cincoze™

DV-1100

Rugged Embedded Computer

Key Benefits

- **High-Performance** Processing with 12th, 13th and 14th Generation Intel® Core™ processors
- **Compact Fanless** Design with a 224.1 × 162 × 62 mm footprint
- **Flexible Expansion** with multiple M.2 sockets and optional CMI/CFM modules
- **High-Speed Connectivity** with 2.5GbE LAN, USB 3.2 and multiple display interfaces
- **Rugged Reliability** with wide operating temperatures and MIL-STD-810H shock and vibration compliance

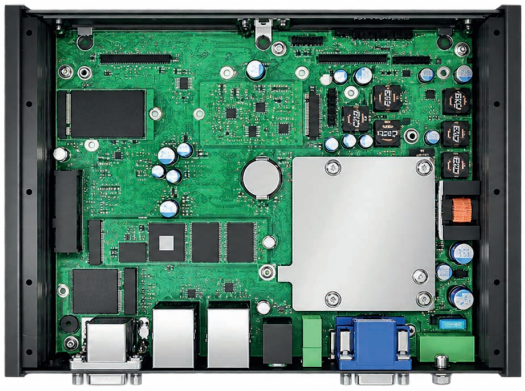


Overview

The DV-1100 is a compact, fanless rugged embedded computer designed for industrial edge computing applications. Supporting 12th, 13th and 14th Generation Intel® Core™ processors, it offers up to 48 GB DDR5 memory and high-speed storage and connectivity options. Multiple M.2 sockets and optional CMI and CFM modules provide flexible expansion for additional I/O and functionality. Its robust construction, wide-range DC power input and industrial-grade protection make it suitable for smart manufacturing, machine vision, railway computing and space-constrained applications.

