Firmware change-log of new features and bug fixes of the u-remote IO-Modules:

Firmware updating Information:

An update of the firmware can be done via the embedded web server. A description of the firmware update can be found in the u-remote web server manual on the Weidmüller website: www.weidmueller.com

UR20-1CNT-100-1DO (1315570000)

All versions

- Known Issue: After Reset of counter value, timestamp sometimes contains implausible value for short period (<1s)

SAI-AU-M12-SB-8DIO-V2 (3096480000)

Version 01.00.00 **Release date: September 2025**

- First released version

SAI-AU-M12-SB-8DI-V2 (3096470000)

Version 01.00.00 **Release date: September 2025**

- First released version

SAI-AU-M12-SB-8DO-2A-V2 (3096490000)

Version 01.00.00 **Release date: September 2025**

- First released version

SAI-AU-M8-SB-8DIO-V2 (3096510000)

Version 01.00.00 **Release date: September 2025**

- First released version

SAI-AU-M8-SB-8DI-V2 (3096500000)

Version 01.00.00 **Release date: September 2025**

- First released version

SAI-AU-M8-SB-8DO-2A-V2 (3096630000)

Version 01.00.00 **Release date: September 2025**

- First released version

UR20-4COM-IO-LINK-V2 (2819690000)

Version 01.00.00 **Release date: July 2024**

- First released version

Version 01.00.01 **Release date: September 2025**

- Upgrade IO-Link Interface and System specification from version 1.1.3 to version 1.1.4
- Requires *u-mation configurator* >= 1.6.0

UR20-4AI-I-HART-ISO-16 (2828350000)

Version 01.00.01 **Release date: November 2024**

- First released version

UR20-1COM-CAN (3040800000)

Version 01.00.00 **Release date: October 2024**

- First released version

UR20-1COM-CANOPEN (2489840000)

Version 01.00.00 **Release date: November 2023**

- First released version
- **Known issue:** Node Guarding can be enabled but is currently non-functional

UR20-1COM-232-485-422 (1315750000)

Version 01.00.16 **Release date: July 2019**

- Increased size of RX buffer to 4kByte
- Fixed that the module could freeze when the force modus is used or after a software reset of the fieldbus coupler

Version 01.00.14 **Release date: October 2018**

- Fixed that RX Hardware buffer can be flushed now after a buffer overflow

Version 01.00.13 **Release date: July 2018**

- Fixed that the status bit IX0.7 is set to “1” while the module is deactivated
- Bit for Function "DisableSend_TX_HWBUFFER" now working correctly

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Version 01.00.12 **Release date: December 2017**
- Fixed that an acknowledge response in rare cases could be transmitted before all data was received
- Fixed that sometimes a received data overflow was not handled correctly
- Added CRC16 checksum calculation for incoming and outgoing data

Version 01.00.11 **Release date: June 2016**
- First released version

UR20-1COM-232-485-422-V2 (2826800000)

Version 01.00.04 **Release date: November 2025**
- General improvements and bug fixes for Modbus and DMX protocols

Version 01.00.03 **Release date: October 2022**
- Bug fix: correct handling of function codes WriteMutlipleCoils 0x0F and ReadCoils 0x01 for modbus master and slave.

Version 01.00.02 **Release date: December 2021**
- First released version

UR20-1COM-SAI-PRO (2007430000)

Version 01.04.00 **Release date: September 2025**
- New supported subbus modules:
  - 3096630000 - SAI-AU-M8-SB-8DO-2A-V2
  - 3096500000 - SAI-AU-M8-SB-8DI-V2
  - 3096510000 - SAI-AU-M8-SB-8DIO-V2
  - 3096490000 - SAI-AU-M12-SB-8DO-2A-V2
  - 3096470000 - SAI-AU-M12-SB-8DI-V2
  - 3096480000 - SAI-AU-M12-SB-8DIO-V2

Version 01.02.00 **Release date: September 2020**
- New feature: Option handling is supported without power cycle of the UR20-1COM-SAI-PRO module
- Bug fix: Improved start up behaviour for SAI-AU SB 8DIO and SAI-AU SB 8DI modules

Version 01.01.00 **Release date: March 2018**
- Fixed behaviour of status LED after power cycle or low voltage for all hardware versions

Version 01.00.07 **Release date: December 2017**
- Minor improvements

Version 01.00.06 **Release date: May 2017**
- New feature: Improved overcurrent detection for sub bus supply (works with HW-Version >01.05.00)
- Bug Fixes: parameter for substitute values is working now

Version 01.00.04 **Release date: October 2016**
- Bug Fixes: Improved start up behaviour while initialising sub bus modules.
  A firmware update is recommended!

