

Edge computing platform powered by a Raspberry CM4 or CM5

Connectivity:

1x HDMI
 1x USB3.0 (USB-A), 1x USB3.1 (USB-C)
 2x Gb-Eth
 2x CSIx2
 1x RS232/422 (software selectable)
 2x SD-card
 2x SIM slot
 1x switchable power out

Industrial connectivity and computing platform with optional support for 4G/5G, LTE-M/NB-IoT (Satellit), satellite internet (GEO, LEO) and LoRa- gateway functionality.

Power in:

9V - 24V

Perseus Controller

The Perseus Controller is developed in Leipzig, Germany and manufactured by local partners. Our engineers customize the Debian-based software to meet specific customer needs and uphold high security standards. By using the Raspberry Pi ecosystem, customers benefit from a global developer community for system customization.

The modular design keeps costs low while ensuring optimal performance and connectivity, and allows for easy upgrades without replacing the entire hardware.



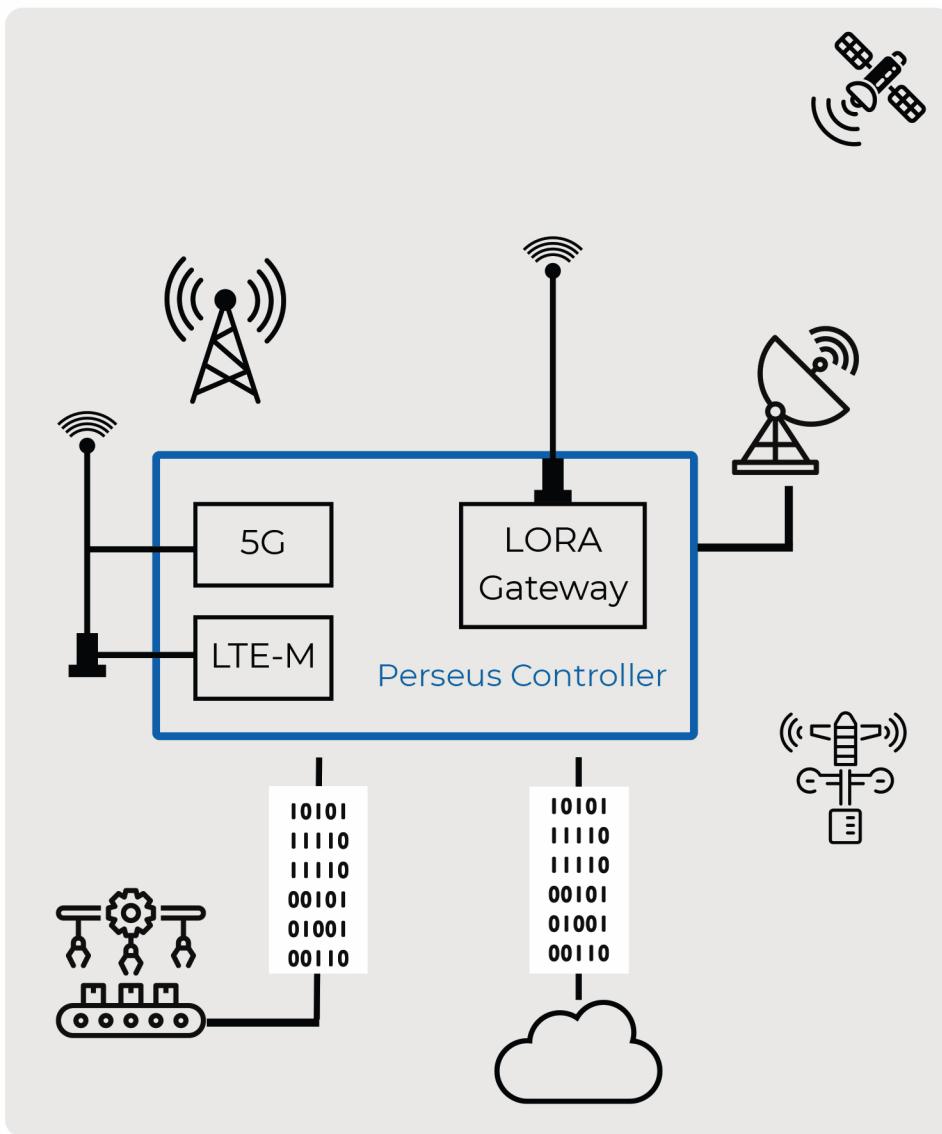
Features

- ✓ Fully customizable industrial edge computing platform
- ✓ Compatible with many third party M.2 extensions
- ✓ Custom EPAK extensions for EtherCAT or LoRa gateway functionality, further extensions on request
- ✓ External interfaces allow easy integration into existing industrial designs

- ✉ info@epak.de
- 📞 +49 341 2120270
- 🌐 www.epak.de

Perseus Controller

Your smart control center - USE CASES



Example Configuration

Perseus Controller with Raspberry CM5

5G module | LTE-M

LoRa EPAK LoRa Gateway module with 5G NTN support

Kymeta Hawk U8 Flat Panel VSAT Terminal

Field Sensor

Machine

Benefits

- Flexible I/O interfaces and extension modules allow easy adaptation to specific industry needs
- Robust failover paths via NB-IoT or satellite connectivity
- Edge computing enables pre-processing, encryption, and bandwidth conservation

Use Case Szenario 1:

Remote Energy Infrastructure (Smart Grid)

Enabling connectivity at distributed energy sites, like substations or solar installations in rural areas.

Perseus aggregates data from smart meters and sensors over LoRa, processes it at the edge, and sends summaries over LTE-M/NB-IoT or 5G NTN via satellite, depending on network availability.

This hybrid approach ensures reliable reporting of consumption, generation, and grid status—even in areas lacking traditional telecom infrastructure.

Use Case Szenario 2:

Mobile Healthcare in Remote Regions

Supporting doctors or medical teams conducting house visits in rural areas.

Perseus ensures secure, real-time access to patient records and hospital systems via 5G or LEO satellite. Medical devices connect via USB or serial ports, with data processed and encrypted locally on the CM5 platform—fully GDPR-compliant. The system supports live video consultations, while its rugged design and satellite fallback guarantee uninterrupted service in the field.