Certifications

EN 50121-3-2 · EN 61000-6-2 · EN 61000-6-4 · MIL-STD-810H · EN 62368-1 · c UL us LISTED · CB · E13



14/13/12th Gen
Intel Core Series

intel. CORE i7 · intel. CORE i9 · intel. CORE i5 · intel. CORE i3

TRIED, TESTED & **TRUSTED**

Specifications

Model Name	DV-1100
System	
Processor	▪ 14th Generation Intel® Raptor Lake-S Refresh Series P-Core Only CPU: - Intel® Core™ i9-14901E 8 Cores Up to 5.6 GHz, TDP 65W - Intel® Core™ i7-14701E 8 Cores Up to 5.4 GHz, TDP 65W - Intel® Core™ i5-14501E 6 Cores Up to 5.2 GHz, TDP 65W - Intel® Core™ i5-14401E 6 Cores Up to 4.7 GHz, TDP 65W - Intel® Core™ i3-14100 4 Cores Up to 4.7 GHz, TDP 60W - Intel® Core™ i9-14901TE 8 Cores Up to 5.5 GHz, TDP 45W - Intel® Core™ i7-14701TE 8 Cores Up to 5.2 GHz, TDP 45W - Intel® Core™ i5-14501TE 6 Cores Up to 5.1 GHz, TDP 45W - Intel® Core™ i5-14401TE 6 Cores Up to 4.5 GHz, TDP 45W - Intel® Core™ i3-14100T 4 Cores Up to 4.4 GHz, TDP 35W - Intel® Processor 300 2 Cores Up to 3.9 GHz, TDP 46W - Intel® Processor 300T 2 Cores Up to 3.4 GHz, TDP 35W ▪ 14th Generation Intel® Raptor Lake-S Refresh Series Hybrid CPU: - Intel® Core™ i9-14900 24 Cores Up to 5.8 GHz, TDP 65W - Intel® Core™ i7-14700 20 Cores Up to 5.4 GHz, TDP 65W - Intel® Core™ i5-14500 14 Cores Up to 5.0 GHz, TDP 65W - Intel® Core™ i5-14400 10 Cores Up to 4.7 GHz, TDP 65W - Intel® Core™ i9-14900T 24 Cores Up to 5.5 GHz, TDP 35W - Intel® Core™ i7-14700T 20 Cores Up to 5.2 GHz, TDP 35W - Intel® Core™ i5-14500T 14 Cores Up to 4.8 GHz, TDP 35W - Intel® Core™ i5-14400T 10 Cores Up to 4.5 GHz, TDP 35W ▪ 13th Generation Intel® Raptor Lake-S Series P-Core Only CPU: - Intel® Core™ i3-13100E 4 Cores Up to 4.4 GHz, TDP 60W - Intel® Core™ i3-13100 4 Cores Up to 4.5 GHz, TDP 60W - Intel® Core™ i3-13100TE 4 Cores Up to 4.1 GHz, TDP 35W - Intel® Core™ i3-13100T 4 Cores Up to 4.2 GHz, TDP 35W ▪ 13th Generation Intel® Raptor Lake-S Series Hybrid CPU: - Intel® Core™ i9-13900E 24 Cores Up to 5.2 GHz, TDP 65W - Intel® Core™ i9-13900 24 Cores Up to 5.6 GHz, TDP 65W - Intel® Core™ i7-13700E 16 Cores Up to 5.1 GHz, TDP 65W - Intel® Core™ i7-13700 16 Cores Up to 5.2 GHz, TDP 65W - Intel® Core™ i5-13500E 14 Cores Up to 4.6 GHz, TDP 65W - Intel® Core™ i5-13400E 10 Cores Up to 4.6 GHz, TDP 65W - Intel® Core™ i5-13500 14 Cores Up to 4.8 GHz, TDP 65W - Intel® Core™ i5-13400 10 Cores Up to 4.6 GHz, TDP 65W - Intel® Core™ i9-13900TE 24 Cores Up to 5.0 GHz, TDP 35W - Intel® Core™ i7-13700TE 16 Cores Up to 4.8 GHz, TDP 35W - Intel® Core™ i7-13700T 16 Cores Up to 4.9 GHz, TDP 35W - Intel® Core™ i5-13500TE 14 Cores Up to 4.5 GHz, TDP 35W - Intel® Core™ i5-13500T 14 Cores Up to 4.6 GHz, TDP 35W ▪ 12th Generation Intel® Alder Lake-S Series P-Core Only CPU: - Intel® Core™ i5-12500E 6 Cores Up to 4.5 GHz, TDP 65W - Intel® Core™ i5-12500 6 Cores Up to 4.6 GHz, TDP 65W - Intel® Core™ i5-12400 6 Cores Up to 4.4 GHz, TDP 65W - Intel® Core™ i3-12100E 4 Cores Up to 4.2 GHz, TDP 60W - Intel® Core™ i3-12100 4 Cores Up to 4.3 GHz, TDP 60W - Intel® Core™ i5-12500TE 6 Cores Up to 4.3 GHz, TDP 35W - Intel® Core™ i3-12100TE 4 Cores Up to 4.0 GHz, TDP 35W - Intel® Pentium® G7400E 2 Cores Up to 3.6 GHz, TDP 46W - Intel® Pentium® G7400TE 2 Cores Up to 3.0 GHz, TDP 35W - Intel® Celeron® G6900E 2 Cores Up to 3.0 GHz, TDP 46W - Intel® Celeron® G6900TE 2 Cores Up to 2.4 GHz, TDP 35W - Intel® Pentium® G7400 2 Cores Up to 3.7 GHz, TDP 46W - Intel® Pentium® G7400T 2 Cores Up to 3.1 GHz, TDP 35W - Intel® Celeron® G6900 2 Cores Up to 3.4 GHz, TDP 46W - Intel® Celeron® G6900T 2 Cores Up to 2.8 GHz, TDP 35W ▪ 12th Generation Intel® Alder Lake-S Series Hybrid CPU: - Intel® Core™ i9-12900E 16 Cores Up to 5 GHz, TDP 65W - Intel® Core™ i9-12900 16 Cores Up to 5.1 GHz, TDP 65W - Intel® Core™ i7-12700E 12 Cores Up to 4.8 GHz, TDP 65W - Intel® Core™ i7-12700 12 Cores Up to 4.9 GHz, TDP 65W - Intel® Core™ i9-12900TE 16 Cores Up to 4.8 GHz, TDP 35W - Intel® Core™ i7-12700TE 12 Cores Up to 4.7 GHz, TDP 35W

