

Industrial Box PC

BPC3200-N*



- 7th generation Intel Celeron and i5 embedded processor generation
- Supports high performance M.2 NVMe storage
- Robust, fanless industrial design with -20 ... +55 °C
- Installation flexibility: stand-alone PC, Panel PC, system with enclosure
- Integrated intrinsically safe USB ports for keyboard connections

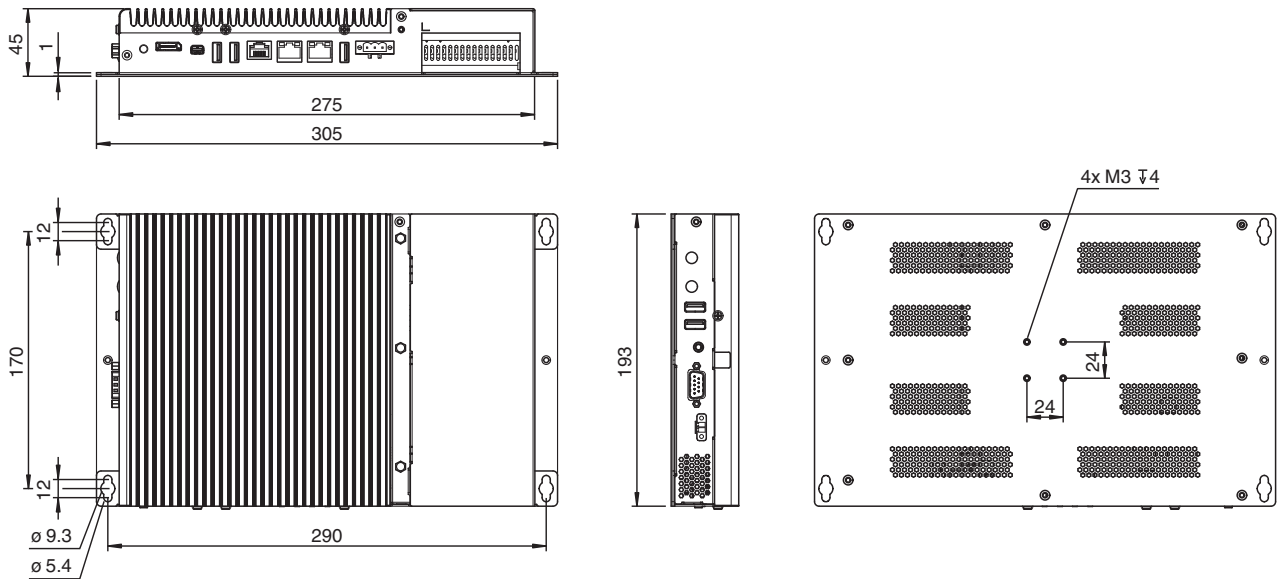
Industrial Box PC



Function

The Box PC 3200 series is based on the 7th Generation Intel® Celeron and i5 (Kaby Lake) embedded processor generation offering a great performance to cost ratio. It supports latest high-speed storage technology (M.2 NVMe 1.3) and extended RAM configurations with up to 16 GB DDR4. The device offers a great application flexibility and can be used as a stand-alone device, as a Panel PC (when mounted on a Pepperl+Fuchs display unit) or as an HMI System (Panel PC installed in a Pepperl+Fuchs enclosure).

