

# Intelligent Edge Computer

## PRELIMINARY DATASHEET

# PE400D

Intel® 10th Generation Xeon® /Core™ i7/ i5/ i3 Embedded Computer with 3 expandable PCIe slots

## Features

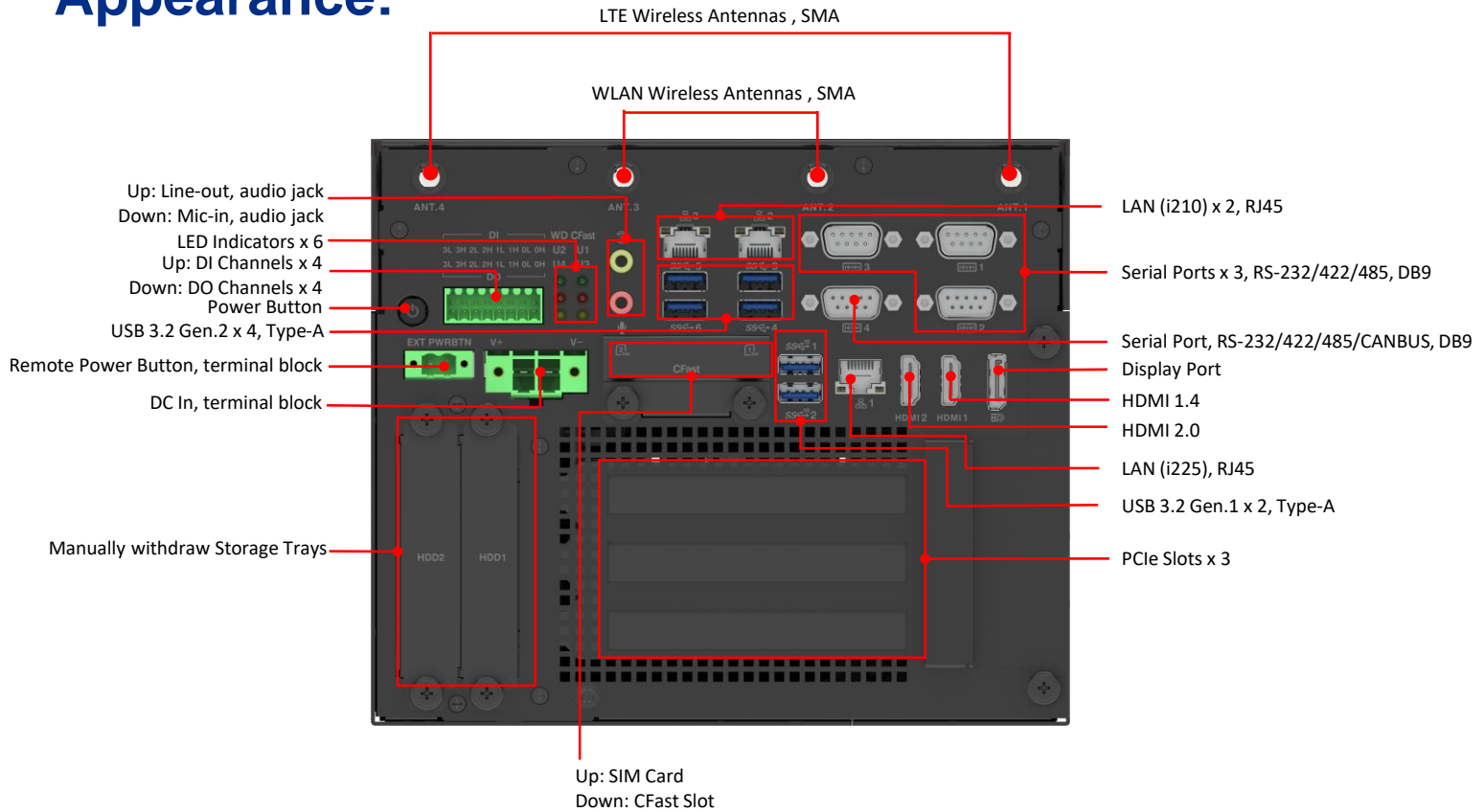
- Diverse skus with Intel 10<sup>th</sup> Gen. processors supports up to 64GB DDR4 memory
- 1\*mPCIe socket for cellular, 1\*M.2 for Wi-Fi/BT, 1\*M.2 for storage
- 3 x independent displays & 3 x PCIe slots
- Wide-operating temperature: -20~60°C



