

Article-No.: 145877

Calmo R4 19" Industrieserver

i5-12400, 8GB, 250GB SSD, W11Pro

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® 11 Pro 64-bit |
|----------------------------|------------------------|

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 |

Running gear

| | |
|---------------|-----------------|
| optical drive | DVD-RW slimline |
|---------------|-----------------|



Highlights

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| | |
|-----------------------------|---|
| 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 |
| 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 |



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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 |
| rear fan size | 80 x 80 mm |
| hint | Fan optionally available |
| particularity | incl. card holder, rubber-mounted drive basket, front filter |

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| | |
|-----------------------------------|--|
| 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 |
| high | 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 |

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

Service note