Version 01.00.01 **Release date: June 2016**
- First released version

UR20-2AI-SG-24-DIAG (1990070000)

Version 01.01.00 **Release date: September 2020**
- Support of new module version with MX file 001051.110 which is calibrated for an extended range of sensor sensitivity up to 960mV/V. **CAUTION**: Modules with MX files below 001501.110 are calibrated for a maximum sensor sensitivity range of 30mV/V and will return no valid measurement values if used outside this range!

Version 01.00.06 **Release date: April 2018**
- **Known issue**: Calibration sheet cannot be downloaded when coupler firmware with release date July 2019 is used
- Offset can be changed independently for each entered value of the sensor sensitivity. A description of changes in the calibration process can be found in the UR20 manual (v13 or above).

Version 01.00.04 **Release date: December 2017**
- Improved algorithm for calculation of user offset in combination with manual tare
- Added blocking of tare function when input data is out of range
- Version is removed from download section – upgrade to newest version is recommended!

Version 01.00.03 **Release date: October 2016**
- First released version

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UR20-3EM-230V-AC (2007420000)

Version 01.00.48 **Release date: February 2024**
- Optimized parameter write operation

Version 01.00.47 **Release date: December 2017**
- Fixed that value of Fundamental Reactive Power sometimes could be inaccurate

Version 01.00.46 **Release date: May 2017**
- New feature: adds Parameter “direction recognition” indicate 3 phase direction

Version 01.00.30 **Release date: October 2016**
- Bug Fixes: Improved diagnosis threshold values for voltage and current: Diagnostic LED threshold behaviour adjusted.

Version 01.00.28 **Release date: June 2016**
- First released version

UR20-3EM-400V-AC-333MV (2920860000)

Version 01.00.03 **Release date: September 2025**
- Bug fix: reading of Mailbox address 96 “Fundamental reactive power -3ph” for Delta configuration only works correctly if the “Measured value” parameter of any channel is set to “Fundamental active power -3ph”

Version 01.00.01 **Release date: June 2025**
- First released version

UR20-3EM-400V-AC-CT1A (2920830000)

Version 01.00.03 **Release date: September 2025**
- Bug fix: reading of Mailbox address 96 “Fundamental reactive power -3ph” for Delta configuration only works correctly if the “Measured value” parameter of any channel is set to “Fundamental active power -3ph”

Version 01.00.01 **Release date: June 2025**
- First released version

UR20-3EM-400V-AC-CT5A (2920840000)

Version 01.00.03 **Release date: September 2025**
- Bug fix: reading of Mailbox address 96 “Fundamental reactive power -3ph” for Delta configuration only works correctly if the “Measured value” parameter of any channel is set to “Fundamental active power -3ph”

Version 01.00.01 **Release date: June 2025**
- First released version

UR20-3EM-400V-AC-RC (2920850000)

Version 01.00.03 **Release date: September 2026**
- Bug fix: reading of Mailbox address 96 “Fundamental reactive power -3ph” for Delta configuration only works correctly if the “Measured value” parameter of any channel is set to “Fundamental active power -3ph”
- Bug fix: change gain of current input amplifier to avoid an overdrive when harmonics are present.

Version 01.00.01 **Release date: June 2025**
- First released version

UR20-4AI-R-HS-16-DIAG (2001670000)

Version 01.00.02 **Release date: August 2026**
- Improvements for internal test purposes

Version 01.00.01 **Release date: June 2016**
- First released version

UR20-4AI-RTD-DIAG (1315700000)
UR20-4AI-TC-DIAG (1315710000)

Version 01.00.13 **Release date: April 2022**
- Minor adjustments for new hardware component. This SW version is mandatory for HW version 01.10.50 and HW version >= 01.20.50

Version 01.00.11 **Release date: December 2017**
- Fixed that deactivation of Limited Value Monitoring sometimes causes faulty behaviour.

