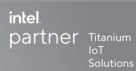
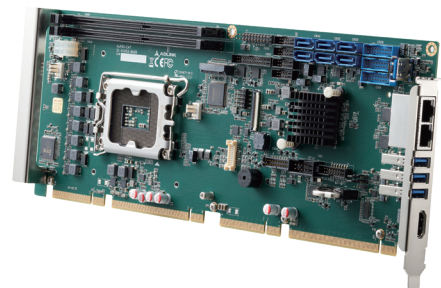


NuPRO-E47

12/13th Gen Intel® Core™ processors
 based PICMG 1.3 Full-size SBC with
 Intel® Q670E chipset



Features

- 12/13th Gen Intel® Core™ i7/i5/i3 processor
- 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

Ordering Information

- NuPRO-E47
 PICMG® 1.3 Full-Size LG1700 with 12th Generation
 Intel® Core™ i9/i7/i5/i3 Processor-based SHB
 Note: CPU, Memory module and Cooler kit are not included

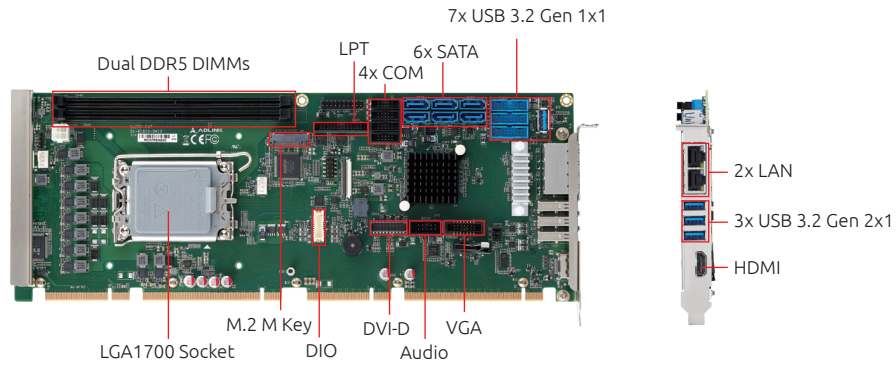
Packing Lists

- NuPRO-E47
- 2x SATA data cable
- 1x 2-port USB 3.0 cable with bracket
- 1x 2-port COM cable with bracket
- 1x print port cable with bracket

Optional Accessories

- | | |
|--|------------------|
| • DB-Audio2
High definition audio | 91-49030-0010 |
| • LGA1700 1U CPU cooler | 32-21002-0000-A0 |
| • LGA1700 2U CPU cooler | 32-20976-1000-A0 |
| • DVI-D/VGA cable with bracket | 30-25309-0000-A0 |
| • 4-port USB 3.0 cable with bracket | 30-25305-0020-A0 |
| • 2-port USB 3.0 cable (right angle)
with bracket | 30-25046-0110-A0 |
| • 1-port COM cable with bracket | 30-25003-2100 |
| • DIO cable with bracket | 30-25304-0000-B0 |

Product Illustration



Specifications

Processor System	CPU	Intel® 12/13th Gen Core™ i9/i7/i5/i3 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
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

Specifications

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® I225-V via RJ45 LAN2: Intel® I225-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	Form Factor	Full-sized PICMG® 1.3 system Host Board
Environmental	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	

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	65 W	1.00.10
Alder Lake	i3-12100TE	4 Cores	4.0 GHz	12 MB	35 W	1.00.10
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	65 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