PRESS RELEASE

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meteocontrol launches bluelog Neo: a next-generation platform for advanced renewable energy plant control and monitoring

Powerful processing, integrated cybersecurity, and flexible software licensing for increasingly complex renewable energy assets.

Augsburg/Munich – meteocontrol GmbH today introduces bluelog Neo, its new solution for control, monitoring and energy management of PV, battery storage, and hybrid plants. blue'Log Neo was developed for a new reality in the operation of renewable energy infrastructure: plants are becoming larger, more hybrid, and increasingly shaped by regulatory, technical, and economic requirements. The platform combines high processing power, integrated cybersecurity features, and flexible software licensing for advanced applications in plant monitoring, control, and energy management.

bluelog Neo is designed for EPCs, IPPs, plant operators, and O&M service providers that need to reliably implement grid compliance, cybersecurity, availability, and the integration of storage and other technologies in daily operations. With its scalable architecture and flexible licensing model, bluelog Neo provides the technical foundation for the professional operation of complex renewable energy systems.

"The energy transition is entering a new and more demanding phase," said Dr. Stijn Stevens, Managing Director and CTO of meteocontrol GmbH. "The expansion of renewable energy remains essential, but the central challenge is shifting: plants must be controlled securely, operated in compliance with grid requirements, combined with storage and other technologies, and managed efficiently across their full lifecycle. bluelog Neo is our answer for this next stage in the development of renewable energy infrastructure."

Parallel processing for power control, monitoring and EMS

At the core of bluelog Neo is a new hardware architecture that features a quad-core processor, 2 GB of energy-efficient DDR4 RAM memory, and an internal A/B system for fail-safe software updates. This enables parallel processing of monitoring, power control, and energy management functions within a single device.

Two physically separated 1 Gbit Ethernet interfaces create a secure boundary between the internal power plant network and grid-related or external communication systems.

Each interface has an individual MAC address and IP configuration, supporting robust and secure network architectures in utility-scale environments.

The device supports up to 100 connected devices for monitoring, even in active power control operation. With high-performance passive cooling and a display-free design, bluelog Neo is built for reliable long-term operation in demanding industrial environments.

Cybersecurity integrated upfront

Cybersecurity is a core element of the bluelog Neo architecture. Secure Element and Secure Boot technologies help protect the device against unauthorized access and manipulation – safely storing and protecting sensitive data, including at the pre-boot phase. Encryption keys are stored in a FIPS 140-3 Level 3 certified key-storage environment.

The platform is also being prepared for future regulatory requirements. Full alignment with IEC 62443-4-2 is planned for the first quarter of 2027, with implementation of the Cyber Resilience Act requirements also scheduled for 2027.

One device, multiple control applications

bluelog Neo introduces a flexible software licensing model that enables customers to expand device functionality without changing hardware. Available license options include PV Control, BESS Control, and Hybrid Control.

This approach allows a single device to support a wide range of clean-energy plant types. Every bluelog Neo comes with a Monitoring ≤ 0.2 MVA license by default, with additional monitoring and control licenses available as requirements evolve.

License delivery is also simplified. Licenses can be delivered automatically via a license server, eliminating the need for manual license file uploads.

Smooth integration into existing plants

bluelog Neo is designed for continuity with existing blue'Log XM and blue'Log XC installations, helping operators protect previous investments while preparing their sites for future requirements. The new hardware platform remains compatible with the physical interfaces of the previous generation, enabling straightforward replacement in most existing installations.

Configuration backups from blue'Log XM and XC can be migrated to bluelog Neo, reducing engineering effort for existing customers. bluelog Neo is also compatible with MX modules from blue'Log XM/XC installations.

Mixed system architectures are supported as well. Depending on firmware configuration, bluelog Neo can operate as a power control "secondary unit" to a blue'Log XC master or as a "primary unit" for blue'Log XM secondary devices.

Certification for German medium- and high-voltage applications

For grid-relevant applications, bluelog Neo is being developed in accordance with the requirements of VDE-AR-N 4110/4120. The certification process includes FGW TR3 testing, TR4 simulation modelling and formal TR8 certification.

Validation includes 64 hardware-in-the-loop tests, reflecting the technical depth required for regulated grid environments.

The same certified functionality will also be made available for blue'Log XC via a software upgrade, enabling existing customers to benefit from new certified functions without necessarily replacing installed hardware.

Availability

meteocontrol is presenting bluelog Neo for the first time at The smarter E Europe 2026 in Munich. Visitors can meet meteocontrol June 23-25 2026 in Hall B5, Booth 210.

bluelog Neo is expected to be available from the fourth quarter of 2026.

About meteocontrol

meteocontrol is a global technology company shaping the secure, reliable and efficient operation of renewable energy infrastructure. With deep expertise in solar, battery storage and hybrid energy systems, the company supports customers worldwide in managing increasingly complex energy assets across their full lifecycle.

For more than 25 years, meteocontrol has been combining technology, data and engineering expertise to help make renewable energy systems more grid-compliant, resilient and economically sustainable. Its solutions are used in more than 75,000 systems across over 140 countries and contribute to the performance, transparency and stability of modern energy portfolios.

Headquartered in Augsburg, Germany, meteocontrol is represented internationally through its own locations and a global partner network.

Further information:
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