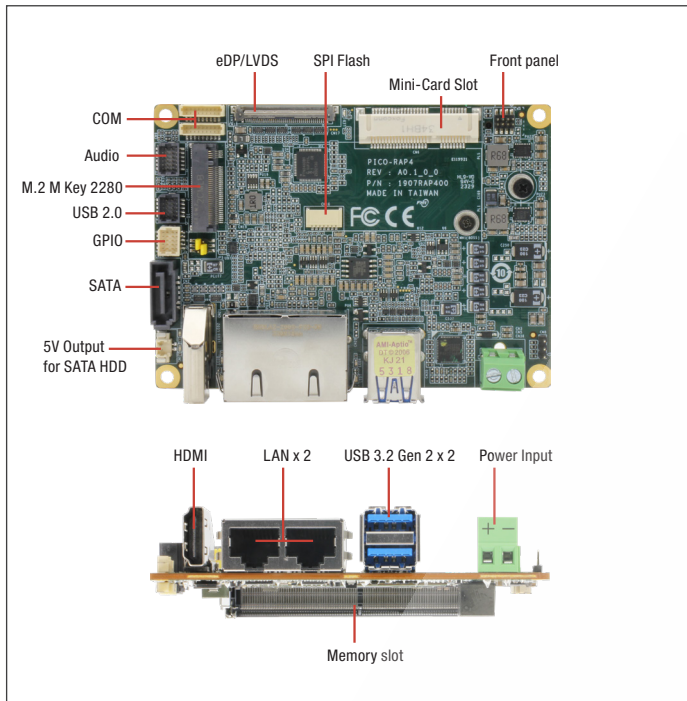


PICO-RAP4

Pico-ITX Board with 13th Gen Intel® Core™ i7/i5/i3 Processor



Specifications

System	
Form Factor	PICO-ITX
CPU	13th Generation Intel® Core™/U series Processors: Intel® Core™ i7 1370PE (6P+8E/20T, 1.90 GHz, 28W) Intel® Core™ i7 1370PRE (6P+8E/20T, 1.90 GHz, 28W) Intel® Core™ i5 1340PE (4P+8E/16T, 1.80 GHz, 28W) Intel® Core™ i3 1320PE (4P+4E/12T, 1.70 GHz, 28W) Intel® Processor U300E (1P+4E/6T, 1.10 GHz, 15W)
Chipset	Integrated with Intel® SoC
Memory Type	DDR5 5200, SODIMM x 1, Non-ECC (Max. 32GB)
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM2.0
RTC Battery	Lithium Battery 3V/240mAh
Dimension	3.94" x 2.84" (100mm x 72mm)
Gross Weight	0.18 lbs (0.08 kg)
OS Support	Windows 10 (64 bit) Ubuntu 22.04.2 (eDP is verified on Ubuntu 23.10.1)
Power	
Power Requirement	12V only
Power Supply Type	AT/ATX
Connector	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (colay)
Power Consumption	Intel® Core™ i7-1370PE, DDR5 32GB, 4.51A@ +12V (TYPICAL) Intel® Core™ i7-1370PE, DDR5 32GB, 7.46A@ +12V (MAX)
Display	
Controller	Intel® Iris Xe Graphics
LVDS/eDP	LVDS x 1 (18/24bit 2CH) 1920 x 1200 @60Hz eDP 1.4 x 1, up to 3840 x 2160 (Optional)
Display Interface	HDMI 1.4 x 1, 3840 x 2160 @30Hz
Multiple Display	Up to 2 Simultaneous Displays
Audio	
Codec	Realtek ALC256
Audio Interface	Line-in/Line-out/Mic (Optional, Audio function not available for WiTAS SKU)
Speaker	—
External I/O	
Ethernet	Intel® i226 2.5GbE, RJ-45 x 1 Intel® i219, 1GbE, RJ-45 x 1
USB	USB 3.2 Gen2 x 2
Serial Port	—