Version 01.00.10 **Release date: May 2017**
- Bug fix: Linearization curve for CU10 sensors >200°C corrected

UR20-4AI-RTD-HP-DIAG (2456540000)

Version 01.00.04 **Release date: April 2022**
- Minor adjustments for new hardware component. This SW version is mandatory for HW version >= 01.30.00

Version 01.00.02 **Release date: December 2017**
- Fixed that deactivation of Limited Value Monitoring sometimes causes faulty behaviour.

Version 01.00.01 **Release date: May 2017**
- First released version

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- High precision RTD module
- Supports additional LG-Ni1000 sensor characteristic
- Supports additional PT100 from -200°C to +250°C

UR20-2AI-UI-16 (2705620000)
UR20-2AI-UI-16-DIAG (2566090000)

Version 01.00.01 **Release date: September 2022**

- Minor adjustments for new hardware component. This SW version is mandatory for HW version 01.40.00

Version 01.00.00 **Release date: February 2021**

- First released version

UR20-4AI-UI-12 (1394390000)
UR20-4AI-UI-16[-HD] (1315620000, 1506920000),
UR20-4AI-UI-16-DIAG[-HD] (1315690000, 1506910000),
UR20-8AI-I-16-[DIAG]-HD (1315650000, 1315720000)
UR20-8AI-I-PLC-INT (1315670000)

Version 01.02.01 **Release date: June 2020**

- Bug fix for 8 channel HD modules: Correct behaviour of diagnosis and status LED for undervoltage detection
- Bug fix for 4 channel modules: Improved shortcut behaviour

Version 01.02.00 **Release date: August 2019**

- Bug fix: Fixed that module sometimes remains in fault state when (re-)booted at high temperature.

Version 01.01.00 **Release date: July 2019**

- Changed the value range for the FORCE mode of the webserver, now low-level values for the range of underloading can be set
- Fixed that the channel error LED stays off when lower or upper limits are exceeded
- Reduced the crosstalk between the input channels
- Removed toggling diagnosis between “Overload” and “Upper limit value exceeded”, when an input channel is overloaded
- Adjusted behaviour of module diagnostics:
  - Module diagnostics are always active (in case of an error the module status LED will be red)
  - In case of an error the channel error LED will always be red on modules which are supporting single channel diagnostic, independent of the configuration for the diagnostic

Version 01.00.36 **Release date: May 2017**

- New feature: Additional low pass implemented

Version 01.00.34 **Release date: October 2016**

- New feature: Adaptation of the switching thresholds according to **Namur Recommendation NE43** *“Standardization of the Signal Level for the Failure Information of Digital Transmitters”*
  High limits: +5%
  Low limits: -10% for non zero unipolar range
  Limits for bipolar range: +/-10%

Measurement range	Low limits	High limits
0 to 20mA	n.a.	> 21mA
4 to 20mA	< 3.6mA	> 21mA
0 to 10V	n.a.	> 10.5V
2 to 10V	< 1.8V	> 10.5V
+/-10V	< -10.5V	> 10.5V
0 to 5V	n.a.	> 5.25V
1 to 5V	< 0.9V	> 5.25V
+/-5V	< -5.25V	> 5.25V

Version 01.00.33 **Release date: June 2016**

- First released version

UR20-4AI-UI-DIF-16-DIAG (1993880000)

Version 01.04.00 **Release date: September 2019**

- Bug fix: Fixed that module sometimes remains in fault state when (re-)booted at high temperature.

Version 01.03.05 **Release date: December 2017**

- Fixed that Module Status LED turns red on an error event on a channel with deactivated diagnostics

Version 01.03.03 **Release date: May 2017**

- First released version

UR20-4AI-UI-DIF-32-DIAG (2544660000)

Version 01.01.00 **Release date: September 2019**

- Bug fix: Fixed that module sometimes remains in fault state when (re-)booted at high temperature.

