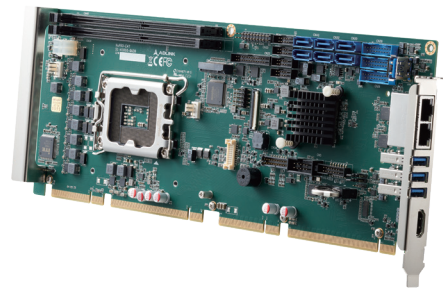


NuPRO-E47

PICMG 1.3 Full-Size SBC supporting
 Intel® Core™ Series 2 Processors and 14/13/12th Gen Intel® Core™ Processors

Features

- Intel® Core™ Series 2 Processors and 14/13/12th Gen Intel® Core™ Processors, up to 65W
- Intel® Q670E Express chipset supporting PCI Express 3.0
- Two DIMM socket support up to 64 GB Non-ECC DDR5 4800 MHz
- Six SATA 3.0 onboard with RAID support
- Four COM ports (including RS-232/422/485)
- Intel® PCIe slot bifurcation support
- Supports EdgeGO Remote Management and Control Software



Ordering Information

PN	Model Name	Chipset	Memory	PCIe x16	PCIe x4	PCI	DP	HDMI	LAN	COM	SATA	USIM	M.2	USB2.0	USB3.0 (Gen1)	USB3.2 (Gen2)	RAID	AMT
91-41810-01XX	NuPRO-E47	Q670E	Non-ECC DDR5 4800 MHz	1 (to back plane)	1 (to back plane)	4	-	1	2	4	6	-	1	4 (to back plane)	7	3	Yes	Yes

Packing Lists

PN	Description	QTY
59-41810-0110	NuPRO-E47	1
30-10057-7000	SATA data cable	2
30-25046-0110-A0	2-port USB 3.0 cable with bracket	1
30-25003-1000	2-port COM cable with bracket	1
30-25019-0010	print port cable with bracket	1

Optional Accessories

PN	Description
91-49030-0010	DB-Audio2, (High definition audio)
32-21002-0000-A0	LGA1700 1U CPU cooler
32-20976-1000-A0	LGA1700 2U CPU cooler
30-25309-0000-A0	DVI-D/VGA cable with bracket
30-25305-0020-A0	4-port USB 3.0 cable with bracket
30-25046-0110-A0	2-port USB 3.0 cable (right angle) with bracket
30-25003-2100	1-port COM cable with bracket
30-25136-0000-A0	DIO cable with bracket

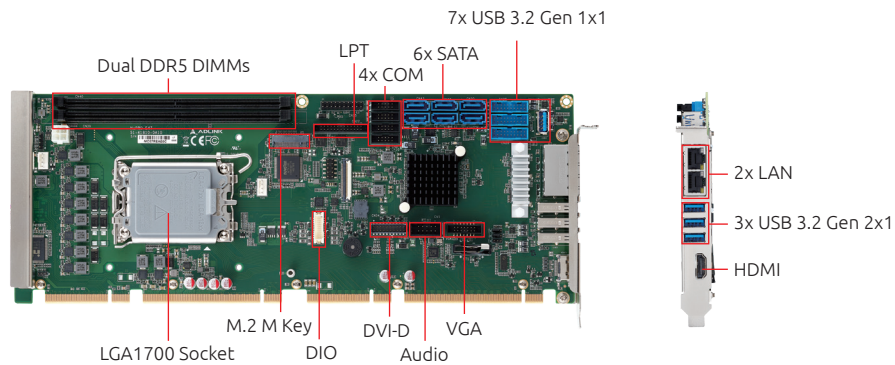
Embedded OS

PN	Description
92-56094-0010	Windows 10 IoT Ent LTSC 2021 High End PKEA
92-56094-2010	Windows 10 IoT Ent LTSC 2021 Value PKEA
92-56094-4010	Windows 10 IoT Ent LTSC 2021 Entry PKEA
92-56101-0010	Windows 11 IoT Ent 2022 High End PKEA
92-56101-2010	Windows 11 IoT Ent 2022 Value PKEA
92-56101-4010	Windows 11 IoT Ent 2022 Entry PKEA

