

Firmware change log of the device: 1334990000 UC20-WL2000-IOT

Firmware updating information:

An update of the firmware can be done via the graphical web front end. A description of the firmware update procedure can be found in the device manual on the Weidmüller website: www.weidmueller.com

Version 1.13.1 **Hardware Version 01.xx.xx** **Release date: June, 2021**

New features:

- Firmware downgrade support:
ATTENTION: Configuration and project data are set to factory default values.
 1. FW 1.13.0 → FW 1.9.1/1.10.0:
 - a) Start 'Firmware update'
 - b) Flash UC20-WL2000-RS-1.13.1.swu
 - c) Select <http://<device ip>> (not https!) and get the firmware update GUI
 - d) Flash UC20-WL2000-DS-1.12.1.swu
 - e) Flash UC20-WL2000-IOT-FW-<1.9.1|1.10.0>.swu
 2. FW 1.13.0 → FW 1.12.3:
 - a) Start 'Firmware update'
 - b) Flash UC20-WL2000-RS-1.13.1.swu
 - c) Select <http://<device ip>> (not https!) and get the firmware update GUI
 - d) Flash UC20-WL2000-DS-1.12.1.swu
 - e) Flash UC20-WL2000-US-1.12.1.swu
 - f) Flash UC20-WL2000-IOT-FW-1.12.3.swu

Version 1.13.0 **Hardware Version 01.xx.xx** **Release date: June, 2021**

New features:

- Online firmware update via hawkBit
- Quick start of firmware update
- Certificate management for the web server
- Performance improvement when using global variables by Modbus TCP Server and OPC-UA
- Modbus TCP server configuration UI
- Support of Weidmüller docker container registry
- Visu: Layers can be switched to foreground/background via context menu
- u-link: Remote access to devices on same subnet

Information:

- **ATTENTION:** Upgrading firmware prior to 1.12 requires storage repartitioning. Please save your configuration settings beforehand. Steps of the upgrade installation:
- Flash firmware image UC20-WL2000-US-1.12.1.swu and restart system.
- Start 'Firmware Update' again and the update procedure will perform the storage repartitioning confirmed by the following message: "System repartitioning: Please be patient, as repartitioning takes a few minutes".
- Flash firmware image UC20-WL2000-IOT-FW-1.13.0.swu
- Firefox: 'Private Mode' is not supported.

Bug fixes:

- In case the controller has different network segments configured, the connection will break and fail after starting the 'Firmware update' operation.
- Login username is now case sensitive
- Login delay after start or reboot
- Node-RED: Global variables are sorted
- Visu: Values are reset by pressing Enter, e.g. for border radius
- Visu: A superfluous file dialogue pops up when pressing Enter using a rectangle widget
- OPC-UA: Connection error
- HMI: Login procedure improved

Known issues:

- u-link: VPN should be reactivated after firmware update
- Software update via u-link is not reliable
- Visu: Background image of type SVG does not work
- Remove a module after Auto Scan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 1.12.3 **Hardware Version 01.xx.xx** **Release date: April, 2021**

Security Advisory fixes:

- CVE-2021-20999: A port intended only for device-internal usage is accidentally accessible via external network interfaces.

Version 1.12.1 **Hardware Version 01.xx.xx** **Release date: March, 2021**

New features:

- Docker services with 'portainer' as docker management
- Visu: Configurable number of decimal places for value widget

Information:

- Repartitioning of eMMC during swupdate operation
- Firefox: 'Private Mode' is not supported.

Bug fixes:

- Reduce memory footprint of systemd logging services

Known issues:

- In case the controller has different network segments configured, the connection will break and fail after starting the "Firmware update" operation. A power cycle will resolve this issue.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 1.10.0 **Hardware Version 01.xx.xx** **Release date: November, 2020**

New features:

- User management: additional user 'service'
- File copy service based on scp.
- Web access is switched to HTTPS protocol.
- Node-RED: upgrade to version 1.1.2

Information:

- ATTENTION: Upgrade to firmware 1.10 requires two steps. 1. Flash firmware image UC20-WL2000-RS-1.10.0.swu and restart system. 2. Flash target firmware version 1.10. Otherwise update fails with error message: "File is too big".
- Note: After firmware update the "admin" password is reset to the default value.
- The new introduced HTTPS protocol requires a user confirmation for an unsecure browser connection. Please confirm the connection type with the first web access.
- Firefox: 'Private Mode' is not supported.

