06/2026

endrich NEWS

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Award-Winning NeoMesh USB Gateway for Single Board Computers

The NeoMesh USB Gateway, developed by endrich, has been honored as a Winner of the "Product of the Year 2026" award by the trade magazine Elektronik. We would like to express our sincere thanks to all readers who voted for us — your support is highly appreciated.

This compact USB dongle enables seamless connectivity between Single Board Computers (SBC), tablet PCs, legacy PCs and NeoMesh networks. With minimal software configuration, the host device can operate as a NeoMesh-to-Internet gateway, forwarding data from the mesh network to the cloud via existing internet connections such as Ethernet or Wi-Fi.

The solution is based on proven sub-GHz NeoMesh technology, operating in the 868 MHz band (Europe) and 915 MHz band (US), ensuring reliable long-range and low-power communication. Importantly, the product is fully CE-RED and FCC compliant and certified, enabling immediate deployment in both European and North American markets.

Designed for rapid prototyping, small-scale deployments and educational use, the gateway offers a simple yet powerful entry point into professional IoT mesh networking.

The product and its ecosystem were showcased at Embedded World 2026, demonstrating robust, scalable and energy-efficient wireless connectivity solutions for next-generation IoT applications.

Internet connectivity

The NeoMesh gateway software on the SBC aggregates data from the local network, formats the data as JSON and transmits it to the cloud via Ethernet or Wi-Fi.

SubGHz NeoMesh

The USB device captures NeoMesh radio signals in the 868 MHz (EU) and 915 MHz (US) bands, interfacing them with a SBC to enable gateway functionality.

SubGHz NeoMesh USB unit

The USB gateway supports NeoMesh operation in the 868 MHz (EU) and 915 MHz (US) sub-GHz bands, enabling flexible integration across diverse wireless environments.

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Vision components (VC) camera modules & vision systems

VC's camera modules and vision systems are successfully used across a wide range of industries and applications – in measurement technology, automation and quality assurance, as well as in robots, smart home appliances and smart city solutions, drones and special-purpose vehicles, medical technology and laboratory equipment. Here, we highlight some of the projects and companies that rely on our OEM components for embedded vision.

Standalone diagnostic glasses with MIPI cameras & embedded vision

The world's first wireless video oculography system utilises embedded vision with VC MIPI cameras and a Raspberry Pi processor board. This allows the glasses to operate entirely independently of a PC. With high image resolution and a frame rate of 500 fps, they deliver more precise data and, for the first time, offer combined head and eye tracking in a medical device.

Video eye-tracking system

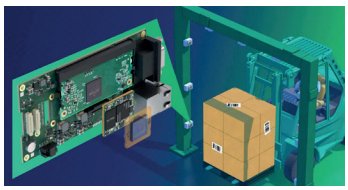
Earth Observation
Satellite Constellation

In space: VC MIPI on a space mission

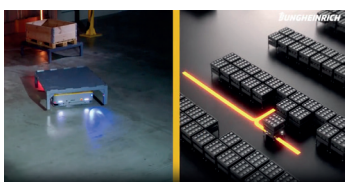
Disasters such as wildfires, floods, storms and volcanic eruptions pose a threat to people and the environment and cause significant economic damage. The solution: a network of nanosatellites for photogrammetric Earth observation, equipped with integrated VC MIPI cameras. In space, the satellites form a formation that allows them to capture data on the same locations, objects or weather phenomena from different angles.

Barcode scanner with FPGA accelerator

The scanner incorporates several embedded vision systems featuring the VC Power SoM FPGA accelerator, which receives the raw image data. The images are analysed within the FPGA, and areas containing barcodes are identified in real time. Only these image areas are cropped out and passed on to the processor board.



Scangate with FPGA pre-processing



AMRs in intralogistics
and manufacturing

Precise navigation for autonomous, driverless transport vehicles (AMR): millimetre-accurate with VC MIPI cameras

VC MIPI camera modules read pre-calibrated floor markers and enable highly accurate alignment in confined spaces – such as when entering or moving under a transport rack. Thanks to the MIPI CSI-2 standard, they are fully compatible with the NVIDIA processor platform of the Robot Control Unit.