Chipset	▪ Intel H610E Chipset
Memory	▪ 1x DDR5 SO-DIMM sockets, support Un-buffered and non-ECC Type memory, up to 48GB. - Core™ i9/i7: Support 5600/4800 MHz with Single Rank memory and 5200/4800 MHz with Dual Rank memory. - Core™ i5/i3/Pentium®/Celeron®/Intel® Processor: Support 4800 MHz.
BIOS	▪ AMI BIOS
Graphics	
Graphics Engine	▪ Integrated Intel® UHD Graphics 770: Core™ i9/i7/i5 ▪ Integrated Intel® UHD Graphics 730: Core™ i3 ▪ Integrated Intel® UHD Graphics 710: Pentium®/Celeron®
Maximum Display Output	▪ Supports Triple Independent Display
DP	▪ 1x DisplayPort Connector: 3840 x 2160 @60Hz
VGA	▪ 1x VGA Connector: 1920 x 1200 @60Hz
CMI Display	▪ 1x CMI Interface for Optional CMI-DP/CMI-HDMI® Module Expansion
Audio	
Audio Codec	▪ Realtek® ALC888, High Definition Audio
Line-out	▪ 1x Line-out, Phone Jack 3.5mm
Mic-in	▪ 1x Mic-in, Phone Jack 3.5mm
I/O	
LAN	▪ 1x 2.5GbE LAN, RJ45 - Intel® I226 ▪ 1x 1GbE LAN, RJ45 - Intel® I219
COM	▪ 2x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9
USB	▪ 1x 10Gbps USB3.2 Gen 2x1, Type A ▪ 2x 5Gbps USB 3.2 Gen 1x1, Type A ▪ 3x 480Mbps USB2.0, Type A
Storage / Expansion	
2.5" Storage	▪ 1x 2.5" SATA HDD/SSD Bay (SATA 3.0)
M.2 Key B Socket	▪ 1x M.2 Key B Type 3042/3052 Socket (PCIe Gen 3x2 / USB3.2 Gen2 x1 / SATA), Support 5G/GNSS/Storage/Add-on Card Expansion ▪ 1x M.2 Key B Type 3042 (PCIe Gen 3x2 / USB2.0), Support Storage/Add-on Card Expansion
M.2 Key E Socket	▪ 1x M.2 Key E Type 2230 Socket (PCIe Gen 3x2 / USB2.0), Support Storage/Wireless/Bluetooth/Intel CNVi Module Expansion
M.2 Key M Socket	▪ 1x M.2 Key M Type 2280 Socket (PCIe Gen 4x4 / SATA), Support Storage/Add-on Card Expansion
SIM Socket	▪ 1 x Front Accessible Dual Nano SIM Socket
CMI (Combined Multiple I/O) Interface	▪ 1x CMI Interface for optional CMI-Display Module Expansion ▪ 2x CMI Interface for optional CMI-COM/DIO Module Expansion
CFM (Control Function Module) Interface	▪ 1x CFM IGN Interface for optional CFM-IGN Module Expansion
Other Function	
External FAN Connector	▪ 1x External FAN Connector, 4-pin Terminal Block (Support Smart Fan by BIOS)
Clear CMOS Switch	▪ 1x Clear CMOS Switch
Reset Button	▪ 1x Reset Button
Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset
Antenna Hole	▪ 5x Antenna Holes