Bug fixes:

- Node-RED: 'iodata-out' supports to set values with variable of type 'TIME'.
- Visu: Title not shown while editing for diagram or chart widgets.
- swupdate mode for Ethernet port X2 is possible

Known issues:

- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 1.9.0 **Hardware Version 01.xx.xx** **Release date: August, 2020**

New features:

- Modbus RTU: support of multi register access and triggers.
- Smart Visu: support of multiple pages.
- Node-RED: support nodes with native dependencies.
- Node-RED: added S7 protocol (RFC1006) and Telegram Nodes.
- OPC-UA: improvement of Web-UI.
- OPC-UA: added operating state indicator.

Information:

- Modbus RTU master: Due to known limitations of the UR20-1COM-232-485-422 module with firmware version 01.00.16 the current maximal quantity for writing multiple registers (FC16) is 121 bytes and for writing multiple coils (FC15) is 1944 bytes.

Bug fixes:

- Manually stopping and starting of the PLC application starts the Modbus master (RTU) successfully.
- OPC UA: write access to variables of type 'TIME' are now possible.

Known issues:

- Node-RED: 'iodata-out' does not accept set values when variable is of type 'TIME'.
- Firefox: 'Private Mode' is currently not supported.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 1.8.0 **Hardware Version 01.xx.xx** **Release date: June, 2020**

New supported modules:

- 2456530000 UR20-8DIO-P-3W-DIAG

New features:

- New Microsoft Edge browser is now supported.
- Node-RED: Twitter and Email nodes added.

Bug fixes:

- Diagnostic data mapping is corrected for module UR20-PF-O-2DI-DELAY-SIL.
- Modbus TCP slave (server): solved "failed to allocate mapping" error.

Known issues:

- Manually stopping and starting of the PLC application won't start Modbus master (RTU). A redeploy solves the issue.
- Node-RED: 'iodata-out' does not accept set values when variable is of type 'TIME'.
- OPC UA: write access to variables of type 'TIME' is currently not possible.
- Firefox: 'Private Mode' is currently not supported.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 1.7.0 **Hardware Version 01.xx.xx** **Release date: April, 2020**

New features:

- Modbus TCP Slave
- Global system status information
- Node-RED: upgrade to version 1.0.3
- Usage of the second Ethernet port (X2) is now supported.
- User defined NTP server parameters
- Visu: configured widget visibility

Information:

- Online help supports search operation.

Bug fixes:

- Node-RED: installation of additional nodes might fail with error "EACCES: permission denied".

Known issues:

- Node-RED: 'iodata-out' does not accept set values when variable is of type 'TIME'.
- OPC UA: write access to variables of type 'TIME' is currently not possible.
- Firefox: 'Private Mode' is currently not supported.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.
- Configuration of UR20-PF-O-2DI-DELAY-SIL module maps diagnostic data in a wrong way.

Version 1.6.0 **Hardware Version 01.xx.xx** **Release date: February, 2020**

New features:

- Weidmüller products 'Managed Switch' are supported regarding DHCP handling.

Information:

- Usage of the second Ethernet port (X2) is not possible yet and will be added in a future firmware update.
- Node-RED: flow size is limited to 3 MB per export/import operation.

Bug fixes:

- Node-RED: flow size is increased from 1 to 3 MB.
- OPC UA: the variable identifier now corresponds to the global variable, hence it will only change if the variable name changes

Known issues:

- Node-RED: installation of additional nodes might fail with error "EACCES: permission denied". A factory reset solves this issue.
- Node-RED: 'iodata-out' does not accept set values when variable is of type 'TIME'.
- OPC UA: write access to variables of type 'TIME' are currently not possible.
- Firefox: 'Private Mode' is currently not supported.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 1.5.0 **Hardware Version 01.xx.xx** **Release date: January, 2020**

New features:

- Device Live View – Monitoring the device configuration of the real-time application
- Network setting supports beside static also dynamic IP configuration (DHCP).