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A gentle approach to chaos: 3D recognition system for component retrieval

An embedded vision system detects irregularly stacked and unsorted components and ensures they are removed gently and in the correct orientation. The system uses an intelligent camera based on the VCSBC6211nano-RH from Vision Components. With a processing power of 5,600 MIPS and compact dimensions of just 40 x 60 mm, it is particularly suitable for applications with limited installation space.

Pick & Place:
Brake disc removal

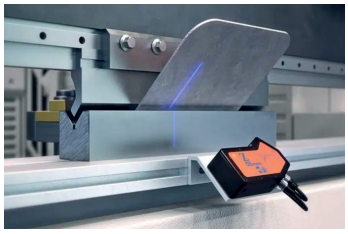
NIR 3D People Detection

Greater workplace safety: Driver assistance system with embedded vision

The challenge: avoiding blind spots. The first driver assistance system capable of detecting people wearing reflective safety clothing. Thanks to embedded vision technology, it operates independently, is particularly compact and fail-safe. It can also be linked directly to the vehicle's control system.

Angle measurement in sheet metal bending: real-time inline inspection

The VC nano 3D-Z light section sensor forms the basis of the optical in-line inspection system, which can be installed on either side of the die. The compact unit consists of a laser triangulation module and an intelligent camera. It measures the bending angle between the workpiece and the die in real time and compares the values with a programmed reference value. Thanks to its large detection range, different dies can be accommodated without the need to alter the laser sensor's mounting.



3D angle measurement during die pressing

Smart laser cutting sensor

Fully automated robot guidance for arc welding

During the welding process, joint cross-sections are measured and the seam position and gap dimensions are determined. The data is pre-processed directly within the camera and transmitted to the robot controller in real time. The laser cutting camera combines the VCSBC nano Z-RH circuit board camera with a high-performance line laser module and specialised evaluation software. Programming is carried out directly via the handheld programming device.

NOTAVIS vision for OEM

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Temperature sensors for medical devices

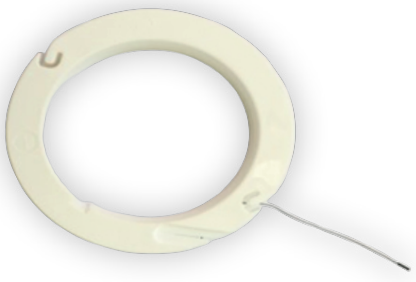
In modern medical devices, temperature measurement is far more than a simple sensing task – it is a safety-critical function within the overall system.

Whether used for patient monitoring, therapy, diagnostics, or internal device supervision, the choice of the right temperature sensor has a direct impact on accuracy, long-term stability, and regulatory approval. Our temperature sensors meet these demanding requirements.

Optimized Electrical and Mechanical Integration

Simple, safe, and space-efficient integration is essential – especially for compact medical devices:

- Choice of proven sensor technologies
  - NTC / PTC thermistors for high accuracy in narrow temperature ranges
  - RTDs (e.g. PT100 / PT1000) for maximum precision and long-term stability
  - Optional digital temperature sensors for simplified signal processing
- Mechanical flexibility
  Various package designs, housing materials and connection options allow adaptation to virtually any device concept
- Compatible with modern medical devices electronics
  - Analog or digital interfaces (e.g. I²C)
  - Low power consumption – ideal for battery powered systems
  - EMC-robust signal behavior for sensitive environments



FEATURES

- Traceable measurement results and calibration options
- High accuracy, optimized for medically relevant temperature ranges
- Long-term stability and minimal drift
- Reliability in continuous operation
- Fast and well-defined response times
- Custom size tube and wire configuration
- Small size
- Improved moisture protection

APPLICATIONS

- Patient monitoring and vital sign acquisition
- Incubators and thermal therapy systems
- In-vitro diagnostics and laboratory equipment
- Dialysis, ventilation and infusion systems
- Internal temperature monitoring of medical devices