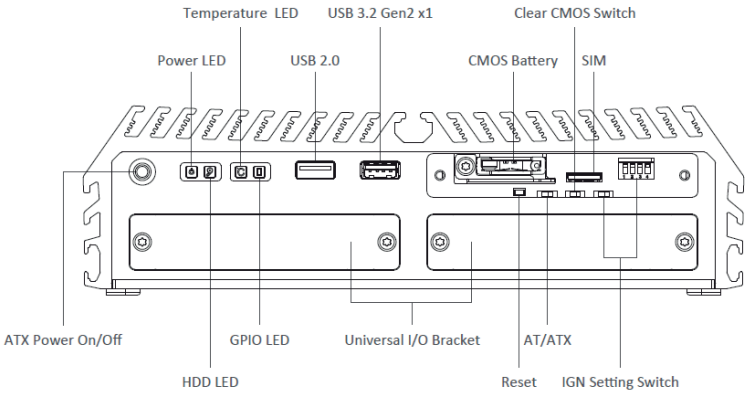
Power	
Power Button	▪ 1x ATX Power On/Off Button
Power Mode Switch	▪ 1x AT/ATX Mode Switch
Power Input	▪ 9 - 48VDC, 3-pin Terminal Block
Remote Power On/Off	▪ 1x Remote Power On/Off, 2-pin Terminal Block
Remote Power LED	▪ 1x Remote Power LED, 2-pin Terminal Block
Max. Power Consumption	▪ 35W CPU: 204.46W ▪ 65W CPU: 307.92W - Test conducted with CPU, 1x RAM, and 1x storage - 100% load during burn-in testing
Inrush Current (Peak)	▪ 35W CPU: 4.362 A@24V ▪ 65W CPU: 4.516 A@24V
Physical	
Dimension (W x D x H)	▪ 224.1 x 162 x 62 mm
Weight Information	▪ 2.52 KG
Mechanical Construction	▪ Extruded Aluminum with Heavy Duty Metal
Mounting	▪ Wall / DIN-RAIL / VESA Mount
Physical Design	▪ Fanless Design ▪ Cableess Design ▪ Jumper-less Design ▪ Unibody Design
Reliability & Protection	
Reverse Power Input Protection	▪ Yes
Over Voltage Protection	▪ Protection Range: 51~58V ▪ Protection Type: shut down operating voltage, re-power on at the preset level to recover
Over Current Protection	▪ 15A
CMOS Battery Backup	▪ SuperCap Integrated for CMOS Battery Maintenance-free Operation
MTBF	▪ 413,236 Hours - Database: Telcordia SR-332 Issue3, Method 1, Case 3
Operating System	
Windows	▪ Windows®11, Windows®10
Linux	▪ Ubuntu Desktop 22.04 LTS
Environment	
Operating Temperature	▪ 35W TDP Processor: -40°C to 70°C ▪ 45W TDP Processor: -40°C to 60°C (With External Fan Kit) ▪ 65W TDP Processor: -40°C to 55°C (With External Fan Kit) * PassMark BurnInTest: 100% CPU, 2D/3D Graphics (without thermal throttling) * With extended temperature peripherals; Ambient with air flow * According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14
Storage Temperature	▪ -40°C to 85°C
Relative Humidity	▪ 95% RH @ 70°C (Non-condensing)
Shock	▪ MIL-STD-810H
Vibration	▪ MIL-STD-810H

EMC	▪ CE, UKCA, FCC, ICES-003 Class A ▪ EN IEC 61000-6-4 / EN IEC 61000-6-2 (24VDC Input Only) ▪ EN 50155 (EN 50121-3-2 Only) ▪ E-mark
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 50121-3-2 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN 61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	▪ EN/IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV ▪ EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 20 V/m ▪ EN/IEC 61000-4-4 EFT: AC Power: 2 kV; DC Power: 2 kV; Signal: 2 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 10V (**Compliant with the standard when utilizing shielded cable.) ▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 30A ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 1 cycles at 60 Hz
Safety	▪ UL, cUL, CB, IEC, EN 62368-1

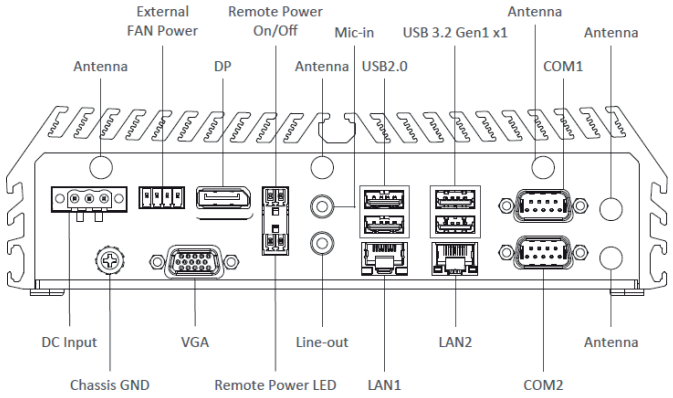
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External Layout