Information:

- Usage of the second Ethernet port (X2) is not possible yet and will be added in a future firmware update.
- Node-RED: flow size is currently limited to 1 MB.
- Weidmüller products 'Managed Switch' are still not supported regarding DHCP handling.

Bug fixes:

- Node-RED: error 502 Bad Gateway after power up is solved.

Known issues:

- Node-RED: installation of additional nodes might fail with error "EACCES: permission denied". A factory reset solves this issue.
- Node-RED: iodata-out doesn't accept set values when variable is of type TIME.
- Firefox: 'Private Mode' is currently not supported.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 1.4.1 **Hardware Version 01.xx.xx** **Release date: November, 2019**

Information:

- Usage of the second Ethernet port (X2) is not possible yet and will be added in a future firmware update

Bug fixes:

- U-Link: registration lost with message 'The registration is pending' is solved

Known issues:

- Firefox: 'Private Mode' is currently not supported
- Node-RED: iodata-out doesn't accept set values when variable is of type TIME
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 01.04.00 **Hardware Version 01.xx.xx** **Release date: October, 2019**

New supported modules:

- Stepper Module UR20-1SM-50W-6DI2DO-P

New features:

- Function block SEL

Information:

- Usage of the second Ethernet port (X2) is not possible yet and will be added in a future firmware update
- During execution of a firmware update procedure a power loss must be prevented.

Known issues:

- U-Link: in rare cases the status 'The registration is pending' might appear. To solve this issue the registration key has to be renewed in the U-Link web portal. Afterwards a power cycle of the device is necessary to initiate a new registration.
- Firefox: 'Private Mode' is currently not supported
- Cloud-configuration: iodata-out doesn't accept set values when variable is of type TIME
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 01.03.00 **Hardware Version 01.xx.xx** **Release date: September, 2019**

New features:

- u-link
- OPC-UA server
- XY-Line Chart for Smart Visu
- Improved support of the visualisation for resistant touch panels
- Improved support of low performance touch panels can be activated by a selective checkbox in the Visu Editor

Information:

- Usage of the second Ethernet port (X2) is not possible yet and will be added in a future firmware update
- During execution of a firmware update procedure a power loss must be prevented.

Bug fixes:

- Fixed loss of RTC system time on reboot.

Known issues:

- Firefox: 'Private Mode' is currently not supported
- Cloud-configuration: iodata-out doesn't accept set values when variable is of type TIME
- Application: REAL_TO_TIME values are not displayed in full precision which may lead to problems in comparison operations
- To avoid problems at boot it is advisable to make sure the USB cable is disconnected when powering up the u-control device.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 01.02.00

Hardware Version 01.xx.xx

Release date: June, 2019

New supported modules:

- UR20-16DI-N
- UR20-16DI-N-PLC-INT
- UR20-16DO-N
- UR20-16DO-N-PLC-INT
- UR20-1CNT-100-1DO
- UR20-1CNT-500
- UR20-1COM-232-485-422 - Modbus RTU Master support only
- UR20-1SSI
- UR20-2CNT-100
- UR20-2DI-P-TS
- UR20-2FCNT-100
- UR20-2PWM-PN-0.5A
- UR20-2PWM-PN-2A
- UR20-4AI-RTD-HP-DIAG
- UR20-4AI-UI-16-HD
- UR20-4AO-UI-16-HD
- UR20-4AO-UI-16-M
- UR20-4DI-N
- UR20-4DI-P-TS
- UR20-4DO-N
- UR20-4DO-N-2A
- UR20-8AI-RTD-DIAG-2W
- UR20-8DI-N-3W
- UR20-8DO-N

New features:

- Added module catalogue
- Modbus RTU Master with device configurator
- User Interface - new Starting page improves the navigation
- User Interface - improved save and deploy handling for projects
- Post package installation supports free installation of Node-RED packages
- Usage of SD card is now supported

Information:

- Usage of the second Ethernet port (X2) is not possible yet and will be added in a future firmware update

Bug fixes:

- Variables: Negative e-notation for REAL is not supported
- Variable input widget: Keypad does not allow input of value 0 right behind a decimal dot. Use keyboard input in that case.

