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# BitHeat Model One



PRODUCT DATA SHEET

bitheat\_model\_one | Rev. 1.0

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## Product Description

BitHeat is a compact, modular cloud-edge computing system featuring six server slots and scalable performance of up to 3.2 kW. The plug-and-play module can be installed within existing building structures without the need for additional floor sealing. All electricity is preferentially sourced from locally generated renewable energy.

The servers operate in a sealed immersion oil cooling loop, allowing particularly efficient heat dissipation. The resulting waste heat is transferred to the heating network via a highly efficient heat exchanger; the heated water reaches 55–60 °C and can be used immediately for space heating, hot water supply, or industrial process heat.

The modular design is compatible with conventional heating technologies – heat pumps, district heating, or gas systems. BitHeat covers the base load, while the existing heating system handles peak demand. By being placed decentrally within the building, a closed loop of local energy generation, data processing, and heat recovery is created. This reduces transmission losses, strengthens digital sovereignty, and improves the CO<sub>2</sub> balance for all users requiring an energy-efficient, secure edge-computing solution.



## Product Features

- Decentralised Edge Computing Architecture – reduced latency and optimised real-time applications through local data processing
- Optional Software Stack – preconfigured with Proxmox and Ceph; optional BaaS deployment available
- Full Data and Operational Sovereignty – data remains on-site, protected by physical security and access controls
- Intuitive Smart Dashboard – app- and web-based interface for monitoring, remote maintenance, and LED status feedback
- Compatible with Existing and New Buildings – ready to operate with standard heat generators (e.g., heat pumps, district heating, gas)
- “Place Everywhere” – flexible installation in any room with connection to the heating circuit
- Plug-and-Play Integration – simple connection to existing heating circuits for immediate use of waste heat in heating and hot water applications
- Maximum Operational and Environmental Safety – reinforced double-walled construction

**Technical Specifications**

<b>Mechanical Data</b>	<b>Dimensions (L × W × H)</b>	645 x 610 x 1225 mm
	<b>Footprint</b>	0,39 m <sup>2</sup>
	<b>Unladen Weight</b>	200 kg
	<b>Total Weight</b>	297 kg
	<b>Maximum Immersion Fluid Capacity</b>	120 l
	<b>Load Bearing Points</b>	4
	<b>Max. Surface Load</b>	0,234 N/mm <sup>2</sup>
<b>Electrical Data</b>	<b>Rated Voltage</b>	230 V
	<b>Mains Frequency</b>	50 Hz
	<b>Max. Connected Load</b>	3,2 kW
	<b>Connection Type</b>	Hardwired
	<b>Protection Class</b>	1
	<b>Protection Rating</b>	X0
<b>IT Data</b>	<b>Max. Number of Servers</b>	6 Stück
	<b>Max. Rack Units</b>	3 Stück
	<b>Form Factor</b>	1 HE
	<b>Max. Width</b>	19 Zoll
	<b>Max. Installation Depth</b>	897 mm
	<b>Max. RAM</b>	9.216 GB
	<b>Max. Storage</b>	48 TB
	<b>Optional Storage</b>	on request
	<b>CPU</b>	Intel® Xeon® und AMD EPYC™
	<b>GPU</b>	Prepared hardware-side, GPU models on request
<b>Max. TDP</b>	250 W	
<b>Immersion Fluid</b>	<b>Typ</b>	Synthetic Fluid
	<b>Max. Operating Temperature</b>	65 °C
<b>Hydraulic Data</b>	<b>Primary Circuit Fluid</b>	Synthetic Immersion Fluid
	<b>Operating Temperature Primary Circuit</b>	60 °C
	<b>Max. Operating Pressure Primary Circuit</b>	0,5 bar
	<b>Secondary Circuit Fluid</b>	Heating water per VDI 2035 or equivalent
	<b>Max. Output Temperature Secondary Circuit</b>	55 °C
	<b>Max. Operating Pressure Secondary Circuit</b>	10 bar
	<b>Flow Connection Thread</b>	ISO 228 – 1" internal thread
<b>Return Connection Thread</b>	ISO 228 – 1" internal thread	
<b>Environmental Conditions</b>	<b>Installation Location</b>	Indoor
	<b>Recommended Ambient Temperature</b>	+15 bis +25 °C
	<b>Permissible Ambient Temperature</b>	+5 bis +40 °C
	<b>Air Quality</b>	Free from dust and other contaminants
	<b>Relative Humidity</b>	5-80 %, non-condensing
	<b>Max. Permissible Vibration (Operation)</b>	0,7 mm/s
	<b>Max. Shock/Impact (Transport)</b>	15 g
	<b>Max. Noise Level</b>	50 dB SPL

## Dimension Sheet