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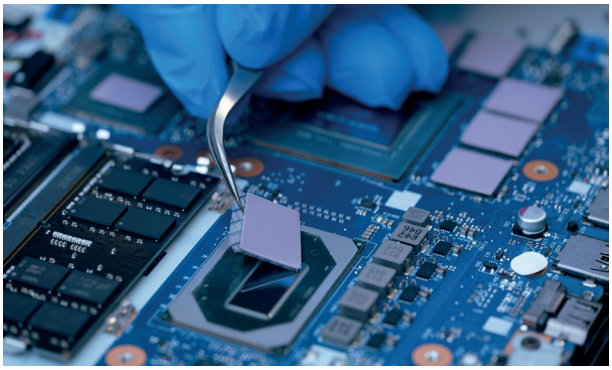
EWS

COOLPhase – Intelligent thermal managment

The COOLPhase® phase-change thermal pads from Celera Fibras set new standards in the field of thermal interface materials. As a distributor, Endrich brings this innovative solution directly to you – for reliable performance in demanding applications.

Why COOLPhase®?

COOLPhase® is based on a highly developed polymer matrix with exceptional wettability. The result: significantly reduced thermal contact resistance between heat-generating and heat-dissipating components.



A key advantage becomes apparent during operation: At temperatures between 50 °C and 60 °C, the material softens and adapts perfectly to surfaces. This eliminates even the smallest air gaps – ensuring maximum and stable heat transfer.

Unlike traditional thermal pastes, COOLPhase® remains reliable and resistant to ageing over the long term.

FEATURES

- High thermal conductivity (up to5,5 W/mK)
- Extremely low contact resistance
- Self-adapting material due to phase-change effect
- Simple and clean installation
- Long service life without drying-out
- RoHS- und REACH-compliant
- customized sizes

APPLICATIONS

- **Industry & electronics**
  IGBTs, MOSFETs, ICs, LEDs, etc.
- **Telecommunications & infrastructure**
  Network technology, servers & antenna systems, IoT devices
- **Automotive & e-mobility**
  Battery management systems (EV) control units (ECUs) & Infotainment inverter, motor controls & drivers

CELERA Passion for Technique

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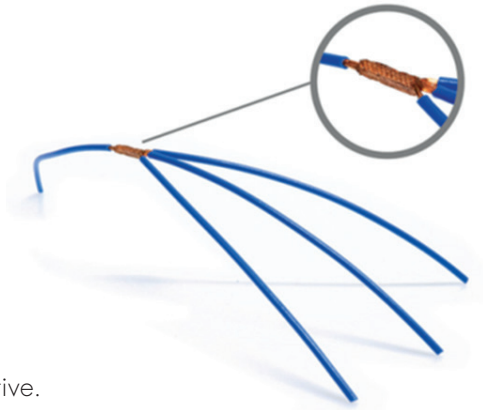
Precision in every connection – Ultrasonically welded copper strands

You can rely on connections that deliver on their promise! Our ultrasonically welded copper strands guarantee maximum electrical conductivity, long-lasting stability and uncompromising quality – designed for the most demanding applications in electrical engineering and mechanical engineering.

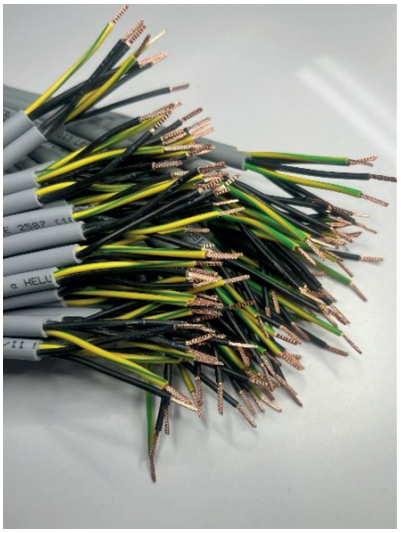
Using state-of-the-art ultrasonic welding technology, the individual strands are welded into a homogeneous, gas-tight joint – without solder, without additives, but with maximum efficiency.