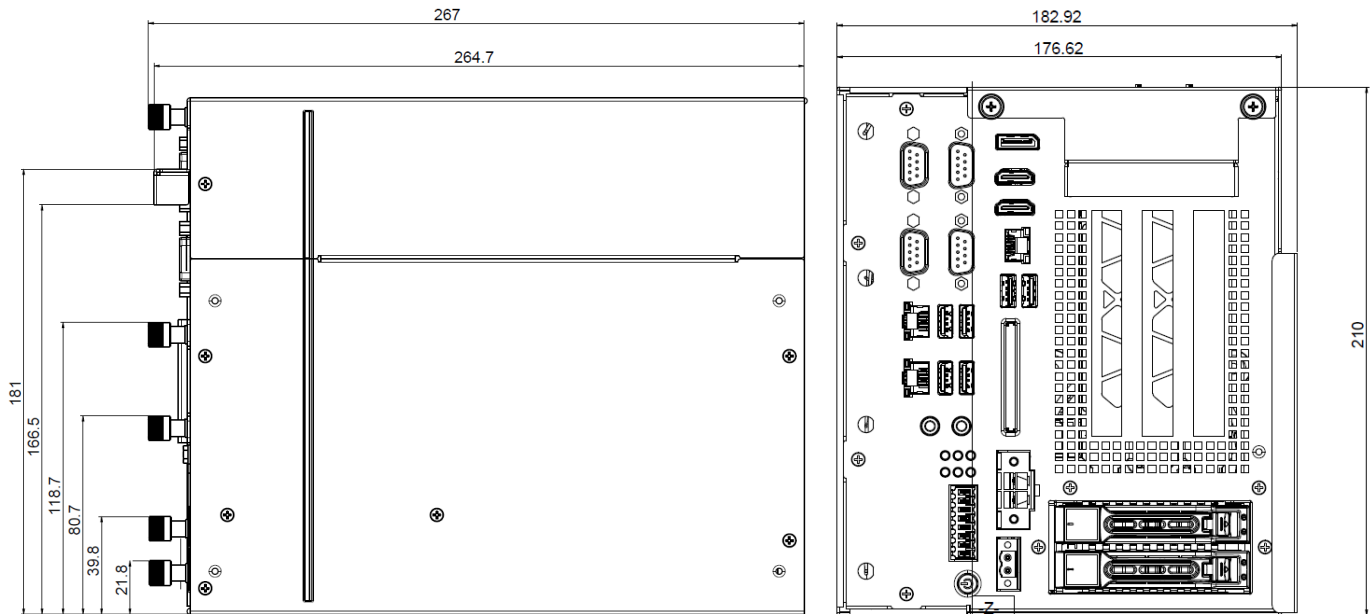
## Specifications

<b>System</b>	CPU	Intel® Xeon® W-1290TE	Intel® Core™ i7-10700E	Intel® Core™ i7-10700TE	Intel® Core™ i5-10500TE	Intel® Core™ i3-10100TE	
	TDP	35W	65W	35W	35W	35W	
	# of Cores	10	8	8	6	4	
	Base Freq.	1.8GHz	2.9GHz	2.0GHz	2.3GHz	2.3GHz	
	Max Turbo Freq.	4.5GHz	4.5GHz	4.4GHz	3.7GHz	3.6GHz	
	Memory	2 x SO-DIMM, DDR4 2666/2400/2133 MHz, ECC*, max. 64GB *Only when use with Xeon CPU					
<b>External Interfaces</b>	Display	1 x HDMI 2.0, supports up to 4096 x 2160 @ 60 Hz 1 x HDMI 1.4, supports up to 4096 x 2160 @ 30 Hz 1 x DP 1.2, supports up to 4096 x 2304 @ 60 Hz *Default 4096x2304 @60Hz supports 3 independent displays at the same time					
	Ethernet	3 x Intel i210 (1Gb, TSN), RJ45					
	USB	2 x USB 3.2 gen.2, 4 x USB 3.2 gen. 1					
	Audio	1 x Mic-in, audio jack 1 x Line-out, audio jack					
	COM	3 x COM: RS-232/422/485, DB9 1 x COM*: RS-232/422/485, CANBus (2.0A/B), DB9 *Default RS-232, configured to CANBus by onboard jumper					
	CAN	1 x COM*: RS-232/CANBus (2.0A/B), DB9 *Default RS-232, configured to CANBus by onboard jumper					
	DIO	4 x DI, 4 x DO support relay output, 2 x 8 terminal block					
	<b>Storage</b>	CFast	1 x Type II CFast slot for OS storage				
SATA		2 x 2.5" HDD slots (supports SATA 3.0 and hot-swappable, 7~7.5mm)					
<b>Expansion Slot</b>	PCIe/PCI	3 x PCIe slot (1 x PCIe16 + 1 x PCIe4 or 2 x PCIe8 + 1 x PCIe4, auto-detect) *Max. length<192mm, max. 100W supply from mainboard for 3 slots in total					
	Mini PCIe	1 x Mini PCIe socket (supports mSATA or cellular module)					
	M.2 M Key	1 x M.2 2242/60/80 M-key socket (PCIe4 & SATA mode)					
	M.2 E Key	1 x M.2 2230 E-key socket (supports CNVi, Wi-Fi/BT module)					
<b>Power</b>	Power	9 to 36 VDC, 2-pin terminal block *System can be powered up by press-able button/remote power button *Press-able power button can be disabled by onboard jumper/BIOS setting					
	<b>Mechanical</b>	Mounting	Wall-mount				
Dimensions		176.6 (H) x 210 (W) x 250 (D) mm					
Weight		7.14kg					
<b>Environment</b>	Operating Temp.	-20~60°C w/ all module operating (industrial parts) 0~40° w/ all module operating (commercial parts)					
	Storage Temp.	-40~85°C					
	Relative Humidity	5 to 95% (non-condensing)					
	EMC	CE (IEC 61000-6-2/4), FCC, VCCI, RCM, CCC, KCC, BSMI					
	Safety	UL, CB, CCC, PSB, BSMI					
	Shock	Operating: 100 Grms, half sine 11ms duration (w/ SSD/CFast)					
	Vibration	Operating: 5 Grms, 5-500 Hz, 3 axes (w/ SSD/CFast) Operating: 0.5 Grms, 5-500 Hz, 3 axes (w/ HDD)					
Green	GA (RoHS)						
<b>Security</b>	TPM	TPM v2.0 powered by Nuvoton NCPT 750 (Optional)					
<b>Others</b>	Watch dog timer	Yes. HW WDT Enable (WDT_EN)					
	Operating System	Windows 10 IoT Enterprise					

