

Article-No.: 145879

Calmo R4 19" Industrieserver

i5-12400, 8GB, 250GB SSD, W10IoT

Technical data

Processor

manufacturer	Intel®
marking	Core™ i5
type	12400
cpu socket	LGA1700
cores	6
Performance Cores	6
threads	12
clock rate	2,50 GHz
clock rate (Power Core)	4,40
max. clock frequency with Intel® Turbo Boost technology	4,40 GHz
L2 Cache	7500 KB
L3 Cache	18 MB
smartCache	18 MB
bit set	64 bit
max. TDP	65 Watt
max. TDP Turbo	117 Watt
processor graphic	Intel® UHD Graphics 730
Intel® Hyper-Threading Technology	yes
Intel® Virtualization Technology (VT-x)	yes

Operating system

installed operating system	Windows® 10 IoT Enterprise 2021 LTSC Value
hint	Important Note: It is not allowed to use Windows IoT software as office- or home-system. Please check the microsoft license terms: https://www.microsoft.com/en-us/Useterms/

Main storage

size	8 GB
technology	DDR5 DIMM
form factor	SIMM
connector	288-pole
speed	4800 MHz

Hard disk

memory capacity	250 GB
type	SSD
frame size	2,5"
interface	SATA3 with 6 Gb/s



Highlights

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Running gear

optical drive	DVD-RW slimline
type	intramural
frame size	5.25" slimline
overall height	12,7
cut surface	SATA

Mainboard Industry

manufacturer	Kontron®
marking	New List Value
form factor	ATX
socket	LGA1700
hint	CPU's of the 12th and 13th generation are supported up to a maximum of 125W TDP
chipset	Intel® R680E
working memory max.	4x DDR5 PC4800, max. 128 GB (optional ECC)
memory max. size	128 GB
memory Slots	4
memory Technology	DDR5-UDIMM
graphic onBoard	New List Value
max. resolution DisplayPort	7,680 x 4,320 pixels @60Hz (DisplayPort 1.4a)

network

network chipset I	Intel® i219LM
transmission rate	10/100/1000 Mbps
network chipset II	Intel® i225LM
transmission rate	10/100/1000/2500 MBit/s
PXE support	yes
Wake on LAN (WOL) support	yes
iAMT	yes
Auto-Power-On function	yes

audio

audio chipset	Tempo 92HD91B
sound mode	5.1-channel high definition

rear interfaces

USB 3.2	6
USB 3.2 Typ C	1
DisplayPort	4
LAN (RJ-45)	3
audio	line-in, line-out, microphone
serial	1



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expansion slots	1x PCIe® x16 5.0, 1x PCIe® x16 (at x4) 4.0, 1x PCIe® x8 (at x4) 4.0 "open slot", 1x PCIe® x8 (at x4) 3.0 "closed slot", 2x PCIe® x1 3.0 "open slot", 1x PCI, 2x M.2 NVMe Key-M 2230/2242/2280 incl. NVMe RAID, M.2 Key-E 2230
expansion slots	
PCI Express x16 5.0	1
PCI Express x16 (at x4)	1
PCI Express x8 (at x4)	2
PCI Express x1	2
PCI	1
M.2 Key-M PCIe NVMe	2
M.2 Key-E WLAN	1
internal interfaces	
USB 3.2 Gen1 (5Gbit/s)	1
USB 2.0	1
USB 2.0 stick	1
USB 3.1 stick	1
serial	3
Trusted Platform Module (TPM)	yes (TPM 2.0)
GPIO	8-bit I/O
S/PDIF	yes
SATA3 (6Gb/s)	4
RAID SATA3 onBoard	0/1/5/10
24-hour continuous operation	yes
available until	2027
Housing Industry	
manufacturer	CHENBRO®
type	4 HE
form factor	ATX
front interface USB 3.0	2
power switches	yes
reset switch	yes
5,25" external	3
3.5" external	1
3.5" internal	4
front fan quantity	1
front fan size	120 x 120 mm
hint:	Fan included in delivery
rear fan quantity	2

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rear fan size	80 x 80 mm
hint	Fan optionally available
particularity	incl. card holder, rubber-mounted drive basket, front filter
safety	lockable 2-door front flap, intrusion switch
degree of protection	IP 20
color	black/silver
dimensions (W x H x D)	430 x 176 x 445 mm

Power supply

manufacturer	Fortron
form factor	ATX
type	intramural
power	350 Watt
24/7 suitable	yes
refrigeration	energetic
fan type	120 x 120 mm
input voltage range	100 - 240V AC V
current draw	6 - 3 A
certification	80 PLUS Gold
efficiency at 100% of rated power	89,19 %
efficiency at 50% of rated power	90,45 %
efficiency at 20% of rated power	88,41 %
efficiency at 10% of rated power	82,35 %
power switches	yes
molex Connector	1
floppy Connector	1
SATA Connector	4
4-pin connector	1
ATX24 Pole	1
width	150 mm
hight	86 mm
deepth	140 mm
heart rate	50 - 60 Hz
FCC	yes
TÜV	TÜV Rheinland
cRU	Yes
RoHS	yes

Service

Service	2 years Bring-In
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Mainboard Accessories

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Slot bracket extension

slot bracket extension	1x serial (slot bracket with 9pin serial plug)
interface	internal 2mm COM

System

Ambient conditions

operating temperature	-10°C to 50°C Cold boot at -40°C tested several times, permanently stable at -10°C
atmospheric humidity	0% to 90% (non-condensing)

Certifications

conformance	CE
grade	EXTRA Computer has a quality management system which is certified according to DIN ISO 9001

Service note