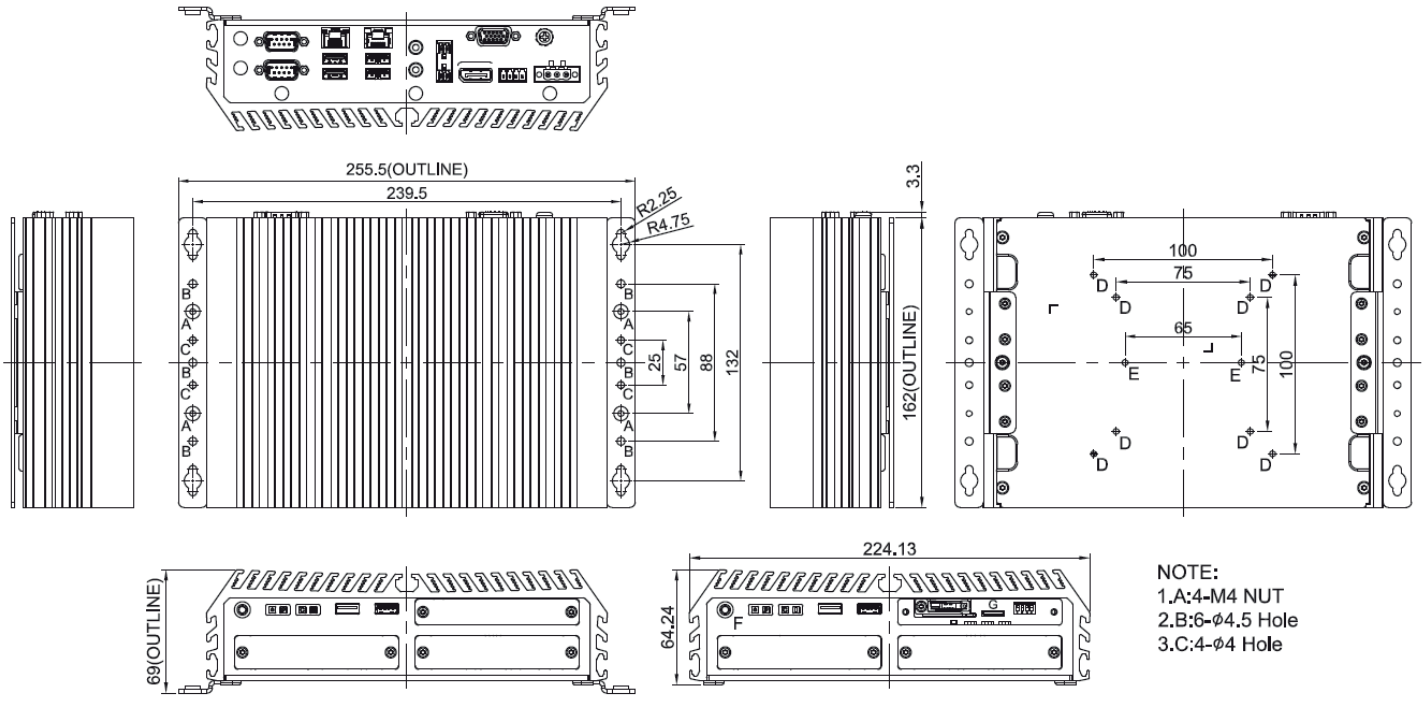
Front



Rear



Dimensions



NOTE:
1.A:4-M4 NUT
2.B:6-Φ4.5 Hole
3.C:4-Φ4 Hole

Unit: mm

Ordering Information

Available Models

Model No.	Description
DV-1100-R10	14/13/12th Gen. Intel® Core™ Series High Performance and Basic Function Rugged Embedded Computer

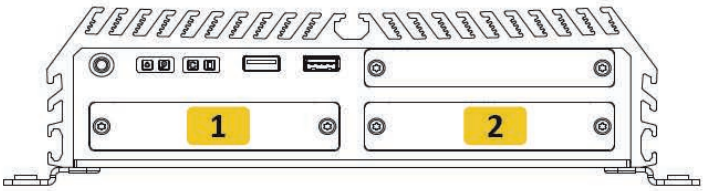
Package Checklist

▪ DV-1100 Embedded Computer x1	▪ Wall Mounting Kit x1
▪ CPU Installation Kit x1	▪ Power Terminal Block Connector x 1
▪ External Fan Terminal Block Connector x 1	▪ Remote Function Terminal Block Connector x 2
▪ Screw Pack x 1	▪ M.2 Key B Type 3052 to Type 3042 Adapter Bracket x1

