CO-W121C/P1001 Series

21.5" TFT Full HD 16:9 Panel PC w/ Intel® Atom™ E3845 Quad Core, 4x USB, 2x COM, 1x VGA and 1x DisplayPort

ALL-NEW OPEN FRAME PANEL PC

| CO-100/P1001 Series Fits Any Machine Perfectly |

Overview

CONTACT

Cincoze power efficient open frame modular panel PCs (CO-W121C/P1001 Series) support Intel® Atom® processors, and multiple displays. Native I/O ports include LAN, USB, COM, and DIO, offering expansion functions to meet different application needs. The integrated structure, exclusive adjustable mounting bracket, and support for various mounting methods enable a perfect fit in cabinets of different materials and thicknesses. The robust design also meets the application needs of harsh industrial environments.

Key Features

- 21.5" TFT-LCD with Projected Capacitive Touch
- Onboard Intel® Atom™ E3845 Processor Quad Core, 1.91GHz
- 1x DDR3L SO-DIMM max. up to 8GB
- Designed with Adjustable Mounting Bracket
- Support Flat / Standard / VESA / Rack Mount
- Front Panel IP65 Compliant
- Wide Operating Temperature
- Cincoze Patent CDS Technology Support

Certifications

IP65

Power Efficient & Multi-Display

Powered by Intel® Atom® processor with support for multiple displays.

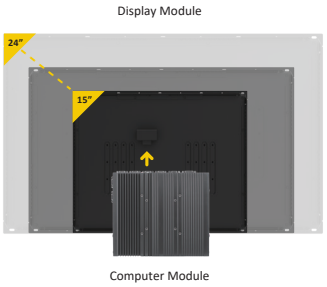
Rich I/O for Flexible Expansion

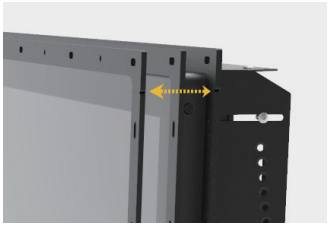
Native I/O ports include LAN, USB, COM, DIO, Mini-PCIe, and SIM slot for additional expansion functions to meet different application needs.

Patented CDS Technology

The patented CDS (Convertible Display System) technology makes maintenance easy and offers flexibility for future upgrades. To upgrade the panel size, replace the display module, or to upgrade the system performance, replace the computer module.

Patent No. M482908





Flexible Design and Easy Installation

Exclusive adjustable mounting bracket with thickness adjustment setting and two panel-locking methods (panel or boss type) make modular panel PC easier and more convenient to integrate into industrial machinery.

Patent No.: D224544, D224545, I802427

Integrated Structure

As standard, the open frame modular panel pc can be deployed in equipment machines, but remove the mounting bracket and it becomes a standalone panel pc for use with a VESA mount or in a 19" rack.

Strong, Reliable and Durable

Meets the requirements for HMI applications in harsh industrial environments: IP65 waterproof and dustproof front panel, fanless, wide temperature, and wide voltage (9–48 VDC).

IP65

CO-W121C Specifications

Model Name	CO-W121C
Display	
LCD Size	▪ 21.5" (16:9)
Resolution	▪ 1920 x 1080
Brightness	▪ 300 cd/m2
Contrast Ratio	▪ 5000 : 1
LCD Color	▪ 16.7M
Pixel Pitch	▪ 0.24825 (H) x 0.24825 (V) mm
Viewing Angle	▪ 178 (H) / 178 (V)
Backlight LED Life Time	▪ 50,000 hrs
Touch Screen	
Touchscreen Type	▪ Projected Capacitive Touch
Wet Touch Tracking	v
Physical	
Dimension (W x D x H)	▪ 550 x 343.7 x 63.3
Weight	▪ 7.16 kg
Construction	▪ One-piece and Slim Bezel Design
Mounting Type	▪ Flat / Standard / VESA / Rack Mount
Mounting Bracket	▪ Pre-installed Mounting Bracket with Adjustable Design (Support 11 different stages of adjustment)
Power	
Power Consumption	▪ 24.8W (Max.)
Protection	
Ingress Protection	▪ Front Panel IP65 Compliant * According to IEC60529
Environment	
Operating Temperature	▪ 0°C to 60°C (32°F to 140°F) (With Industrial Grade Peripherals; Ambient with air flow)
Storage Temperature	▪ -20°C to 60°C (-4°F to 140°F)
Humidity	▪ 90% RH @ 40°C (Non-condensing)
EMC	▪ CE, UKCA, FCC, ICES-003 Class A
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	▪ EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV ▪ EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m ▪ EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 3V ▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz
Safety	▪ UL, cUL, CB, IEC, EN 62368-1

