- EASY SETUP Plug & Play



ASYNCHRONOUS DISPLAY

- MULTI-TASK Independent Content
- HIGH EFFICIENCY Work Smarter
- FLEXIBLE SETUP Extend Your Workspace



INSTALLATION

4 INSTALLATION OPTIONS

DESKTOP / EMBEDDED / WALL-MOUNTED / RAIL MOUNT

01 DESKTOP

Place on a desk or flat surface for easy access and maintenance.



02 EMBEDDED

Integrate into cabinets, kiosks, or enclosures for a clean and space-saving solution.



03 WALL-MOUNTED

Mount on walls or structures securely with the included mounting brackets.



04 RAIL MOUNT

Install on standard DIN rails for flexible and reliable mounting in industrial environments.



POWERFUL

COMPATIBILITY SYSTEM

Compatible with Windows 7 / Windows 8 / Windows 10 / Linux.









Specification

Mother Board Specification

Model	I520-BI	
CPU	Celeron J1900 i5-4260U	Celeron J6412 i3: 7100U i5: 6200U / 7200U / 8260U / 10210U i7: 7500U / 10610U
Memory[1]	1*DDR3 RAM Slot, Up to 8GB	1*DDR4 RAM Slot, Up to 16GB
Storage	1*MSATA SSD Slot 1*M.2 SATA SSD Slot	
Display[2]	1*HDMI: Resolution up to 4096*2304@24Hz 1*VGA: Resolution up to 1920*1200@60Hz	
Expansion	1*Mini PCIE Slot, Support 4G and WIFI module	
Ethernet	2*Intel i210-AT LAN Chip (10 / 100 / 1000 Mbps, RJ-45 Type)	
USB	4*USB 3.0 (Type-A)	
COM	2*RS-232 / 422 / 485 (DB9 Type) 4*RS-232 (Phoenix Terminal Type)	
Audio	1*Line-Out	
Daughter Card	Support expansion I/O interfaces and functional slots	

Note:

[1] : The maximum memory capacity and the maximum capacity per strip supported by this motherboard depend on the CPU.
[2] : The maximum resolution and frame rate of the display interface output depends on the CPU.

Fittings Information

RAM	DDR3	4GB / 8GB
	DDR4	4GB / 8GB / 16GB / 32GB
Storage	MSATA	64GB / 128GB / 256GB / 512GB / 1TB
	M.2 SATA	128GB / 256GB / 512GB / 1TB / 2TB / 4TB
	M.2 NVME	128GB / 256GB / 512GB / 1TB / 2TB / 4TB
	SATA	120GB / 128GB / 240GB / 256GB / 480GB / 512GB / 960GB / 1TB / 2TB / 4TB
GSM Module	4G	4G+GPS
	5G	5G+GPS
WIFI Module	7260AN / 7260AC / AX210	
CAN BUS Module	2*CAN BUS Ports	

Device Specification

BIOS	AMI UEFI BIOS
Power Input	DC 9-36V With Overvoltage Protection
	Support Auto-Start
	3 Pin Phoenix Terminal Type DC Plug
Watch Dog	Support
Working Temperature	-20℃ - 70℃ , Support 24/7 Working
Storage Temperature	-30℃ - 80℃
Humidity	90% (20±50℃)
Size	260mm*150mm*65mm

Structure	Fully Enclosed Aluminum Alloy Material
Heat dissipation	Fanless Design, Conduction Heat Dissipation
Installation	Desktop / Embedded / Wall / Rail Mount
System	Windows and Linux

Daughter Card Specification

COM Port-2	2*RS-232 / 485 (DB9 type)
COM Port-6	4*RS-232 / 485+2*RS-232 (Phoenix terminal type)
Ethernet Port-2	2*Intel i211V LAN Chip (RJ-45 type)
Ethernet Port-4	4*Intel i211V LAN Chip (RJ-45 type,POE function optional)
10G Ethernet Port-2	2*10Gbps Ethernet Ports
USB Port-4	4*USB 3.0 (Type-A)
GPIO Port-14	14 ports GPIO, 7*GPI+7*GPO, 0-3.3V (Phoenix terminal type)
Mini PCIE Slot-2	2*Mini PCIE slots, Support 4G and WIFI module
M.2 Slot-1	1*M.2 Key-B slot, Support 5G module
M.2 NVME SSD Slot-1	1*M.2 NVME SSD slot
SATA SSD Slot-1	1*SATA 3.0 SSD Slot, Support RAID 1
CAN Port-2	2*CAN interfaces (Phoenix terminal type)
UPS battery	1.2AH or 4.8AH
DIDO Port-16	16 ports DIDO, 8*DI+8*DO, 24V, Isolation (Phoenix terminal type) Comes with 4*RS-485 COM ports (Phoenix terminal type)


6-way COM



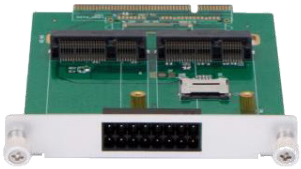
2.5-inch SSD



UPS power supply

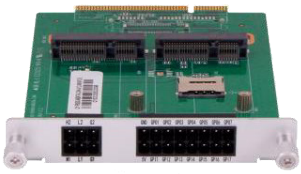

4-channel USB

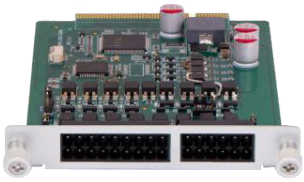

2-channel COM


14 GPI0 channels

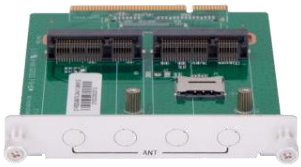

Dual Gigabit Ethernet ports


Four Gigabit Ethernet port


CAN+GPIO


DIDO


M.2 SSD


4G WIFI GPS

Ordering Information

Model	CPU	LAN	USB	COM	Display	RAM	SSD	Expansion	Power
I520-BI	J1900 / 4th	2	4	2*RS-232/422/485 4*RS-232	1*HDMI 1*VGA	1*DDR 3 Up to 8GB	1*MSATA 1*M.2 SATA	1*Mini PCIE	DC 9-36V
	6th / 7th					1*DDR 4 Up to 16GB			
	J6412					1*DDR 4 Up to 16GB			
	8th / 10th					1*DDR 4 Up to 32GB			

