

# Release Notes 2.27.01.00

For the following motors

**MAC140F and 141F**

**MAC083L and MAC320L**

**MAC400, 402, 800, 1000, 1200, 1500, 3000, 3000G and 4500.**

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**Ver 2.27.01.00**

**13. November 2024**

Bug fixes:

- Fix long term operation stability issue
- Fix Encoder startup when using invert direction issue
- Fix CVI on MiniMac issue

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**Ver 2.27.0**

**4. September 2024**

New functionality:

- Support for MAC083F
- Support for MAC141F
- Support MAC320P
- MiniMac add CVI/P+ operation so motor controller can stay alive on only CVI voltage
- non-RM4: add option for setting save position backup in flash when voltage at 18V instead of 15V

Improvements:

- MiniMac supply voltage reading no longer in Reg 21, only in UBUS reg 198
- RM4 STO detect voltage adjusted to 17V
- Implemented commands for on-the-fly baudrate change

bugs fixed:

- MiniMac: improve position save stability
- absolute encoder motors: Fix mechanical endstop homing w. index pulse invert rotation direction issue.
- Minimac remove incorrect encoder initialization error
- Minimac w. absolute encoders: Fix incorrect position when rotating during boot error.
- Fix factory default cmd 0x100 issue

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**Ver 2.26.21****7. June 2024**

- implement turntable actual position wrap compensation

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**Ver 2.26.20****29. February 2024**

All Motors:

- Improved signal handling for absolute encoders
- adjusted regenerative load estimation
- Improved current control stability for MAC3000G-RM46

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**Ver 2.26.19****9. February 2024**

All Motors:

- Fix incorrect hardware version value displayed in reg 205 for motors with hardware version  $\geq 2.0$
- reduce signal noise in measured temperature
- Fix motor overheating issue for MAC800->1200 with HW version  $\geq 2.0$

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**Ver 2.26.18****18. January 2024**

All Motors:

- Fix EtherCat operation mode issue
- Fix Ethernet module Unit scaling issue

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**Ver 2.26.17****19. December 2023**

MAC1200

- Fix false overcurrent error issue
- Fix unit scaling with ethernet module issue

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**Ver 2.26.16****6. December 2023**

All motors:

- Fix invert direction issue on abs encoder
- Fix abs encoder startup and noise issues
- Fix quad-to-pulse-dir conversion issue on external encoder
- improved noise filtering on external encoder input

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**Ver 2.26.15****30. October 2023**

All Motors:

- Fix regenerative load limit issue

MAC320:

- Fix motor error in active mode issue

ver 2.26.14

18. October 2023

MAC1000, MAC3000G

- Add functionality for factory configured torque limits

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**Ver 2.26.13****29. August 2023**

All motors:

- Fix ethernet module restart issue
- Improved ethernet/motor communication
- Fixed ethernet save-in-flash issue

Mac400:

- Improved internal powerdump handling
- Torque updated in passive mode.

MAC402

- Improved high torque stability
- Improved passive mode handling

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**Ver 2.26.10**

**29 Mar 2023**

MAC140F/320 only

- Ethernet SPI issue fixed

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**Ver 2.26.09**

**22 Feb 2023**

MAC14xF only:

- Fix encoder calibration issue

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**Ver 2.26.07**

**8 Dec 2022**

All motors:

- Fixed invert rotation issue

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**Ver 2.26.06**

**21 Nov 2022**

All motors:

- Allowed for readout of encoder type in reg 283
- Fixed position save to flash issue

MAC400, MAC402, MAC1500, MAC3000, MAC3000G, MAC4500:

- Fixed problem with absolute encoder and inverted direction flag
- Increased noise tolerance on ethernet sync
- Fixed support for 32 bit absolute encoder position
- Fixed absolute encoder issues at high temperatures

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**Ver 2.26.04**

**11 Nov 2022**

MAC141x-F only:

- Fixed turntable issue when saving parameters to FLASH.
- Added special command 0x105C to perform factory reset on motor
- Fixed absolute position startup drift error
- increased noise tolerance on ethernet sync

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**Ver 2.26.02**

MAC400, MAC402, MAC1500, MAC3000, MAC3000G, MAC4500:

- fixed problem with ePLC program not starting automatically
- fixed problem with incorrect initial encoder position for incremental encoders

MAC400

- adjusted regenerative load cool down time.

MAC140F

- add support for automatic current calibration.

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**Ver 2.26.1**

**7. Sep 2022**

MAC400, MAC402, MAC1500, MAC3000, MAC3000G, MAC4500:

- Support for new RM46 control core.
- Improved motor performance for products using RM46 control core.

MAC140F:

- Fixed problem with register 35 not configuring crossfield.

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**Ver 2.25.05**

**16 May 2022**

All motors:

Prevent outside sources from setting active mode until STO is completely cleared  
Fixed High resolution position mode

MAC1500 and MAC3000G:

Efficiency of internal power dump improved (only for 1ms sample time)

MAC3000G:

Powerdump threshold voltage reduced.

MAC400:

Optimized I2T.

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**Ver 2.25.2**

**4 Feb 2022**

Fixed EtherCat issue for all MAC motors

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**Ver 2.25.0**

**11 Jan 2022**

MAC140F:

- Initial release

MAC400 / MAC400G / MAC402 / MAC1500 / MAC3000 / MAC3000G / MAC4500 :

- Fixed problem with encoder direction when using gear out on absolute encoder motors

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**Ver 2.24**

**04 June 2021**

Fixes :

- I2T scaling updated to prevent overflow (MAC402)
- Fixed issues with analogue torque mode

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**Ver 2.23**

**14 Jan 2021 AD**

Improvements:

- Added commands 100 and 101 for factory testing.
- Handling of CRC-errors from Absolute encoders improved.
- Support for brake burn-in activation via command.

Fixes:

- Startup issue with abs.encoder flash backup fixed.

V2.23 is more robust against electrical noise, so if you experience false overspeed errors, we recommend that you update from v2.22 to v.2.23.

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