Dimensions



Technical Data

General specifications

Type Industrial Box PC

Hardware

Processor Intel® Core™ i5-7300U
Intel® Celeron™ 3965U

Technical Data

RAM	<p>2x SO-DIMM slots, supports up to 32 GB DDR4-2133 (one SO-DIMM slot)</p> <p>Configurable RAM options: Industrial temperature grade (temperature option A): A: 1x 4GB DDR4-2133 [Celeron] B: 1x 8GB DDR4-2133 C: 1x 16GB DDR4-2133 D: 2x 16GB DDR4-2133 [Industrial, general purpose (Non-Ex), i5]</p> <p>Wide temperature grade (temperature option B): K: 1x 4GB DDR4-2133 [Celeron] L: 1x 8GB DDR4-2133 M: 1x 16GB DDR4-2133 P: 2x 16GB DDR4-2133 [Industrial, general purpose (Non-Ex), i5]</p>
Mass storage	<p>Storage interface: 1x M.2 2242/2280 M Key, PCIe + SATA 3 1x M.2 2242/2280 M Key, 2242/2280, SATA 3, supports Raid 0/1 [i5]</p> <p>Configurable storage options: Industrial temperature grade (temperature option A): A: 32 GB M.2 SATA 3 [Celeron] D: 256 GB M.2 NVMe 1.3 (PCIe 4x) E: 512 GB M.2 NVMe 1.3 (PCIe 4x)</p> <p>Wide temperature grade (temperature option B): K: 32 GB M.2 SATA 3 [Celeron] P: 256 GB M.2 NVMe 1.3 (PCIe 4x) Q: 512 GB M.2 NVMe 1.3 (PCIe 4x)</p>
Supply	
Input current	max. 3 A, max. 60 W
Power consumption	
DC	24 V d. c. (20 ... 28 V d. c.) (SELV/PELV or NEC class 2)
Interface	
Interface type	<p>Backside: 1x Power button w/ LED indicator 1x DisplayPort 1.2 port (supports DP++) 1x mini DisplayPort 1.2 port (supports DP++) 2x USB Ex i ports prepared for Pepperl+Fuchs intrinsically safe keyboard 1x RS232/422/485 port (1x RJ45) 2x RJ45 ports for Gigabyte Ethernet (Intel I219 / I210) 1x USB 2.0 port 1x Power input w/ 3 pin terminal block</p> <p>Left side: 2x Antenna holes 2x USB 3.1 Gen1 (5 Gbps) ports 1x 3,5mm audio jack (Line-out) 1x RS232/422/485 port (D-SUB 9) 1x Connector for external power button</p> <p>Internal expansion options: 1x PCIe 4x slot for low profile cards 1x full-size mini PCI Express socket / M.2 2230 E Key socket</p>
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (ind. Locations) EN 61000-6-4:2007+A1:2011 EN 55035:2017/A11:2020 EN 55011:2016+A1:2017
Explosion protection	
Directive 2014/34/EU	EN IEC 60079-0:2018 EN IEC 60079-7:2015/A1:2018 EN 60079-11:2012
RoHS	
Directive 2011/65/EU (RoHS)	EN IEC 63000:2018
Software	
Operating system	<p>Windows® 10 IoT Enterprise LTSC 2021 x64 VisuNet RM Shell 6 (based on Windows® 10 IoT Enterprise LTSC 2021 x64) [Celeron, 4 GB RAM, 64 GB SSD]</p> <p>Optional: INN-: IGEL OS 11 based on Linux, without licence [Celeron, 8 GB RAM, 64 GB SSD] JNN-: IGEL OS 12 based on Linux, without licence, [Celeron, 8 GB RAM, 64 GB SSD] TNN-: ThinManager Ready [Celeron, 4 GB RAM, no storage]</p>
Ambient conditions	

Technical Data

Operating temperature	Temperature classes: A: 0 ... 45 °C (32 ... 113 °F) B: -20 ... 55 °C (-4 ... 131 °F) [with wide temperature grade RAM/storage]
Storage temperature	-20 ... 60 °C (-4 ... 140 °F)
Relative humidity	max. relative humidity 93% at 40°C (non-condensing) according to EN60068-2-78
Shock resistance	Acceleration: 15 g Duration: 11 ms Shocks: 18 (3 per axis per direction)
Vibration resistance	Amplitude / acceleration: +/- 0.075 mm // 1 g Frequency range: 10 Hz - 150 Hz Sweeps: 20
Mechanical specifications	
Degree of protection	IP 20
Material	Painted sheet metal and extruded aluminum
Mass	approx. 2.5 kg
Dimensions	305 mm x 193 mm x 45 mm
Mounting	Wall mounting, DIN rail (via optional adapter)
International approvals	
UL approval	
Approved for	UL OrdLoc UL approval E223772 UL61010-1 Ed.3 UL 61010-2-201 Ed2 CAN/CSA C22.2 No 61010-1-12 CAN/CSA C22.2 No 61010-2-201 IS circuits for CL I, DIV 2, GP A-D CL II, DIV 2, GP E, F, G CL III IS circuits for CL I, ZN 2, IIC CL II, ZN 22, IIIB CL III, ZN 22, IIIA Install per drawing 116-0478 Mounting in CL I, DIV 2, GP A-D, T4 CL II, DIV 2, GP E, F, G CL III Mounting in CL I, ZN 2, IIC, T4 CL II, ZN 22, IIIB CL III, ZN 22, IIIA
ATEX approval	
ATEX certificate	UL 22 ATEX 2478X
ATEX marking	II 3 G Ex ec [ic Gc] IIC T4 Gc
IECEX approval	
IECEX certificate	IECEX ULD 22.0016X
IECEX marking	Ex ec [ic Gc] IIC T4 Gc
IECEX standard	IEC 60079-0:2017 Ed 7.0 IEC 60079-7:2017 Ed 5.1 IEC 60079-11:2011 Ed 6.0
CCC approval	
CCC certificate	2023322309005714
CCC marking	Ex ec [ic Gc] IIC T4 Gc
CCC standard	GB 3836.1-2021 GB/T 3836.3-2021 GB/T 3836.4-2021