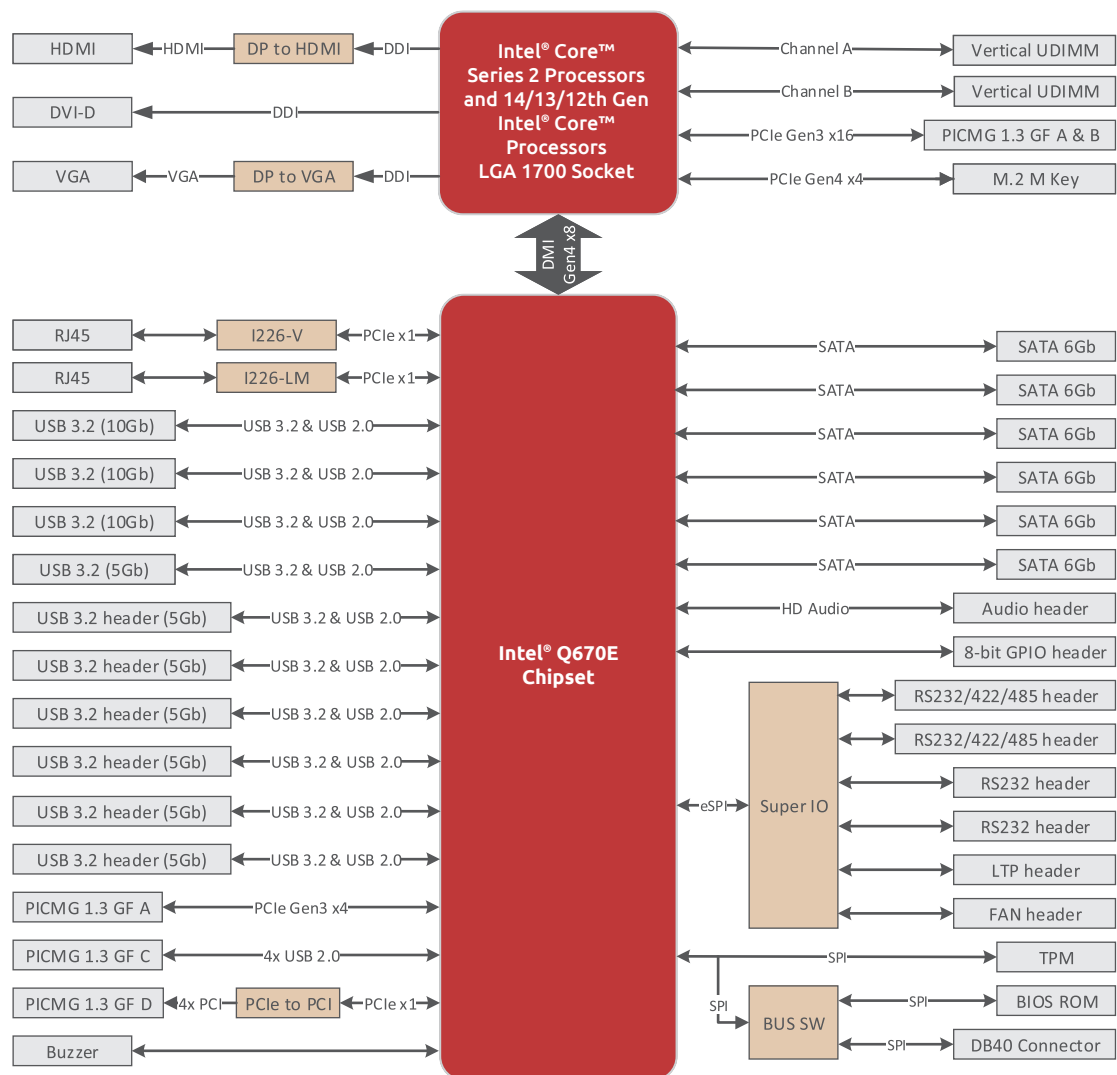
Specifications

Model	NuPRO-E47
Processor System	
CPU	Intel® Core™ Series 2 Processors and 14/13/12th Gen Intel® Core™ Processors, up to 65W
Chipset	Intel® Q670E Express Chipset
Memory	Dual-channel Non-ECC DDR5 4800 MHz, up to 64 GB
BIOS	AMI® UEFI BIOS 256 Mbit SPI Flash Memory
Watchdog Timer	1 to 65536 sec. software programmable and can be generate system reset
Hardware Monitor	CPU temperature System temperature System voltage CPU fan speed
Operating Systems	Microsoft® Windows® 10 64-bit Microsoft® Windows® 11 64-bit Ubuntu 20.04.06
I/O Interfaces	
M.2	1x M.2 M-Key, 2280, support PCIe Gen4 x4
SATA	6x SATA 3.0 onboard with RAID support
Serial Ports	2x RS-232 via onboard 2.0 pitch box header 2x RS-232/422/485 with auto flow control via onboard 2.0 pitch box header
Expansion Slots (Via backplane)	1x PCIe x16 with Intel® PCIe slot bifurcation support and can be configured to: 1x PCIe x16 or 2x PCIe x8 to backplane (based on backplane) 1x PCIe x4 to backplane 4x PCI to backplane
I/O Interfaces	