CPU Information

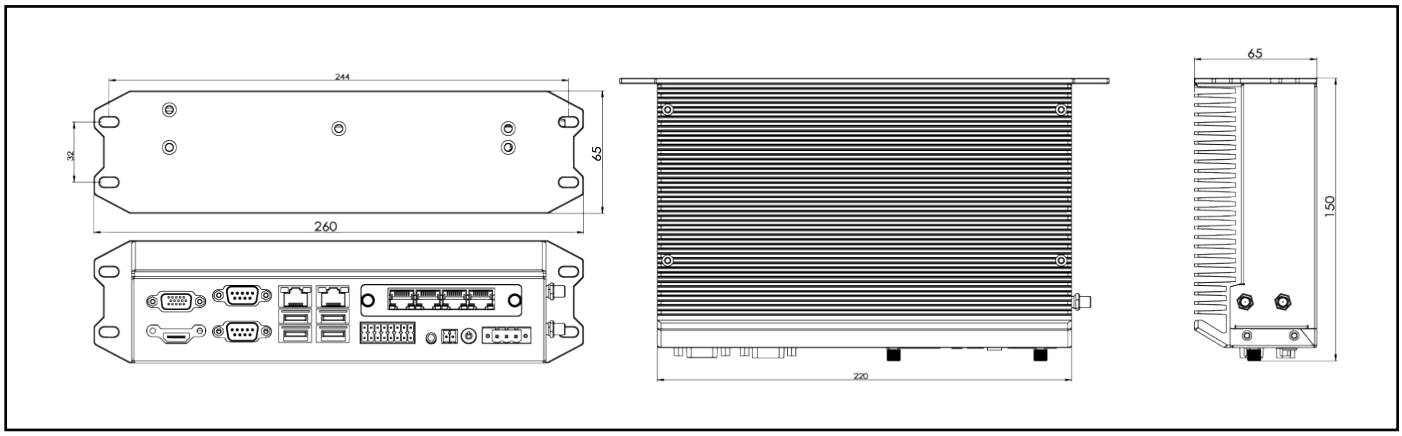
CPU	Core	Threads	Frequency	Cache	Graphics	RAM
J1900	4	4	2.00-2.42GHz	2 MB	HD Graphics	Max to 8GB for 1*DDR3 Slot
J6412	4	4	2.00-2.60GHz	1.5 MB	UHD Graphics	Max to 16GB for 1*DDR4 Slot

CPU	Core	Threads	Frequency	Cache	Graphics	RAM
i5-4260U	2	4	1.40-2.70GHz	3 MB	HD Graphics 5000	Max to 16GB for 1*DDR3 Slot
i5-6200U	2	4	2.30-2.80GHz	3 MB	HD Graphics 520	Max to 16GB for 1*DDR4 Slot
i3-7100U	2	4	2.40GHz	3 MB	HD Graphics 620	Max to 16GB for 1*DDR4 Slot
i5-7200U	2	4	2.50-3.10GHz	3 MB	HD Graphics 620	Max to 16GB for 1*DDR4 Slot
i7-7500U	2	4	2.70-3.50GHz	4 MB	HD Graphics 620	Max to 16GB for 1*DDR4 Slot
i5-8260U	4	8	1.60-3.90GHz	6 MB	UHD Graphics 620	Max to 32GB for 1*DDR4 Slot
i5-10210U	4	8	1.60-4.20GHz	6 MB	UHD Graphics	Max to 32GB for 1*DDR4 Slot
i7-10610U	4	8	2.70-3.50GHz	8 MB	UHD Graphics	Max to 32GB for 1*DDR4 Slot

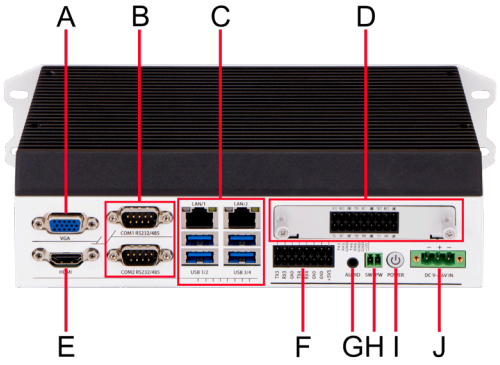
System Information

CPU	Specification
J1900 / 4th / 6th / 7th	Windows 7 / 10 and Linux
J6412 / 8th / 10th	Windows 10 / 11 and Linux

Dimensions



I/O Port





A : 1*VGA
B : 2*COM (RS-232/422/485)
C : 2*LAN + 4*USB3.0
D : 1*Daughter Card
E : 1*HDMI

F : 1*16 Pin phoenix terminal for COM
G : 1*AUDIO
H : 1*POWER SW
I : 1*POWER
J : 1*DC IN

Package List

Adapter	1*12V 5A Adapter
Power Cable	1*Power Cable (The type is depends on the national standard of the buyer)
Terminal	2 Pin phoenix terminal for Power Switch
Terminal	16 Pin phoenix terminal for COM

Applications



Industrial Automation



Machine Control



Data Acquisition