

u-control – Controls and edge devices

Combining OT and IT to perfection

Modular controllers for industrial automation and IoT applications

In the context of automation, more and more physical devices are being integrated into networks. This promotes the trend towards convergence of IT and OT systems. The new modular control systems u-control M3000 and M4000 point the way to the future.

M3000 or M4000 – which controller is right for you?

With u-control M3000, automation solutions can be perfectly integrated into the IoT integration. The powerful controller also serves as an edge device for information in the network and can be expanded by connecting function modules – ideal for automation and Industrial IoT applications. u-control M4000 also offers two additional CPU cores, four Ethernet interfaces and more RAM, NV-RAM and flash memory for complex edge computing in automation.



Approvals:



Planned approvals:



PLC and edge device in one device

MultiCore technology

u-OS inside

2 Ethernet interfaces

Simple option for connecting additional function modules

4 Ethernet interfaces

Optional extension with additional interfaces (field buses, Wifi, GSM)

u-control – Controls and edge devices

UC20-M3000

- Controller for automation and IoT applications
- u-OS integrated
- System supply for 64 u-remote I/O modules
- Additional interface for function modules that can be bayed on the left
- Dual-core CPU, 1.2 GHz
- 2 x 10 A current path

Technical data

System data
Connection type
max. number of modules
Configuration interface
Processor
Memory (Flash)
Realtime clock
Engineering tool
Supply
Supply voltage for inputs
Supply voltage for outputs
Feed current for I _{IN} (input current path) , max.
Feed current for I _{OUT} (output current path) , max.
Current consumption I _N (power segment of the field bus coupler), typ.
General data
Weight
Dimensions H x W x D
Note

Ordering data

Module variants
Note

Accessories

	Swivel marker
	Connection marker for pusher custom printing
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (Material: Polyester)
	Thermotransfer version (material: polyester)
	Paper version for Laserprinter
	USB cable (USB A to Micro USB)
Replacement parts	
	Plug-in connector unit
Control accessories	
	SD Memory Card
Note	

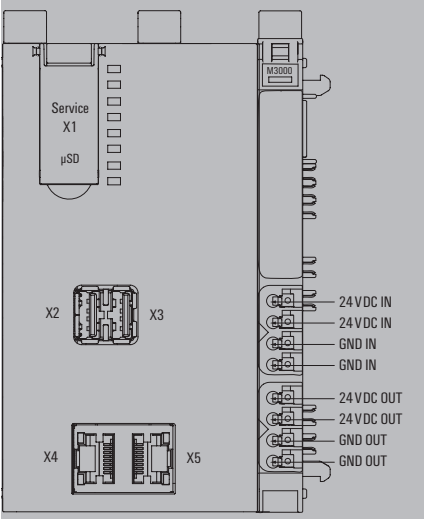
UC20-M3000



PUSH IN
64
USB-C (3.1), MicroSD CARD
Dual Core ARM Cortex A53, 1200 MHz
16 GB
Battery buffered
u-OS
24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
10 A
10 A
116 mA
588 g
120 mm / 80 mm / 101 mm

Type	Qty.	Order No.
UC20-M3000	1	2839150000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC SDR	192	1323700000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESO UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-2839150000-SP	5	2884000000
SD-CARD	1	2684400000
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UC20-M3000

- Controller for automation and IoT applications
- u-OS integrated
- System supply for 64 u-remote I/O modules
- Additional interface for function modules that can be bayed on the left
- Quad-Core CPU, 1.2 GHz
- 2 x 10 A current path

Technical data

System data
Connection type
max. number of modules
Configuration interface
Processor
Memory (Flash)
Realtime clock
Engineering tool
Supply
Supply voltage for inputs
Supply voltage for outputs
Feed current for I _{IN} (input current path) , max.
Feed current for I _{OUT} (output current path) , max.
Current consumption I _N (power segment of the field bus coupler), typ.
General data
Weight
Dimensions H x W x D
Note

Ordering data

Module variants
Note

Accessories

	Swivel marker
	Connection marker for pusher custom printing
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (Material: Polyester)
	Thermotransfer version (material: polyester)
	Paper version for Laserprinter
	USB cable (USB A to Micro USB)
Replacement parts	
	Plug-in connector unit
Control accessories	
	SD Memory Card
Note	

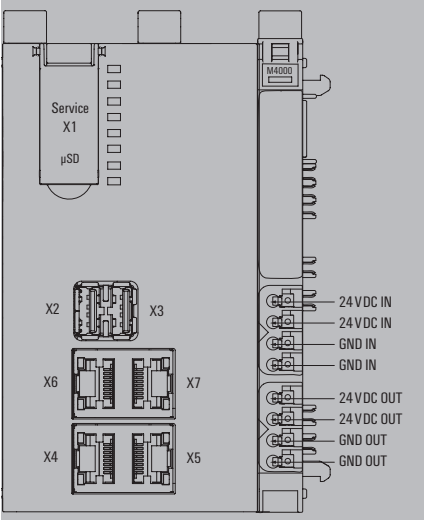
UC20-M4000



PUSH IN
64
USB-C (3.1), MicroSD CARD
Quad Core ARM Cortex A53, 1200 MHz
16 GB
Battery buffered
u-OS
24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
10 A
10 A
116 mA
604 g
120 mm / 80 mm / 101 mm

Type	Qty.	Order No.
UC20-M4000	1	2839160000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC SDR	192	1323700000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESO UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-2839160000-SP	5	2883990000
SD-CARD	1	2684400000
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u-control – Controls and edge devices

Flexible automation of applications

u-control WL2000 for compact and cost-optimised control

The u-control WL2000 controller is based on the compact design of the u-remote fieldbus coupler – for even greater space saving and maximum flexibility when it comes to the implementation of individual automation solutions. It is compatible with the u-remote range and allows for direct connection of I/O modules. Combined with our open u-OS operating system, it can be utilised for its entire range of applications, and offers an excellent level of customisation. For further information on u-OS, read chapter E.