USB	3x USB 3.2 Gen2 x1 ports (10Gbps) on rear I/O 6x USB 3.2 Gen1 x1 via onboard box headers 1x USB 3.2 Gen1 x1 vertical type A port 4x USB 2.0 to backplane
Parallel Port	1x LPT box header
Audio	1x box header for audio module DB-Audio2
DIO	1x box header for 8-bit in and 8-bit out
Ethernet	LAN1: Intel® I226-V via RJ45 LAN2: Intel® I226-LM via RJ45
TPM	INFINEON TPM SLB 9670XQ2.0 or 9670VQ2.0
Audio	
Audio Codec	Realtek® ALC262 support by DB-Audio2 daughter board
Interface	Intel® High Definition Audio via onboard box header
Graphics	
Graphics	Integrated Intel® HD Graphics series, based on CPU for different GPU
HDMI	1x HDMI on rear I/O, resolution up to 4096 x 2160 @ 60Hz
DVI-D	1x DVI-D via onboard pin header, resolution up to 1920 x 1200 @ 60Hz
VGA	1x VGA via onboard pin header, resolution up to 1920 x 1200 @ 60Hz
Mechanical and Environmental	
Form Factor	Full-sized PICMG® 1.3 system Host Board
Dimension	338 mm x 126 mm (L x W)
Operating Temperature	0 °C to 60 °C
Storage Temperature	-40°C to 80°C
Relative Humidity	
	5% to 95%, non-condensing
Certification	
	CE & FCC Class A