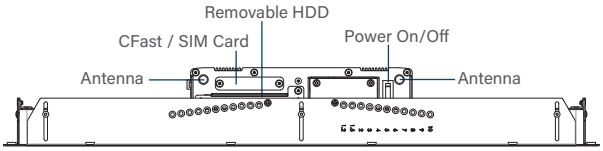
P1001 Series Specifications

Model Name	P1001	P1001E
System		
Processor	▪ Onboard Intel® Atom™ Processor E3845 Quad Core, 1.91 GHz	
Memory	▪ 1x DDR3L 1066/1333 MHz SO-DIMM Socket (un-buffered and non-ECC) ▪ Support up to 8 GB	
BIOS	▪ AMI 64Mbit SPI BIOS	
Graphics		
CDS (Convertible Display System) Technology	▪ 1x Convertible Display System (CDS) Interface	
VGA	▪ 1x VGA Connector (1920x1080@60Hz)	
DP	▪ 1x DisplayPort Connector (1920x1080@60Hz)	
Audio		
Line-out	▪ 1x Line-out, Phone Jack 3.5mm	
Mic-in	▪ 1x Mic-in, Phone Jack 3.5mm	
I/O		
LAN	▪ 2x GbE LAN (Supports WoL, Teaming, Jumbo Frame & PXE), RJ45 - GbE1: Intel® I210 - GbE2: Intel® I210	
USB	▪ 1x USB 3.2 Gen1 (Type A), 3x USB 2.0 (Type A)	
Serial Port	▪ 2x RS-232/422/485 with Auto Flow Control Support, DB9	
DIO	▪ 8x Isolated Digital I/O (4in/4out)	
Storage		
SSD/HDD	▪ 1x 2.5" HDD/SSD Drive	
SIM Card	▪ 1x Front Accessible SIM Socket	
CFast	▪ 1x Front Accessible CFast Socket	
Expansion		
Mini PCI Express	▪ 1x Full-size Mini-PCIe Socket for Wi-Fi/GSM/Expansion Module	
Universal Bracket		▪ 2x Universal I/O Bracket
Other Function		
Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset	
Internal Speaker	▪ AMP 2W + 2W	
OSD Function	▪ LCD On/Off, Brightness Up, Brightness Down	
Reset Button	▪ 1x Reset Button	
Power		
Power Button	▪ 1x ATX Power On/Off Switch	
Power Mode Switch	▪ 1x AT/ATX Mode Switch	
Power Input	▪ 1x 3-pin Terminal Block Connector with Power Input 9~48VDC	
Power Adapter (Optional)	▪ 1x Optional AC/DC 12V/5A, 60W	

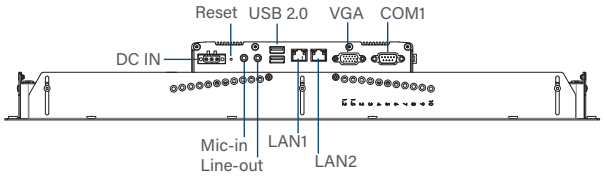
Physical		
Dimension (W x D x H)	▪ 204.5 x 149 x 37.5 mm	▪ 204.5 x 150 x 60 mm
Weight Information	▪ 1.34kg	▪ 1.54kg
Mechanical Construction	▪ Extruded Aluminum with Heavy Duty Metal	
Mounting	▪ Wall / VESA / CDS Mounting	
Physical Design	▪ Fanless Design ▪ Jumper-less Design	
Reliability & Protection		
Reverse Power Input	▪ Yes	
Over Voltage Protection	▪ Protection Range: 51~58V ▪ Protection Type: shut down operating voltage, re-power on at the present level to recover	
Over Current Protection	▪ 20A	
Operating System		
Microsoft® Windows®	▪ Windows® 10, Windows® 8, Windows® 7 ▪ Windows® Embedded 8 Standard, Windows® Embedded Standard 7	
Linux	▪ Supports by project	
Environment		
Operating Temperature	▪ Ambient with Air Flow: -20°C to 70°C (with Industrial Grade Peripherals)	
Storage Temperature	▪ -30°C to 85°C	
Relative humidity	▪ 10%~95% RH (Non-condensing)	
Shock	▪ Operating, 15 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)	
Vibration	▪ Operating, 1 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)	
EMC	▪ CE, UKCA, FCC, ICES-003 Class A	
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A	
EMS	▪ EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV ▪ EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m ▪ EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 3V ▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz	

