

Copy files to root directory of microSD card (filesystem FAT32), insert into display (contacts on top) and run update process.



**Do not downgrade firmware that was installed from factory! You may get a brick**

To check current version open “Device information” menu.

Every device have own firmware! Display updated in display menu, controller updates through controller menu.

**Display**

**Controller**

**Release notes**

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| <p>v0.60B </p> <p>Fixed throttle drop.<br/>Small menu fixes.<br/>LEVCAN updated.<br/>Button setup simplified, by default all set to CAN mode.<br/>Added exFAT support (but display still can be updated only from FAT32).<br/>Added charge screen.<br/>Added fast statistics type selection.<br/>Added wider event window.<br/>Mph stats fixed.</p> | <p>v0.7.18 </p> <p>Experimental logger added.<br/>Fixed many charger glitches, however still have few.<br/>Added soft start to charger and more safe phase detect.<br/>Completely reworked field weakening, now should not have any hard braking after release.<br/>Added minimum speed reference for speed PID.<br/>Added RC PWM control on P1 port (throttle/brake).<br/>Added more logger parameters.<br/>Few important FOC control fixes, DC current should be calculated better under field weakening.<br/>Fixed one weird ultra-rare bug in square mode.<br/>LEVCAN operates on queues now, log time 2x faster when display updated.<br/>Decreased DCi Ki default from 500 to 200.<br/>Slightly decreased FW start point.<br/>Added full debug info export.<br/>Added logger mode selection and tuned logger start.<br/>Removed first line from log for easy datazap upload.<br/>Throttle / brake curves added (8 point configuration) with presets.<br/>PAS extra scale added for additional modes.<br/>Soft acceleration for cruise added, more shutdown triggers.<br/>Cruise logic updated - phase current limited by selected mode, not throttle position.<br/>Minimum cruise speed - limits cruise activation.<br/>Cruise increment/decrement - control cruise speed with buttons ( port = CR+/CR-)<br/>Cruise restore - recovery last saved cruise speed with button, activated only above min cruise speed. (port = CRr)<br/>Power limit added to modes and battery configuration. 0 = power limit disabled.<br/>Small menu fixes.<br/>CAN inputs increased to 16.<br/>Parameters export / import fixes.<br/>12V shutdown fix.</p> | <p>31 August 2020<br/>Use configuration export before update, reset defaults after update and import configuration.</p> |
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| v0.59B<br>   |   | 18 March 2020<br>HOTFIX for display speed sensor             |
| v0.58B<br><br>Fixed 0V throttle issue.<br>Fixed charge statistics<br>reset.<br>Added kmh/mph switch.<br>Added more parameters<br>to info. lines on main<br>screen.<br>Added hotkey mode for<br>compatibility with<br>controller speed<br>functions.<br>Fixed contrast setting.<br>Added driving range,<br>calculated from WH<br>usage.<br>A lot of tiny fixes. | v0.7.12<br><br>Torque PAS fixes<br>Fixed configuration import for<br>advanced modes<br>Added configuration selector from 1 to<br>9<br>Import will show first line of<br>configuration, you can put a comment<br>here<br>Fixed N mode<br>Fixed motor wiggle at charger mode<br>Added more debug information | 11 March 2020  |
|   | v0.7.9<br>   | 21 Nov 2019<br>HOTFIX, fixed NaN error for analog<br>inputs. |

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| <p>v0.57B </p> <p>CAN buttons setup<br/>Inverted inputs setup<br/>Statistics reworked<br/>Added filters for analog inputs</p> | <p>v0.7.8 </p> <p>Big menu update<br/>Control logic completely reworked for future compatibility with BMS<br/>New default values for PIDs<br/>DC-DC low voltage difference charge fixed<br/>Inverted brake input added<br/>Specific setup for 3 positional speed switch added (can work now as 1-2-3)<br/>Button/switch select for usual speed select input<br/>Save CRC calculation fixed<br/>New speed mode - neutral<br/>Speed increment and decrement added<br/>Added t-sensor NTC 10k B:3380<br/>Reboot command added<br/>Fixed field weakening over 126%<br/>Fixed VBUS measuring, now it is at PWM frequency, significantly improved<br/>overvoltage protection<br/>Added median VBUS filter<br/>Added averaging of N-X ADC samples filter for throttle and brake<br/>Fixed brake glitches<br/>Current measuring fixes for better measuring on 6F board<br/>When enable button configured controller will not turn-on anymore when power applied<br/>Autodetect improved, more informative, short-circuit detect added and timeout fixed<br/>Added lock-at-turn-on, will lock throttle until password on-screen is entered<br/>Voltage on phases detect added, will lock controls<br/>UVLO added<br/>Added "Advanced modes" menu with more specific options per mode<br/>Personal throttle protection lock for CAN source or local<br/>Motor temperature limit for charger (DC-DC)</p> | <p>20 Nov 2019<br/>Export configuration (or make screenshots), after controller update do "Erase data storage" and reboot. Configuration will not be imported fully, some values will need to enter manually.</p> |
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