Version 01.00.04 **Release date: December 2017**

- First released version

UR20-4AI-UI-ISO-16-DIAG (2566960000)

Version 01.01.01 **Release date: July 2020**

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- First released version

UR20-2AO-UI-16 (2705630000)
UR20-2AO-UI-16-DIAG (2566100000)

Version 01.03.01 **Release date: March 2021**

- First released version

UR20-2AO-UI-ISO-16-DIAG (2566970000)

Version 01.00.00 **Release date: July 2020**

- First released version

UR20-4AO-UI-16[-HD] (131568000, 1510690000),
UR20-4AO-UI-16-DIAG[-HD] (1315730000, 1506930000),
UR20-4AO-UI-16-M[-DIAG] (2453880000, 2453870000)

Version 01.03.03 **Release date: February 2023**

- Improving overload behaviour in current mode for devices with high capacities

Version 01.03.01 **Release date: March 2021**

- Support of UR20-4AO-UI-16 (131568000) and UR20-4AO-UI-16-DIAG (1315730000) hardware version 01.31.00 due to replacement of discontinued supplier component, hardware 01.31.00 or above cannot be downgraded to software versions below 01.03.00 (4AO-xx-HD and -M versions are not affected)

Version 01.02.00 **Release date: May 2017**

- Added 'M'-version - universal analogue output module with Marine certification

Version 01.01.07 **Release date: June 2016**

- First released version

UR20-4COM-IO-LINK (1315740000)

Version 01.05.05 **Release date: March 2026**

- Bugfix: Diagnosis alarm is not deleted after disabling unused channels by using acyclic services.

Version 01.05.04 **Release date: March 2025**

- Bugfix: C/Q pin used as DI/DO is not working in combination with fixed port length greater than 1.

Version 01.05.03 **Release date: January 2025**

- Bugfix: IO-Link device output process data are missing on all ports, if "Process Data length Input/Output" is set to "32 Bytes" for every channel.
- Bugfix: the IO-Link "Data output valid" control bits have no function, if "Process Data length Input/Output" is set to "32 Bytes" for every channel.
- The registration behaviour for slow booting IO-Link devices has been improved.

Version 01.05.01 **Release date: February 2024**

- Improved login behaviour for devices connected to PRO COM IO-LINK
- Bugfix: channel error LED stays red after registration, although the IO-LINK device is in operational mode
- Bugfix: activation of multiple channels via WEB application is partly delayed

Version 01.05.00 **Release date: September 2023**

- Improved general communication stability
- New Feature: Support of startup behaviour for slow starting IO-LINK devices (max. 30sec)
- Bugfix: If only one channel is set to IO-LINK mode and all other channels are set to DI mode, the process data of the IO-LINK channel is frozen
- Bugfix: If one channel is set to IO-LINK mode but no device is connected, writing parameters to IO-Link devices sometimes fails
- Bugfix: DataStorage is not available when *Data storage size* in IODD is set to *0* although device supports DataStorage (Rev. 1.1)

Version 01.04.00 **Release date: February 2021**

- Improved start-up timing behaviour
- New feature: Added parameter "Channel diagnosis" for (de-)activation of IO-LINK device diagnoses

Version 01.03.00 **Release date: July 2019**

- Support for IO-Link devices with slow response behaviour (> 1 sec)
- Support for all fieldbus couplers of the u-remote product family
- A new version (1.2.0) of the u-remote IO-Link configurator is available, which now also enables an online connection via the fieldbus coupler to the IO-Link Master module and their connected IO-Link devices.

Version 01.02.00 **Release date: July 2018**

- Module is now compatible with EtherCat coupler (firmware from the coupler also must be updated)
- Additional configurator tool is available for PROFINET, PROFIBUS & EtherCAT UR20 coupler
- Diagnosis "Parameter fault" is now shown in the webserver and Status LED of the module
- Variable process data length (Input/Output) function added

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Version 01.00.03 **Release date: May 2017**

- First released version
- Only compatible with: PROFIBUS-DP coupler FW-Version >=01.03.00
  PROFINET coupler FW-Version >=01.03.00

UR20-4DI-4DO-PN-FSOE (1529780000)

Version 01.00.06 **Release date: June 2016**

- First released version

UR20-4DI-4DO-PN-FSOE-V2 (2464580000)

Version 01.00.06 **Release date: October 2021**

- Bug fix: An availability problem during start-up that can occur in very rare cases has been resolved

Version 01.00.05 **Release date: April 2018**

- Improved output response time < 10ms

Version 01.00.04 **Release date: May 2017**

- First released version

UR20-4DI-4DO-PN-FSPS (1335060000)

Version 01.00.02 **Release date: June 2016**

- First released version

UR20-4DI-4DO-PN-FSPS-V2 (2464570000)