CO-W121C/P1001 External Layout

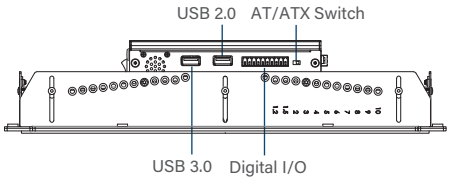
Front I/O



Rear I/O



Left I/O



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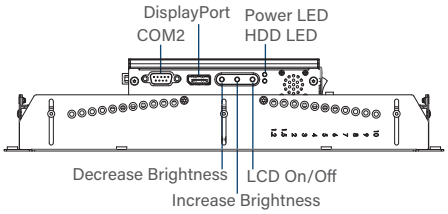
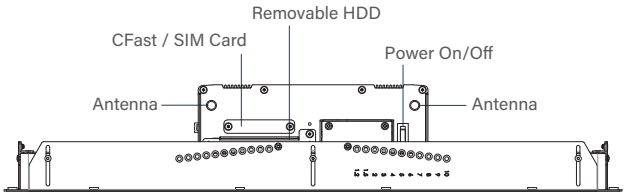


CO-W121C/P1001E External Layout

Front I/O



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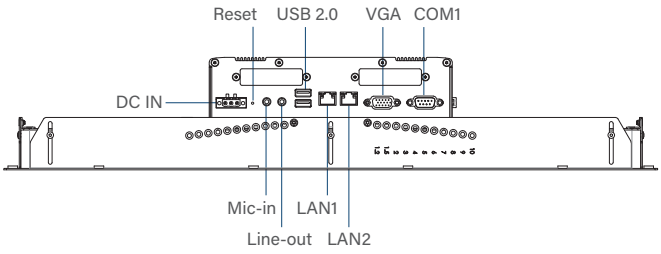

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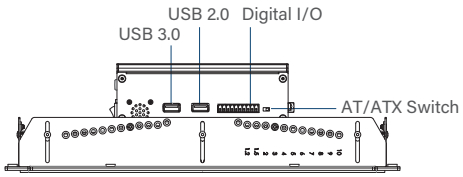