- Time Settings: month is displayed wrongly (current month – 1)
- Live View: Message “Loading...” is displayed in case a project without variables is deployed. It can be ignored.
- Autoscan: Displays proper error message for unsupported I/O modules

Known issues:

- Firefox: 'Private Mode' is currently not supported
- Cloud-configuration: iodata-out doesn't accept set values when variable is of type TIME
- Application: REAL_TO_TIME values are not displayed in full precision which may lead to problems in comparison operations
- To avoid problems at boot it is advisable to make sure the USB cable is disconnected when powering up the u-control device.
- Remove a module after Autoscan operation and the follow up deploy operation fails. A power cycle is necessary to solve this error.

Version 01.01.00

Hardware Version 01.xx.xx

Release date: February, 2019

New supported modules:

- UR20-3EM-230V-AC

New features:

- Visualisation - editor to configure visualisations for human machine interfaces
- Global variables can now be used for write operation
- Configuration of up to three different DNS server addresses

Information:

- Activation of SD card slot and the second Ethernet port (X2) is not available yet and will be added in a future firmware update

Bug fixes:

- Global variables: Leading underscores are now allowed
- Import of large project files no longer causes 'Disconnected' message
- Fixed that in rare cases a restart of the device causes connection error messages
- Improved compatibility to USB cables of different standards
- No more limitation to IP address changes

Known issues:

- Firefox: 'Private Mode' is currently not supported
- Variables: Negative e-notation for REAL is not supported
- Cloud-configuration: iodata-out doesn't accept set values when variable is of type TIME
- Variable input widget: keypad does not allow input of value 0 right behind a decimal dot. Use keyboard input in that case
- Time Settings: month is displayed wrongly (current month – 1)
- Live View: Message “Loading...” is displayed in case a project without variables is deployed. It can be ignored
- Autoscan: No proper error message for unsupported I/O modules
- To avoid problems at boot it is advisable to make sure the USB cable is disconnected when powering up the u-control device.

Version 01.00.01

Hardware Version 01.xx.xx

Release date: October, 2018

New supported modules:

- UR20-4DI-P
- UR20-4DI-P-3W
- UR20-8DI-P-2W
- UR20-8DI-P-3W
- UR20-8DI-P-3W-HD
- UR20-8DI-ISO-2W
- UR20-16DI-P
- UR20-16DI-P-PLC-INT
- UR20-4DI-2W-230V-AC
- UR20-4DO-P
- UR20-4DO-P-2A
- UR20-4DO-PN-2A
- UR20-4DO-ISO-4A
- UR20-8DO-P
- UR20-8DO-P-2W-HD
- UR20-16DO-P
- UR20-16DO-P-PLC-INT

- UR20-4RO-SSR-255
- UR20-4RO-CO-255
- UR20-4AI-UI-16
- UR20-4AI-UI-12
- UR20-8AI-I-16-HD
- UR20-8AI-I-PLC-INT
- UR20-4AI-RTD-DIAG
- UR20-4AI-TC-DIAG
- UR20-4AI-R-HS-16-DIAG
- UR20-4AO-UI-16
- UR20-PF-O-1DI-SIL
- UR20-PF-O-2DI-SIL
- UR20-PF-O-2DI-DELAY-SIL
- UR20-PF-I
- UR20-PF-O
- UR20-16AUX-I
- UR20-16AUX-O
- UR20-16AUX-FE
- UR20-16AUX-GND-I
- UR20-16AUX-GND-O
- UR20-ES

Information:

- Turn on the power supply for the u-control device before you connect the USB cable to avoid problems when starting the u-control device.
- SD Card and Ethernet port labeled X2 will be supported with a future firmware version.

Known issue:

- Firefox 'Private Mode' is currently not supported.
- Using reserved keywords e.g. 'nan' or 'infinity' as names in the WebUI leads currently to a generic deploy error.
- During an import operation of a large project a 'disconnected screen' might appear and a browser refresh will clear it.
- In rare cases a restart of the system might bring up a connection error with different error messages. An additional browser refresh will solve it.
- Negative e-notation for REAL not supported.
- Some USB cables might have problems to work properly. Please try a different one.
- Ethernet IP address can only be changed when Ethernet cable is plugged in and has a lively connection.