Optional Modules and Accessories

Model No.	Description
CMI-DP01-R10	CMI Module with 1x DisplayPort
CMI-HD03-R10	CMI Module with 1x HDMI® Port
CMI-COM06-R10	CMI Module with 2x RS232/422/485 Ports (Support 5V/12V)
CMI-DIO06-R10	CMI Module with 16DIO (8in 8out)
CFM-IGN04-R10	CFM Module with Power Ignition Sensing Function, 12V/24V Selectable
UB1603-R10	Universal Bracket with 2x DB9 Cutout
UB1606-R10	Universal Bracket with DP Cutout
UB1608-R10	Universal Bracket with HDMI® Cutout
UB1611-R10	Universal Bracket with 2x RJ45 Cutout
UB1618-R20	Universal Bracket with DIO Cutout
UB1633-R10	Universal Bracket with 2x USB Type C Cutout for MEC-USB (M.2 interface) Expansion
UB1634-R10	Universal Bracket with 2x USB Type A Cutout for MEC-USB (M.2 interface) Expansion
DINRAIL-R10	Diamond series DIN-RAIL Mount Kit
FAN-EX104	External Fan with 4pin Terminal Block Plug and Mounting Bracket, Support Smart Fan
GST220A24-CIN	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug and Tubes, Level VI
GST360A24-CIN	Adapter AC/DC 24V 15A 360W with 3pin Terminal Block Plug and TUBES, Level VI
RSD-200D-24	Railway Single Output DC-DC Converter 200W / DC 24V
MEC-LAN-2002i	M.2 2242/2260/2280 (B+M key) 2-port 10/100/1000 isolated Ethernet board, 2x RJ45 Connector
MEC-CAN-2812i	M.2 2242/2260/2280 (B+M key) dual isolated CAN bus 2.0B board, 2x DB9 Connector
MEC-CAN-2814i	M.2 2242/2260/2280 (B+M key) quad isolated CAN bus 2.0B board, 4x DB9 Connector
MEC-COM-2032i	M.2 2242/2260/2280 (B+M key) 2-port RS-232/422/485 isolated serial board, 2x DB9 Connector
MEC-USB-2002C	M.2 2242/2260/2280 (B+M key) 2-port USB 3.2 board(0°C~+70°C), 2x USB Type C Connector, Cervoz
MEC-USB-2002-SP	M.2 2242/2260/2280 2 port USB 3.2 board(-0°C~+70°C), w/ IDE 20P 90° Cable, 2x USB Type A Connector, Cervoz

Optional Module Configuration



Model No.	Description	1	2
CMI-DP01/UB1606 	CMI Module with 1x DisplayPort / 1x Universal Bracket with DP Cutout for DV Series	-	V
CMI-HD03/UB1608 	CMI Module with 1x HDMI® / 1x Universal Bracket with HDMI® Cutout for DV Series	-	V
CMI-COM06/UB1603 	CMI Module with 2x RS232/422/485 Ports (Support 5V/12V) / 1x Universal Bracket with 2x DB9 Cutout for DV Series	V	V
CMI-DIO06/UB1618 	CMI Module with 16DIO (8in 8out) / 1x Universal Bracket with DIO Cutout for DV Series	V	V
MEC-LAN-2002i/UB1611 	M.2 Module with 2x 10/100/1000 isolated Ethernet board and 2x RJ45 Connector / 1x Universal Bracket with 2x RJ45 Cutout for DV Series	V	V
MEC-CAN-2812i/UB1603 	M.2 Module with 2x isolated CAN bus 2.0B board and 2x DB9 Connector/ 1x Universal Bracket with 2x DB9 Cutout for DV Series	V	V

MEC-CAN-2814i/UB1603 	M.2 Module with 4x isolated CAN bus 2.0B board and 4x DB9 Connector / 2x Universal Bracket with 2x DB9 Cutout for DV Series	V	
MEC-COM-2032i/UB1603 	M.2 Module with 2x RS-232/422/485 Ports isolated serial board and 2x DB9 Connector / 1x Universal Bracket with 2x DB9 Cutout for DV Series	V	V
MEC-USB-2002C/UB1633-R10 	M.2 Module with 2x USB 3.2 Type C Port / Universal Bracket with 2x USB Type C Cutout for MEC-USB (M.2 interface) Expansion	V	-
MEC-USB-2002-SP/UB1634-R10 	M.2 Module with 2x USB 3.2 Type A Port / Universal Bracket with 2x USB Type A Cutout for MEC-USB (M.2 interface) Expansion	V	-

V : Compatible

Delivering end-to-end, like no one else.
Bring us your challenge & experience the difference.

Corporate & EMEA Headquarters
Fareham, Hampshire, UK
+44 (0) 1489 866 066
sales-emea@captec-group.com

Subsystems Engineering UK
Farnborough, Hampshire, UK
+44 (0) 1252 512 919
sales-cse@captec-group.com

Canada Headquarters
Cambridge, ON, Canada
+1 (519) 650 4000
sales-canada@captec-group.com

USA Headquarters
Buffalo, NY, USA
+1 (519) 650 4000
sales-usa@captec-group.com

captec-group.com

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