The u-control WL2000 is equipped with an Ethernet-based fieldbus and one or optionally two TCP/IP interfaces. The controller also has an optional CAN interface. In addition, communication via the Modbus TCP protocol or OPC-UA is also possible over our u-OS operating system and Codesys. u-control WL2000 also has a Dual-Core ARM A9 processor and a USB service interface. In addition to the battery-buffered real-time clock, there is also a plug-in station for a microSD card with up to 32 GB of storage space for your projects.



Versatile connection options
Fitted with a fieldbus and TCP/IP interface, plus an optional CAN interface.

Battery-buffered real-time clock
Battery-buffered real-time clock and slot for MicroSD cards up to 32 GB.

Separate power supply
Galvanic isolation of the physical input and output power supply.

**u-OS
inside**

Simple data exchange
The micro USB interface enables easy data exchange and service of the control.

Input & output current
3 separate current paths for system bus, as well as input current and output current path.

u-control – Controls and edge devices

UC20-WL2000-AC

- Controller for automation and IoT applications
- Engineering tool u-create web
- System supply of 64 I/O modules
- Dual-Core CPU, 624 MHz
- 2 x 5 A current path

Technical data

System data
Connection type
max. number of modules
Configuration interface
Processor
Memory (Flash)
Realtime clock
Engineering tool
Supply
Supply voltage for inputs
Supply voltage for outputs
Feed current for I _{IN} (input current path) , max.
Feed current for I _{OUT} (output current path) , max.
Current consumption I _N (power segment of the field bus coupler), typ.
General data
Weight
Dimensions H x W x D
Note

Ordering data

Module variants
Automation controller (Web engineering)
Note

Accessories

Swivel marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (material: polyester)
Paper version for Laserprinter
USB cable (USB A to Micro USB)
Replacement parts
Plug-in connector unit
Control accessories
SD Memory Card
Battery for real-time clock
Note

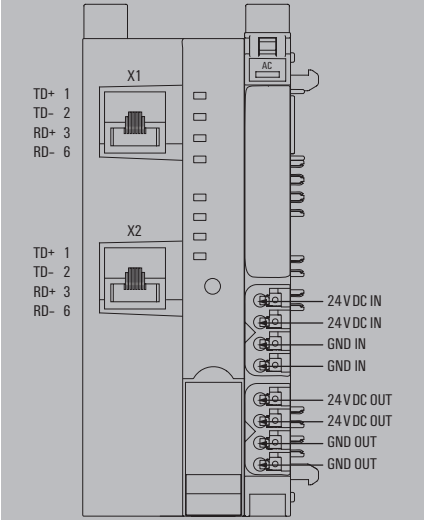
UC20-WL2000-AC



2 x RJ45 plug-in connectors
64
Micro USB 2.0
Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
8 GB, 32 GB via microSD
Battery buffered
u-create web, u-OS
24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
5 A
5 A
116 mA
232 g
120 mm / 52 mm / 76 mm

Type	Qty.	Order No.
UC20-WL2000-AC	1	1334950000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC SDR	192	1323700000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESO UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-1334950000-SP	5	2605360000
SD-CARD	1	2684400000
BATTERY-CR1220-3V	1	2684410000
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UC20-WL2000-AC-CAN

- Controller for automation and IoT applications
- Engineering tool u-create web
- System supply of 64 I/O modules
- Dual-Core CPU, 624 MHz
- 2 x 5 A current path
- CAN Interface

Technical data

System data
Connection type
max. number of modules
Configuration interface
Processor
Memory (Flash)
Realtime clock
Engineering tool
Supply
Supply voltage for inputs
Supply voltage for outputs
Feed current for I _{IN} (input current path) , max.
Feed current for I _{OUT} (output current path) , max.
Current consumption I _N (power segment of the field bus coupler), typ.
General data
Weight
Dimensions H x W x D
Note

Ordering data

Module variants
Automation controller (Web engineering)
Note

Accessories

Swivel marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (material: polyester)
Paper version for Laserprinter
USB cable (USB A to Micro USB)
Replacment parts
Plug-in connector unit
Control accessories
SD Memory Card
Battery for real-time clock
Note

UC20-WL2000-AC-CAN



2 x RJ45 plug-in connectors
64
Micro USB 2.0
Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
8 GB, 32 GB via microSD
Battery buffered
u-create web, u-OS
24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
5 A
5 A
116 mA
232 g
120 mm / 52 mm / 76 mm

Type	Qty.	Order No.
UC20-WL2000-AC-CAN	1	2928020000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC SDR	192	1323700000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESO UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-2928020000-SP	5	2742900000
SD-CARD	1	2684400000
BATTERY-CR1220-3V	1	2684410000
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