

A future-proof way of connecting IT and OT systems

Weidmüller u-control M series: modular controllers for IIoT applications

An increasing number of physical devices are being integrated into networks in the context of automation. This requires a convergence of IT and OT systems. The new modular control systems u-control M3000 and M4000 are leading the way to the future, as they enable automation solutions to be seamlessly integrated into the IoT. The powerful controllers also serve as edge devices to provide local information in the network and can be expanded with additional function modules - they are therefore ideal for implementing future-proof automation and IIoT applications.

Exploit the advantages of the IoT

While IT systems have traditionally been used primarily for information and communication processes, OT systems tend to be used to control physical production processes and are generally not connected to the Internet for security reasons. However, in the context of automation, an increasing number of physical devices must be integrated into networks. This is driving the trend towards convergence of IT and OT systems. Only the convergence of IT and OT enables users to exploit the advantages of the IoT. In addition to greater efficiency, this also includes gaining new business insights, opening up digital business opportunities and therefore optimising international competitiveness.

Control and edge system in one device

The new modular control systems, u-control M3000 and M4000, are leading the way to the future in this respect, because they are control and edge system in one. This saves space and enables efficient data pre-processing and precise control directly at the machine. The u-control M series allows different runtime systems to be installed on various computer cores, which makes them significantly more powerful than PLC controls alone. They can provide local information in the network and can be expanded by coupling u-remote function modules. Complex automation solutions and IIoT applications can also be

perfectly integrated. All this makes u-control M3000 and M4000 future-proof systems for all automation and IIoT tasks.

Optimal connection of OT and IT

The specific features of the u-control M3000 and M4000 make them the perfect connecting elements from the process level to the company level. Their high performance, combined with the dual-core processor technology, means they can be integrated flexibly under Linux. The u-OS real-time-capable runtime system developed by Weidmüller is located on the two additional computing cores, which enables users to add additional functions to IO channels that are not currently in use. This also means that control systems can be expanded with no extensive programming expertise or additional software.

Impressive power - high flexibility

The u-control M3000 and M4000 have huge computing power, and their extensive internal memories ensure a high level of security for future challenges in automation and digitalisation. While u-control M3000 with two CPU cores already meets all the standard requirements, u-control M4000 additionally offers two CPU cores, two Ethernet interfaces and more RAM, NV-RAM and flash memory for complex edge computing in automation. The systems can be optimally extended with additional interfaces; e.g. field buses, WiFi and GSM. Users can therefore create customised solutions with a high degree of future security.

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Image caption: The u-control M3000 and M4000 controllers facilitate the combination of IT and OT systems and can be integrated very efficiently with the open runtime environment, u-OS.

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