

Article-No.: 145881

Calmo R4 19" Industrieserver

i7-12700, 16GB, 250GB SSD

Technical data

Processor

manufacturer	Intel®
marking	Core™ i7
type	12700
cpu socket	LGA1700
cores	12
Performance Cores	8
Efficient Cores	4
threads	20
clock rate	2,10 GHz
clock rate (Power Core)	4,80
clock rate (Efficient Core)	3,60
max. clock frequency with Intel® Turbo Boost technology	4,90 GHz
L3 Cache	25 MB
bit set	64 bit
max. TDP	65 Watt
max. TDP Turbo	180 Watt
processor graphic	Intel® UHD Graphics 770
Intel® Hyper-Threading Technology	yes
Intel® Virtualization Technology (VT-x)	yes
ECC memory support	yes

Main storage

size	16 GB
technology	DDR5 DIMM
form factor	DIMM
connector	288-pole
speed	4800 MHz

Hard disk

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

Running gear

optical drive	DVD-RW slimline
type	intramural
frame size	5.25" slimline



Highlights

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overall height	12,7
cut surface	SATA
Mainboard Industry	
manufacturer	Kontron®
marking	New List Value
form factor	ATX
socket	LGA1700
hint	CPUs 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
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



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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
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

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

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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