Your benefits:

- Minimal contact resistance for optimal current transmission
- High mechanical strength, even under vibration or temperature fluctuations
- Perfect reproducibility thanks to precise process control
- Sustainable manufacturing without additional materials or emissions



Choose a future-proof technology – powerful, secure and cost-effective.



We support you every step of the way, from development through to series production, and offer bespoke solutions that meet the highest quality standards. By using tried-and-tested materials and state-of-the-art manufacturing technologies, we guarantee maximum reliability, durability and safety – even in sensitive and regulated sectors.

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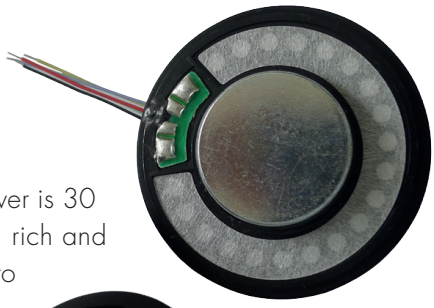
IEWS

Headset earphone core



This is indeed a high-performance microphone and speaker unit that has been specially developed for use in headsets. It is designed for over-earheadphones, where high sound fidelity and wearing comfort are the main priorities.

The nominal impedance is 32 Ω, the nominal power is 20 mW, the maximum power is 30 mW, and the sound pressure level reaches up to 110 dB at 1 kHz. It offers clear, rich and detailed sound reproduction and is therefore particularly well suited for listening to music and making phone calls.

The silicone microphone installed on the top of the speaker is the most outstanding feature of this device. It features a noise-cancelling function and is a key component in improving call quality. It effectively filters out ambient noise, making the other party's voice clearer, whilst simultaneously reducing interference such as wind and breathing sounds, offering users an immersive call experience.

The microphone we have selected is characterised by high performance, low power consumption and a compact design.

Features	
Nominal Impedance	32 ± 15 % Ω (bei 1 kHz)
Power	20 mW (Rated), 30 mW (max.)
Sound output	110 ± 3 dB at 1 kHz (0 dB = 20 µPa) at 178 mV (sine wave), measured using an IEC 318 coupler
Operating temperature	-20 °C to +60 °C
Storage temperature	-20 °C to +60 °C
Construction materials diaphragm	Transparent composite cone
Weight (typical)	17 g
Size	41 mm (diameter) * 14,5 mm (height)
Sound-cancelling microphone	SPW0690LM4H-1

Automotive HDMI/USB protection

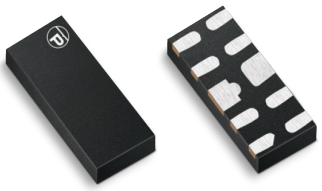
The PAM251033 is an array of control diodes/TVS diodes with extremely low capacitance. This device is designed to protect automotive equipment and systems from the damaging effects of ESD, EFT and other transient surges. The PAM251033 is available in the space-saving DFN-10 package and is rated at 30 Watts peak pulse power per line for a 8/20µs waveshape.

This device meets the IEC 61000-4-2 (ESD), 61000-4-4 (EFT) and 61000-4-5 (Surge) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This device in conjunction with passive components integrated into a TVS/filter network can be used for EMI/RFI protection.

ELECTRICAL CHARACTERISTICS PER LINE						
Part number	Rated stand-off voltage	Reverse trigger voltage min.	Reverse holding voltage min.	Clamping voltage max.	Leakage current max.	Capacitance typ.
PAM251033	3.3 V	3.8 V	3.5 V	10 V	1 A	0.33 pF

APPLICATIONS

- HDMI
- USB 2.0
- USB 3.x



PROTEK DEVICES

FEATURES

- AEC-Q101 qualified
- Compatible with IEC 61000-4-2 (ESD): Air – 15 kV, contact 8 kV
- Compatible with IEC 61000-4-4 (EFT): 40 A – 5/50 ns
- Compatible with IEC 61000-4-5 (Surge): 3 A – 8/20 µs
- 30 Watt peak pulse power per Line (tp = 8/20 µs)
- Protects 4 lines
- Ultra Low Capacitance: 0.33 pF typical (I/O to I/O)
- RoHS compliant

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