Version 01.00.06 **Release date: October 2021**

- Bug fix: An availability problem during start-up that can occur in very rare cases has been resolved

Version 01.00.05 **Release date: April 2018**

- Improved output response time < 10ms

Version 01.00.01 **Release date: May 2017**

- First released version

UR20-8DI-PN-FSOE (1529800000)

Version 01.00.06 **Release date: June 2016**

- First released version

UR20-8DI-PN-FSOE-V2 (2464600000)

Version 01.00.04 **Release date: May 2017**

- First released version

UR20-8DI-PN-FSPS (1335070000)

Version 01.00.06 **Release date: June 2016**

- First released version

UR20-8DI-PN-FSPS-V2 (2464590000)

Version 01.00.01 **Release date: May 2017**

- First released version

UR20-8DIO-P-3W-DIAG (2522380000)

Version 01.00.03 **Release date: October 2022**

- Improved wire break diagnosis

Version 01.00.01 **Release date: June 2018**

- First released version

UR20-PF-O-1DI-SIL (1335030000)
UR20-PF-O-2DI-SIL (1335050000),
UR20-PF-O-2DI-DELAY-SIL (1335040000)

Version 01.13.00 **Release date: June 2016**

- First released version

UR20-1SM-50W-6DI2DO-P (2489830000)

Version 02.00.01 **Release date: September 2023**

- Previously the holding current was set to a constant value. Now the holding current takes over the setting of parameter “drive current”.

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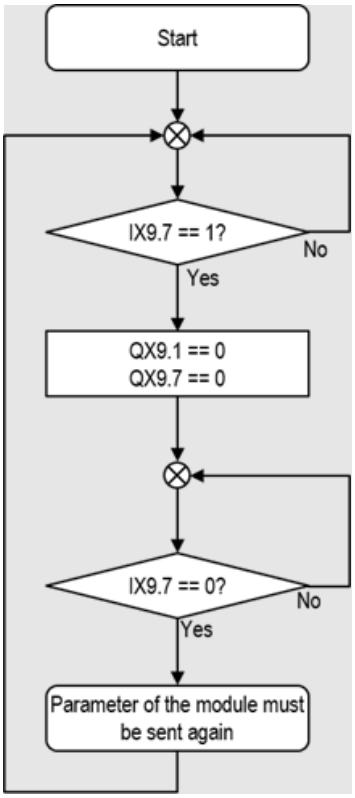
Version 02.00.00 **Release date: March 2020**

- Bug fix: Fixed that end stops no longer work during reference run.
- New feature: After switching on the module, the following errors occur: The motor LEDs light up red and if diagnosis are activated (module and coupler) an undervoltage error diagnosis is triggered. The bit for the output stage must not be enabled Bit 9.7 and the move Bit 9.1 must not be set. A change from 0 to 1 Bit 9.6 acknowledges the error. Known issue from Version 01.00.04. is solved.
- New feature: If the "Move Bit" 9.1 is reset during a traversing movement, the motor stops immediately. Attention: Step loss is possible.
- The function modulo axis is implemented
- Changed that the parameter "traversing range" is now only valid for the modulo axis.
- Linear acceleration and optimal acceleration are implemented in process data

Version 01.00.04 **Release date: December 2018**

- **Known issue**:
  Non-simultaneous power cycling of external power supply and u-remote system supply while a motor is rotating could lead to unwanted motor movement:
  - A power cycle at the external power supply while the u-remote system supply remains causes the motor to stop and restart after external power supply is restored. The motor will continue moving to the target position of the last move command before the power interruption.
  - A power interruption of the u-remote system supply while the external power supply remains causes the motor to continue to rotate to the target position of the last move command.



- Workaround:
  The application program of the connected controller (PLC) should check the status of the process data bit “State power supply” (IX9.7). If the “State power supply” bit is “false” (0) the program should reset both the bit “Moving” (QX9.1) and the bit “Enable motor driver“ (QX9.7) to “false“ (0).
  (please see UR20 Stepper motor module manual)
- This behaviour is planned to be fixed with the next firmware update.

UR20-2PWM-I-2.5A-2DI-P (2697910000)

Version 01.00.03 **Release date: February 2024**

- Fixed sporadically restart of module error

Version 01.00.01 **Release date: August 2022**

- First released version

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