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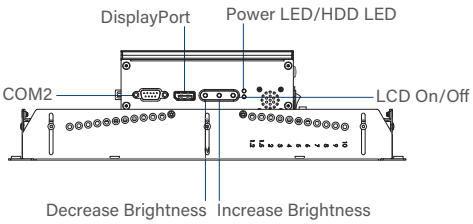
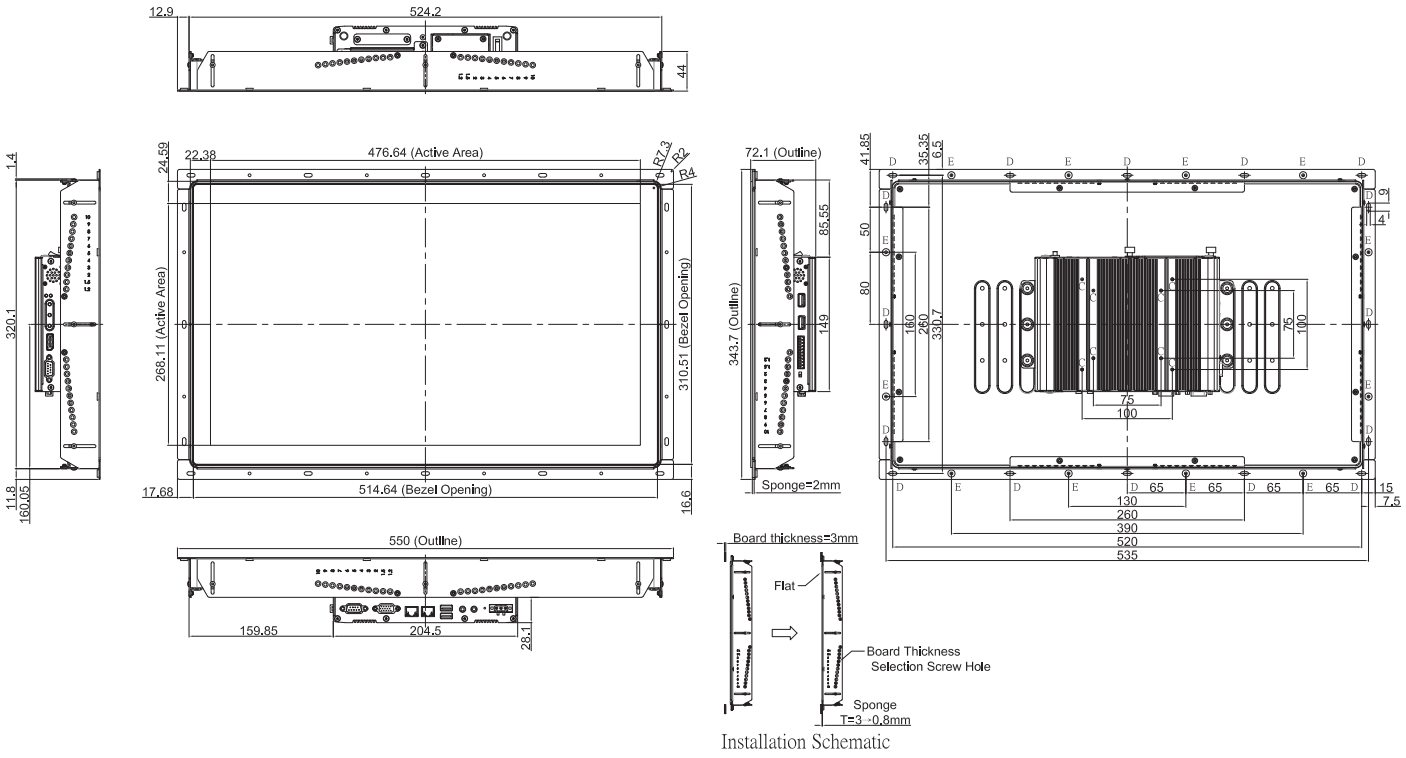
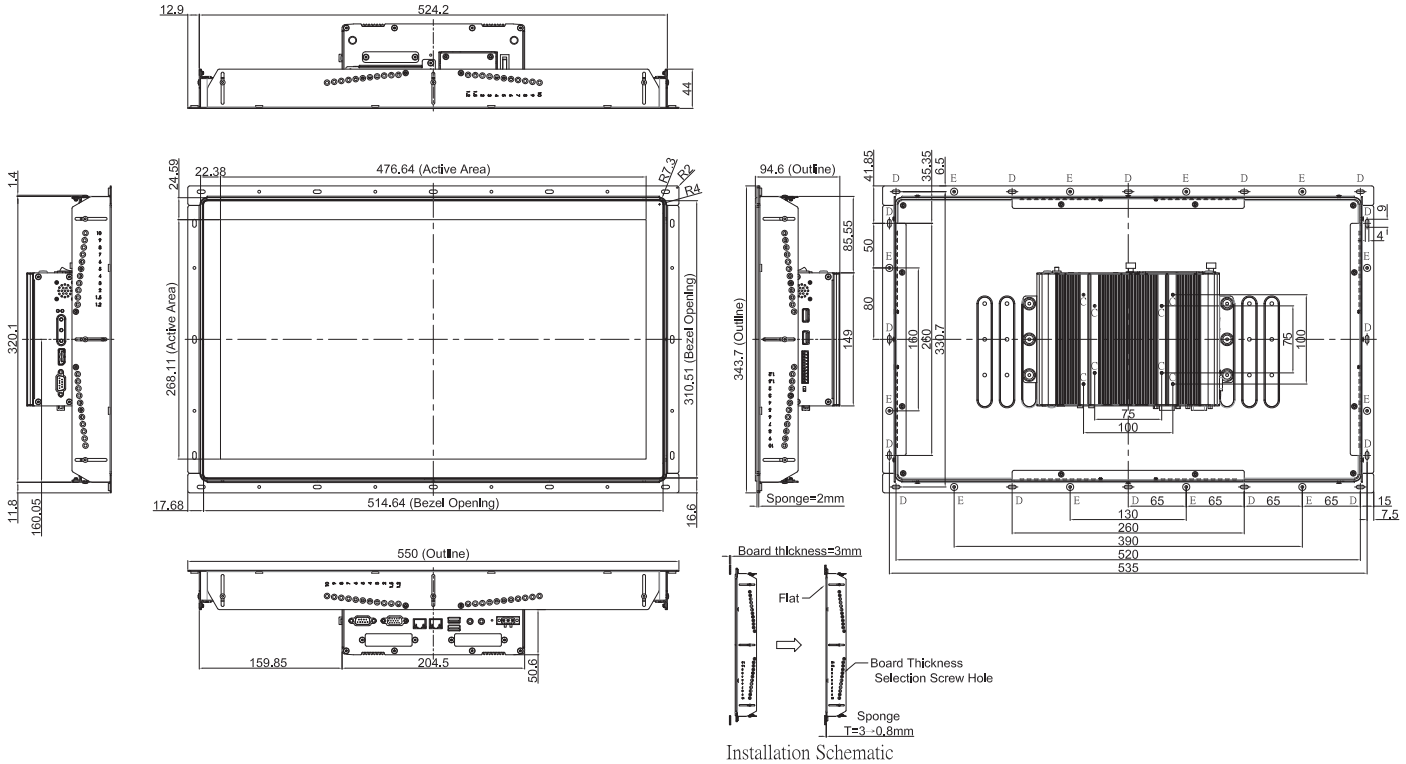