Features

- 13th Gen Intel® Core™ i7/i5/i3 Processor SoC
- DDR5 SODIMM, Max. 32 GB
- 2.5GbE Intel i226 + 1GbE Intel i219
- HDMI1.4 + eDP1.4/LVDS dual channel 18~24bit
- Half Size mPCIe/mSATA x 1, M.2 2280 M key x 1
- USB 3.2 Gen 2 x 2, USB 2.0 x 2, RS-232/422/485 x 2
- TPM2.0, SATA 6.0Gbps x 1, SMBUS/I2C x 1, GPIO 8-bit
- Mipi-CSI 4 lane x 2
- Line-in/Line-out/MIC (Optional)



Video	HDMI 1.4 x 1
Internal I/O	
USB	USB 2.0 x 2
Serial Port	COM1~2 (RS232/422/485, supports 5V/12V/RI)
Video	LVDS/eDP x 1(Default: LVDS) Inverter x 1 (12V/2A)
SATA	SATA 6.0 Gb/s x 1 +5V SATA Power Connector x 1
Audio	Audio Header x 1 (Optional, Audio function not available for WiTAS SKU)
DIO/GPIO	GPIO 8-bit
SMBus/I2C	SMBus/ I2C x 1 (Default: SMBus)
Fan	4pins Smart Fan x1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
Expansion	
Mini PCIe/mSATA	Half Size mSATA/mPCIe x 1 (default: mSATA, select with BIOS)
M.2	M.2 2280 M-Key x 1 (PCIe 4.0 [x4])
Others	MIPi-CSI via 61-Pin FPC Connector
Environment & Certification	
Operating Temp	32°F ~ 140°F (0°C ~ 60°C)
Storage Temp	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	1,087,053
EMC	CE/FCC Class A

