

Article-No.: 122688

Calmo M G9

i3-9100, 4GB, 120GB SSD

Der zuverlässige Begleiter für anspruchsvolle Industrieanwendungen

Reliable and fail-safe hardware in the professional environment is trumps. Therefore, for demanding applications and control systems, rely on the Calmo M. With its sophisticated housing and Kontron industrial mainboards, it is the first choice for customers who need a reliable PC for continuous operation in production environments. The easily accessible SSDs and the tool-free service option industrial hardware at the highest level - developed and manufactured in Germany.

Technical data

Processor

manufacturer	Intel®
marking	Core™ i3
type	9100
cpu socket	FCLGA1151
cores	4
threads	4
clock rate	3,60 GHz
max. clock frequency with Intel® Turbo Boost technology	4,20 GHz
smartCache	6 MB
bit set	64 bit
max. TDP	65 Watt
processor graphic	Intel® UHD Graphics 630
Intel® Virtualization Technology (VT-x)	yes
ECC memory support	yes

Main storage

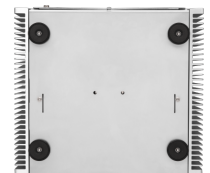
size	4 GB
technology	DDR4 SO-DIMM
form factor	SO-DIMM
connector	260-pole
speed	2666 MHz

Hard disk

memory capacity	120 GB
type	M.2 2280 NVMe® PCIe@3.0x4
interface	M.2 PCIe® 3.0 x4 with max. 32 Gb/s (NVMe®)

Mainboard Industry

manufacturer	Kontron®
marking	D3633-S
form factor	Mini-ITX
socket	LGA1151
hint	supports 8th and 9th generaion CPUs
chipset	Intel® Q370



Highlights

- Tool-free maintenance
- Fanless and rugged
- Developed and manufactured in Germany
- Available until 2025



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working memory max.	2x SO-DIMM DDR4 PC2400/2666, max. 32 GB (supports dual channel memory architecture)
memory max. size	32 GB
memory Slots	2
memory Technology	DDR4-SDRAM
graphic onBoard	Intel® UHD Graphics, DirectX12 support (with appropriate CPU)
max. resolution DisplayPort	3,840 x 2,160 pixels @60 Hz
network	
network chipset I	Intel® i219LM
transmission rate	10/100/1000 Mbps
network chipset II	Intel® i210AT
transmission rate	10/100/1000 Mbps
PXE support	yes
Wake on LAN (WOL) support	yes
audio	
audio chipset	Realtek ALC 671
sound mode	5.1-channel high definition
rear interfaces	
USB 3.1	2
USB 3.0	2
USB 2.0	4
PS/2	2
DVI-D	1
DisplayPort	2
LAN (RJ-45)	2
audio	line-in, line-out
serial	1
expansion slots	1x PCIe® x16 3.0, 1x miniPCIe® (half-size/full-size), 1x PCIe® M.2-SATA (2242, NVMe®)
expansion slots	
PCI Express x16 3.0	1
M.2 Key-B SATA	1
internal interfaces	
USB 3.0	1
USB 2.0	1
USB 3.1 stick	1
RS-232/422/485	1
Trusted Platform Module (TPM)	yes
GPIO	8-bit I/O
LVDS	yes



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backlight inverter	yes
S/DPDIF	yes
SATA3 (6Gb/s)	4
RAID SATA3 onBoard	0/1/5/10
24-hour continuous operation	yes

Housing Industry

manufacturer	exone
form factor	Mini-ITX
power switches	yes
reset switch	no
5,25" external slimline	no
2.5" internal	2
fanless	yes
degree of protection	IP 50
color	silver
dimensions with feet (W x H x D)	260 x 93 x 237 mm
dimensions without feet (W x H x D)	260 x 87 x 237 mm

Housing Industry Accessories

Front module

Power supply

manufacturer	Fortron
form factor	outboard
type	External industry
power	84 Watt
24/7 suitable	yes
refrigeration	unfavourable
particularity	with pull-off-proof screw plug
Suitable for	Calmo S, M, UNI Pro, UNI Ryzen
input voltage range	90 - 264V AC V
certification	80 PLUS Bronze
efficiency level	VI
output voltage	12 V
output voltage Ampere	7 A
polarization	DC
hollow plug Outer diameter	5,5 mm
hollow plug Depth	12 mm
plug for external power supply unit	Hollow plug 5,5 mm x 2,5 mm x 12 mm
hollow plug inner	2,5 mm

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diameter	
hollow plug Polarity	Plus inside
hollow plug angle	180°
current supply	IEC14 connector (10A)
operating temperature range	0°C to 70°C
storage temperature range	20°C to 80°C
width	108 mm
hight	30 mm
deepth	49,2 mm
CCC	yes
TÜV	TÜV GS

Service

Service	2 years Bring-In
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KIOSK

KIOSK

KIOSK	BIOS will throttle CPU to 25W TDP
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Mainboard Accessories

Slot bracket extension

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

System

Energy measuring

Consumption in idle mode (S0)	12,62 Watt
Consumption in standby (S3)	1,28 Watt
Soft-Off consumption (S5)	0,34 Watt
TEC	57,19 kWh

Ambient conditions

noise emission	0 dB(A)
operating temperature	5°C to 55°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

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Service note