Type Code

BPC3200-*

BPC3200-	(1)	(2)-NNNN-	(3)-	(4)	(5)	(6)	(7)NN-	(8)
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Model	
BPC3200-	Stand-alone Box PC

(1)	Explosion protection
N	Industrial, general purpose (Non-Ex)
M	ATEX & IECEx Zone 2 and Class I, Div. 2

(2)-NNNN-	Temperature
A-NNNN-	0 °C ... 45 °C
B-NNNN-	-20 °C ... 55 °C

(3)-	Power supply unit
D-	24 V DC

(4)	Computing platform
1N	Intel® Celeron
2N	Intel® Core i5-7300U

(5)	RAM
A	1x 4 GB, industrial temperature grade [only Temperature "A", Intel Celeron 3965U]
B	1x 8 GB, industrial temperature grade [only Temperature "A"]
C	1x 16 GB, industrial temperature grade [only Temperature "A"]
D	2x 16 GB, industrial temperature grade [only general purpose (Non-Ex), i5-7300U]
K	1x 4 GB, wide temperature grade
L	1x 8 GB, wide temperature grade
M	1x 16 GB, wide temperature grade
P	2x 16 GB, wide temperature grade [only general purpose (Non-Ex), i5-7300U]

(6)	Storage
N	None [only ThinManager Ready]
B	64 GB M.2 SATA, industrial temperature grade [only Temperature "A", Intel Celeron 3965U]
D	256 GB M.2 NVMe, industrial temperature grade [only Temperature "A"]
E	512 GB M.2 NVMe, industrial temperature grade [only Temperature "A"]
L	64 GB M.2 SATA, wide temperature grade
P	256 GB M.2 NVMe, wide temperature grade
Q	512 GB M.2 NVMe, wide temperature grade

(7)NN-	Operating System
3NN-	Windows® 10 IoT Enterprise LTSC 2021 x64
4NN-	VisuNet RM Shell 6 (based on Windows® 10 IoT Enterprise LTSC 2021 x64)
INN-	IGEL OS 11 (based on Linux, without licence) [only with 8 GB RAM, 64 GB SSD]
JNN-	IGEL OS 12 (based on Linux, without licence) [only with 8 GB RAM, 64 GB SSD]
TNN-	ThinManager Ready

(8)	Options
NN0	Standard

Example:

BPC3200-	N	A-NNNN-	D-	1N	A	B	4NN-	NN0
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Preferred configurations:

Type	Type code	Description
High-performance configuration	BPC3200-NB-NNNN-D-2NLP3NN-NN0	Intel i5-7300U 8 GB DDR4, wide temperature grade 256 GB M.2 NVMe, wide temperature grade Windows® 10 IoT Enterprise LTSC 2021 x64
Thin Client configuration	BPC3200-NA-NNNN-D-1NAB4NN-NN0	Intel Celeron 3965U 4 GB DDR4, industrial temperature grade 64 GB M.2 SATA 3, industrial temperature grade VisuNet RM Shell 6 (based on Windows® 10 IoT Enterprise LTSC 2021 x64)