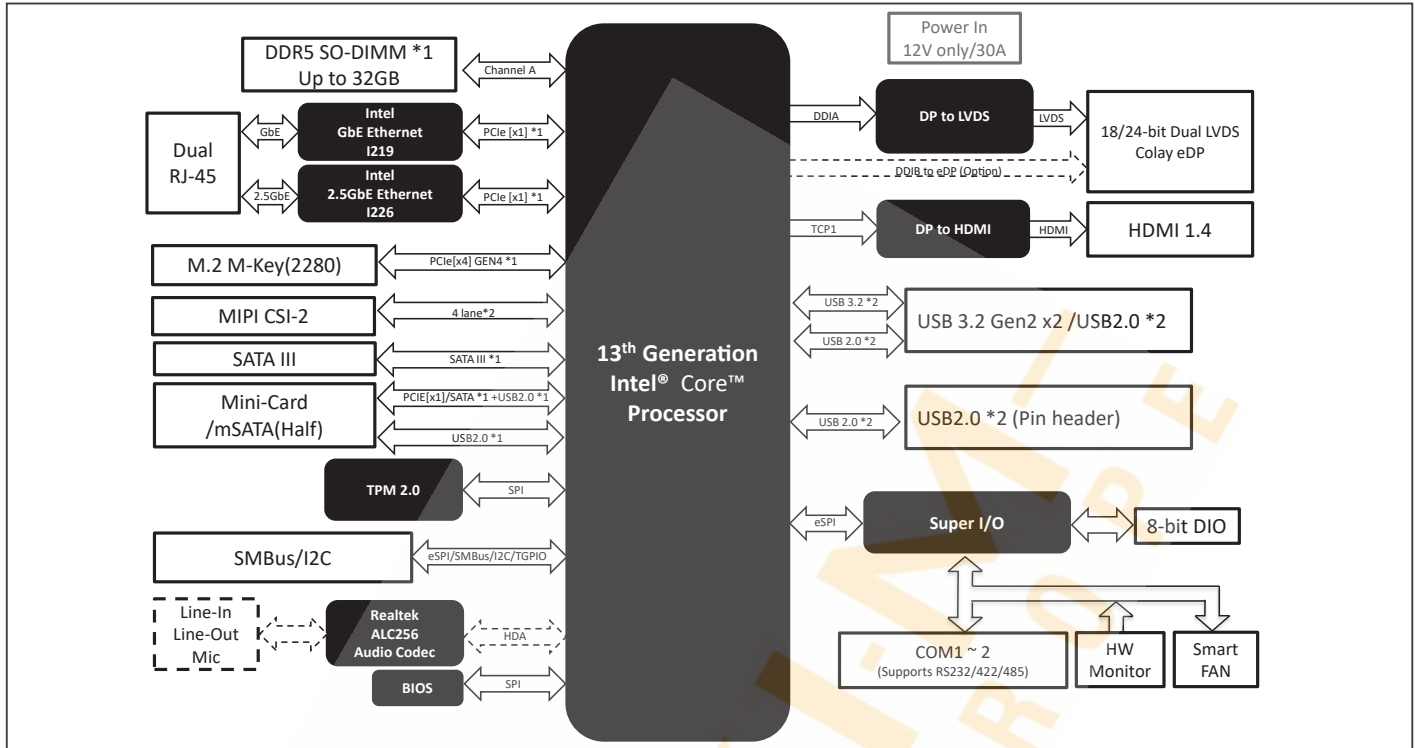
Packing List

- PICO-RAP4

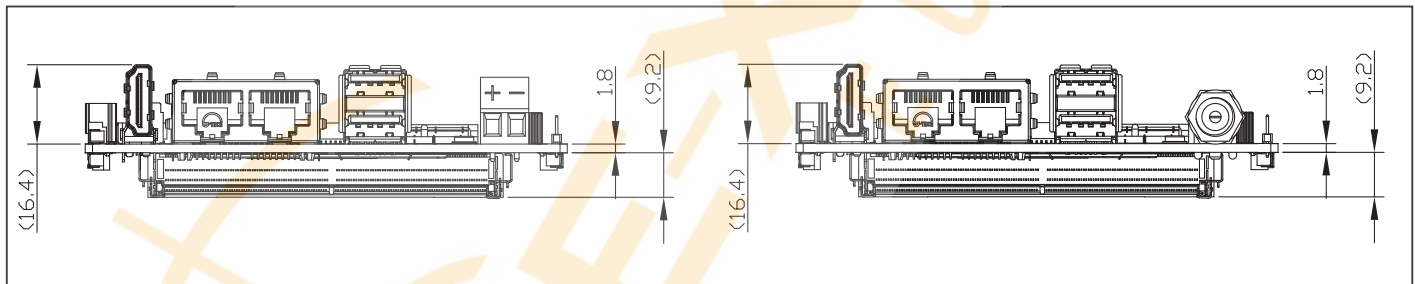
Optional Accessories

Part Number	Description	Qty.
1709100108	Front Panel cable.10cm	1
1701090154	COM cable.1 port .15cm	2
170010010D	USB2.0 cable.2 ports .10cm	1
1709070500	SATA cable.50cm	1
170X000322	SATA power cable.6cm	1
170X000156	Audio cable.Line in /Line out/ Mic.25cm	1
1702030200	Power cable (Phoenix type to DC Jack).20cm	1
PICO-RAP4-HSP01	Heat Spreader.AL.100*72*10.8mm	1
PICO-RAP4-FAN01	Cooler.100*72*24.3mm.for PICO-RAP4	1
PER-P30D-A10-0001	120W, DC-DC Converter, 9~36V input, 12V output, Rev A1.0, 30 x 72mm	1

Block Diagram



Dimension Unit: mm



Ordering Information

Part number	CPU	Memory	Display	Storage	LAN	USB	COM	Expansion slot	Power	Operating Temp	Audio	Others
PICO-RAP4-A10-0001	U300E	SO-DIMM	HDMI x 1 LVDS x 1	SATA 6Gb/s x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	2	M.2 2280 M-Key x 1 miniCard (Half) x 1	+12V (Terminal block)	0°C ~ 60°C	—	GPIO, SMBUS, TPM, MIPI-CSI
PICO-RAP4-A10-0002	i3-1320PE	SO-DIMM	HDMI x 1 LVDS x 1	SATA 6Gb/s x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	2	M.2 2280 M-Key x 1 miniCard (Half) x 1	+12V (Terminal block)	0°C ~ 60°C	—	GPIO, SMBUS, TPM, MIPI-CSI
PICO-RAP4-A10-0003	i5-1340PE	SO-DIMM	HDMI x 1 LVDS x 1	SATA 6Gb/s x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	2	M.2 2280 M-Key x 1 miniCard (Half) x 1	+12V (Terminal block)	0°C ~ 60°C	—	GPIO, SMBUS, TPM, MIPI-CSI
PICO-RAP4-A10-0004	i7-1370PE	SO-DIMM	HDMI x 1 LVDS x 1	SATA 6Gb/s x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	2	M.2 2280 M-Key x 1 miniCard (Half) x 1	+12V (Terminal block)	0°C ~ 60°C	—	GPIO, SMBUS, TPM, MIPI-CSI



Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Texim Europe B.V. its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Texim"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Texim makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product.

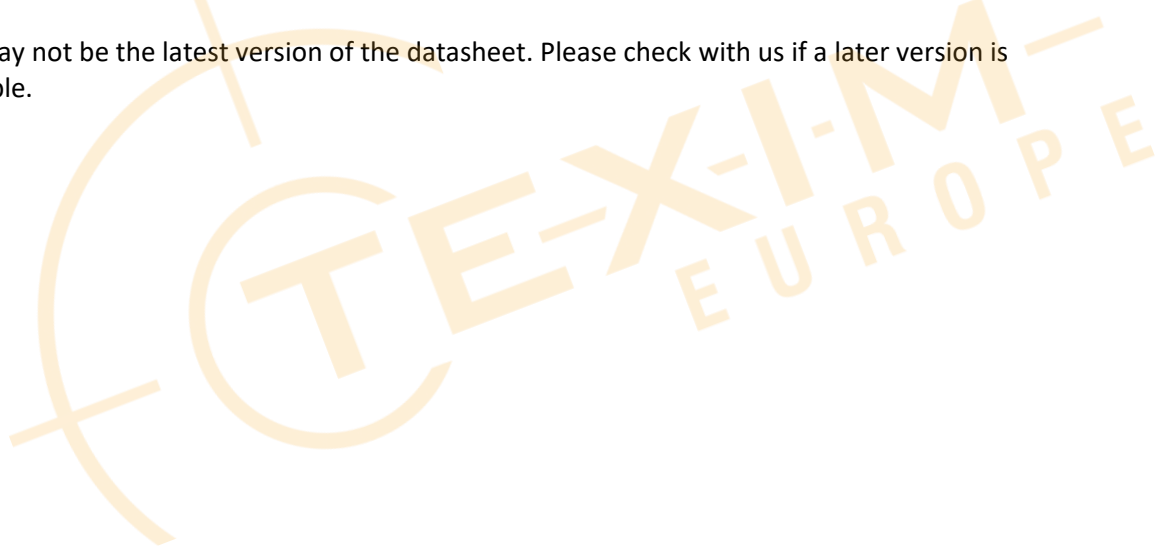
It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.





Headquarters & Warehouse

Elektrostraat 17
NL-7483 PG Haaksbergen
The Netherlands

T: +31 (0)53 573 33 33
E: info@texim-europe.com
Homepage: www.texim-europe.com



The Netherlands

Elektrostraat 17
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33
E: nl@texim-europe.com



Belgium

Zuiderlaan 14, box 10
B-1731 Zellik

T: +32 (0)2 462 01 00
E: belgium@texim-europe.com



UK & Ireland

St Mary's House, Church Lane
Carlton Le Moorland
Lincoln LN5 9HS

T: +44 (0)1522 789 555
E: uk@texim-europe.com



Germany - North

Bahnhofstrasse 92
D-25451 Quickborn

T: +49 (0)4106 627 07-0
E: germany@texim-europe.com



Germany - South

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: muenchen@texim-europe.com



Austria

Warwitzstrasse 9
A-5020 Salzburg

T: +43 (0)662 216 026
E: austria@texim-europe.com



Nordic

Søndre Jagtvej 12
DK-2970 Hørsholm

T: +45 88 20 26 30
E: nordic@texim-europe.com



Italy

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: italy@texim-europe.com