CO-W121C/P1001 Dimensions



Installation Schematic

CO-W121C/P1001E Dimensions



Installation Schematic

Unit: mm

Ordering Information

Available Models

Model No.	Description
CO-W121C-R10/P1001-R10	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular Panel PC with Intel Atom E3845 Quad Core Processor and P-Cap. Touch
CO-W121C-R10/P1001E-R10	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular and Expandable Panel PC with Intel Atom E3845 Quad Core Processor and P-Cap. Touch

Model Configuration

	CO-W121C	P1001	P1001E
CO-W121C/P1001	V	V	--
CO-W121C/P1001E	V	--	V

V : Compatible

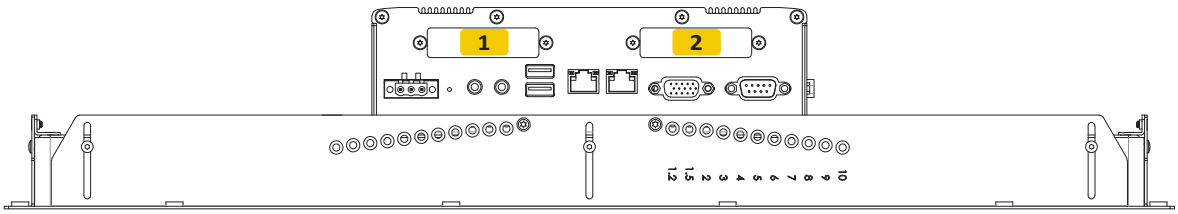
Package Checklist

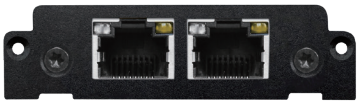
- CO-W121C/P1001 Series Panel PC x 1
- Power Terminal Block Connector (Female) x 1
- DIO Terminal Block Connector (Female) x 1
- HDD Screw Pack x 1
- Mini PCIe Screw Pack x 1

Optional Modules and Accessories

Model No.	Description
MEC-COM-M212-DB9	Mini-PCIe Module with 2x COM Ports, 1x Standard DB9 Cable (For P1001E only)
MEC-LAN-M102-30	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable (For P1001E only)
MEC-USB-M102-30	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 30cm cable (For P1001E only)
UB0303	2x Universal Bracket each with 1x DB9 Cutout (For P1001E only)
UB0311	1x Universal Bracket with 2x RJ45 Cutout (For P1001E only)
UB0314	1x Universal Bracket with 2x USB Cutout (For P1001E only)
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W, GST60A12-CIN1, wide temp (-30°C ~ +70°C)
SL2-SL3	US 2 heads power cord, US B type to IEC C13, SVT 18AWG/3C Black 1.8M SL-2+SL-3
SL6-SL3	EU 2 heads power cord, EU G type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M SL-6+SL-3
QP026-SL3	UK 2 heads power cord, UK I type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M QP026+SL-3

Optional Module Configuration (For P1001E only)



Model No.	Description	1	2
MEC-COM-M212-DB9/UB0303	Mini-PCIe Module with 2x COM Ports, 1x Standard DB9 Cable, 2x Universal Bracket each with 1x DB9 Cutout	V	V
MEC-LAN-M102-30/UB0311 	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable, w/ 1x Universal Bracket with 2x RJ45 Cutout	V	V
MEC-USB-M102-30/UB0314	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 30cm cable, 1xUniversal Bracket with 2x USB Cutout	V	V

V : Compatible

Updated: Aug. 29, 2025.

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