### Appearance:



### Dimension (mm):



## Ordering Information:

PN	CPU	Chipset	SO-DIMM	SPI Header	CFlash	M.2 M-key/E-key	2.5" SATA	mPCIe	HDMI /DP	COM	USB	Lan	DIO	SIM	Audio	Power	OP temperature
TBD	i3-10100TE	W480E	2	1 <sup>1</sup>	1	2 <sup>2</sup> 3 <sup>3</sup> 1/1	2	1 <sup>4</sup>	1/1	4	6	3	1	2	In / Out	9-36V	-20~60/ 0~40°
TBD	i5-10500TE	W480E	2	1 <sup>1</sup>	1	2 <sup>2</sup> 3 <sup>3</sup> 1/1	2	1 <sup>4</sup>	1/1	4	6	3	1	2	In / Out	9-36V	-20~60/ 0~40°
TBD	i7-10700E	W480E	2	1 <sup>1</sup>	1	2 <sup>2</sup> 3 <sup>3</sup> 1/1	2	1 <sup>4</sup>	1/1	4	6	3	1	2	In / Out	9-36V	-20~60/ 0~40°
TBD	i7-10700TE	W480E	2	1 <sup>1</sup>	1	2 <sup>2</sup> 3 <sup>3</sup> 1/1	2	1 <sup>4</sup>	1/1	4	6	3	1	2	In / Out	9-36V	-20~60/ 0~40°
TBD	W-1290TE	W480E	2	1 <sup>1</sup>	1	2 <sup>2</sup> 3 <sup>3</sup> 1/1	2	1 <sup>4</sup>	1/1	4	6	3	1	2	In / Out	9-36V	-20~60/ 0~40°

1. TPM 2. SATA SSD/TPU 3. mSATA/Cellure/TPU 4. Wifi/TPU

## Packing List:

Description	Qty
Power terminal block to power jack adaptor, 10cm	1
External power button terminal block	1
DIO terminal block	1
Wall mount bracket Set (2 pcs) & 4 screws	1
Dust cover set (2 HDMI; 1 DP; 4 DB9; 6 USB; 3 LAN; 2 audio jack; 4 SMA)	1

## Optional Accessories:

Part Number	Description
<b>ADAPTER</b>	
0A001-01030100	Power adapter, input voltage 90 to 264VAC, output voltage 24VDC with 13.75A DC load, 0 to 70°C (>40°C de-rating) operating temperature
<b>POWER CORD</b>	
14009-00021400	Power cord with United States (US) plug, 180cm
14009-00021000	Power cord with Europe (EU) plug, 180cm
14009-00021100	Power cord with China (CN) plug, 180cm
14009-00020600	Power cord with Japan (JP) plug, 180cm
14009-00020800	Power cord with Australia (AU) plug, 180cm
14009-00020900	Power cord with United Kingdom (UK) plug, 180cm
14009-00021000	Power cord with Korea (KR) plug, 180cm
14009-00020700	Power cord with Swiss (CH) plug, 180cm
14009-00021200	Power cord with Taiwan (TW) plug, 180cm
<b>WIRELESS EXTENSION CABLE</b>	
14012-00880000	External wireless extension cable, RP-SMA to RP-SMA, 60cm
<b>4G LTE ANTENNA</b>	
14012-00041200	Omni-directional rubber duck GPRS/EDGE/UMTS/HSPA/LTE antenna, 704 to 960MHz & 1710 to 2690MHz, 3.5 dBi, RP-SMA, antenna length 10cm
<b>WI-FI ANTENNA</b>	
14012-00041300	Omni-directional rubber duck Wi-Fi antenna, 2.4/5GHz, 2dBi, RP-SMA, antenna length 8.6cm
<b>Wi-Fi Module</b>	
0C031-00090100	QUECTEL/EC25-AU
<b>LTE Module</b>	
0C031-00090100	Quectel EC25-AU LTE cat.4 mini-PCIe module, supports B1, 2, 3, 4, 5, 7, 8, 20, 40, -40~85°C
<b>CORAL TPU</b>	
04020-03420700	CORAL MINI PCIE ACCELERATOR
04020-03420300	CORAL M.2 PCIE ACCELERATOR
04020-03420600	CORAL M.2 PCIE ACCELERATOR With Dual Edge TPU