Product Illustration



Block Diagram



CPU Support List

Family	Number	CPU Core	Frequency	Cache	Processor Base Power	Since BIOS
Alder Lake	i9-12900E	16 Cores	5.0 GHz	30 MB	65 W	1.00.10
Alder Lake	i9-12900TE	16 Cores	4.8 GHz	30 MB	35 W	1.00.10
Alder Lake	i7-12700E	12 Cores	4.8 GHz	25 MB	65 W	1.00.10
Alder Lake	i7-12700TE	12 Cores	4.7 GHz	25 MB	35 W	1.00.10
Alder Lake	i7-12700	12 Cores	4.9 GHz	25 MB	65 W	2.03.10
Alder Lake	i5-12500E	6 Cores	4.5 GHz	18 MB	65 W	1.00.10
Alder Lake	i5-12500TE	6 Cores	4.3 GHz	18 MB	35 W	1.00.10
Alder Lake	i5-12500	6 Cores	4.6 GHz	18 MB	65 W	2.03.10
Alder Lake	i5-12400	6 Cores	4.4 GHz	18 MB	65 W	2.03.10
Alder Lake	i3-12100E	4 Cores	4.2 GHz	12 MB	60 W	1.00.10
Alder Lake	i3-12100TE	4 Cores	4.0 GHz	12 MB	35 W	1.00.10
Alder Lake	i3-12100	4 Cores	4.3 GHz	12 MB	60 W	2.06.10
Alder Lake	G7400E	2 Cores	3.6 GHz	6 MB	46 W	1.00.10
Alder Lake	G7400TE	2 Cores	3.0 GHz	6 MB	35 W	1.00.10
Alder Lake	G6900E	2 Cores	3.0 GHz	4 MB	46 W	1.00.10
Alder Lake	G6900TE	2 Cores	2.4 GHz	4 MB	35 W	1.00.10
Raptor Lake	i9-13900E	24 Cores	5.2 GHz	36 MB	65 W	2.03.10
Raptor Lake	i9-13900TE	24 Cores	5.0 GHz	36 MB	35 W	2.03.10
Raptor Lake	i9-13900	24 Cores	5.6 GHz	36 MB	65 W	2.03.10
Raptor Lake	i7-13700E	16 Cores	5.1 GHz	30 MB	65 W	2.03.10
Raptor Lake	i7-13700TE	16 Cores	4.8 GHz	30 MB	35 W	2.03.10
Raptor Lake	i7-13700	16 Cores	5.2 GHz	30 MB	65 W	2.03.10
Raptor Lake	i7-13700T	16 Cores	4.9 GHz	30 MB	35 W	2.03.10
Raptor Lake	i5-13500E	14 Cores	4.6 GHz	24 MB	65 W	2.03.10
Raptor Lake	i5-13500TE	14 Cores	4.5 GHz	24 MB	35 W	2.03.10
Raptor Lake	i5-13500	14 Cores	4.8 GHz	24 MB	65 W	2.03.10
Raptor Lake	i5-13500T	14 Cores	4.6 GHz	24 MB	35 W	2.03.10
Raptor Lake	i5-13400E	10 Cores	4.6 GHz	20 MB	65 W	2.03.10
Raptor Lake	i3-13100E	4 Cores	4.4 GHz	12 MB	60 W	2.03.10
Raptor Lake	i3-13100TE	4 Cores	4.1 GHz	12 MB	35 W	2.03.10
Raptor Lake	i3-13100	4 Cores	4.5 GHz	12 MB	60 W	2.03.10
Raptor Lake	i3-13100T	4 Cores	4.2 GHz	12 MB	35 W	2.03.10
Raptor Lake Refresh	i9-14900	24 Cores	5.8 GHz	36 MB	65 W	2.06.10
Raptor Lake Refresh	i9-14900T	24 Cores	5.5 GHz	36 MB	35 W	2.06.10
Raptor Lake Refresh	i9-14901E	8 Cores	5.6 GHz	36 MB	65 W	2.06.10
Raptor Lake Refresh	i9-14901TE	8 Cores	5.5 GHz	36 MB	45 W	2.06.10
Raptor Lake Refresh	i7-14700	20 Cores	5.4 GHz	33 MB	65 W	2.06.10
Raptor Lake Refresh	i7-14700T	20 Cores	5.2 GHz	33 MB	35 W	2.06.10
Raptor Lake Refresh	i7-14701E	8 Cores	5.4 GHz	33 MB	65 W	2.06.10
Raptor Lake Refresh	i7-14701TE	8 Cores	5.2 GHz	33 MB	45 W	2.06.10
Raptor Lake Refresh	i5-14500	14 Cores	5.0 GHz	24 MB	65 W	2.06.10
Raptor Lake Refresh	i5-14500T	14 Cores	4.8 GHz	24 MB	35 W	2.06.10
Raptor Lake Refresh	i5-14501E	6 Cores	5.2 GHz	24 MB	65 W	2.06.10
Raptor Lake Refresh	i5-14501TE	6 Cores	5.1 GHz	24 MB	45 W	2.06.10
Raptor Lake Refresh	i5-14401E	6 Cores	4.7 GHz	24 MB	65 W	2.06.10
Raptor Lake Refresh	i5-14401TE	6 Cores	4.5 GHz	24 MB	45 W	2.06.10
Raptor Lake Refresh	i3-14100	4 Cores	4.7 GHz	12 MB	60 W	2.06.10
Raptor Lake Refresh	i3-14100T	4 Cores	4.4 GHz	12 MB	35 W	2.06.10