

Firmware revision history

Revision	Date	Changes
2.17.1	16/07/24	<p>Improvement- Dual Gimbals- The option to set a ballistic offset in Sync mode has been added.</p> <p>Improvement- Dual Gimbals- Reading the number of bullets and several statuses from 'CapSnap' unit.</p> <p>Improvement- The stabilization algorithm was updated: an option to stabilize using two IMUs for higher accuracy, the control loop is based on both position and speed loops, and a rebalance mechanism has been added.</p> <p>Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Fix- Set the 'system inserted heading' (when 'OVD GPS' flag is set) as PAN load position motor at controller startup.</p>
2.17.0	27/06/24	<p>Improvement- Dual Gimbals- 'Boresight' mechanism and its relevant commands were added. In addition, 'Sync mode' settings commands were added. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Improvement- LRF – set range and get range commands were added. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Improvement- An option to get the incremental position in addition to the absolute position was added. Description can be found in the '<i>Command and Control API</i>' document.</p>
2.16.3	03/04/24	<p>Fix- Absolute mode in short path while software limit switch is active. For non-absolute systems only.</p>
2.16.2	12/03/24	<p>Fix- Added a delay in the SWLS settings, to prevent interruptions to the driver when it saves to its memory.</p> <p>Remark- <i>Do not turn off the system until the SWLS commands are complete.</i></p>
2.16.1	18/02/24	<p>Improvement- Dual Gimbals- '<i>Inner mode</i>', Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Fix- Enable general operations (such scanning, preset etc.) with each Dual Gimbals mode.</p> <p>Fix- Scanning- snake movement.</p>
2.16.0	20/12/23	<p>Improvement- Software limit switch- setting the software limit switch handler (controller/driver/both). Activate '<i>slowdown</i>' mechanism. Description can be found in the '<i>Command and Control API</i>' document.</p>

		<p>Improvement- New error register to indicate if one of the motion operations wasn't completed successfully. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Improvement- New Error position indication for absolute mode. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Improvement- Set faults in motor error register when communication with driver is lost.</p> <p>Improvement- Reading the number of satellites from AN GPS.</p> <p>Fix- motor error message.</p>
2.15.1	12/11/23	<p>Improvement- Dual Gimbals- '<i>Sighting In</i>' mechanism, Description can be found in the '<i>Command and Control API</i>' document.</p>
2.15.0	9/11/23	<p>Improvement- main operations timing.</p> <p>Improvement- optimization the readings from the drivers.</p> <p>Fix- Homing on startup (using startup register).</p> <p>Fix- Dual Gimbals – absolute movement with software limit switch.</p>
2.14.3	11/10/23	<p>Improvement- New MPU IMU integration.</p> <p>Fix - Dual Gimbals- software limit switch in Sync mode.</p> <p>Improvement- Reading absolute encoder position from the drivers.</p>
2.14.0	6/8/23	<p>Feature- Dual gimbals Implementation. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Improvement- New Cube drivers' integration.</p> <p>Improvement- New AN GPS integration.</p> <p>Fix- 'preset' angles in a range of 0 to 360°.</p> <p>Optimization- Software limit switch- negative position must be less than the positive limit.</p> <p>Optimization- Blocking negative position commands in absolute mode.</p>
2.13.8	23/7/23	<p>Fix- Absolute movement with short path.</p> <p>Fix- Leveling operation considering the software limit switch.</p>
2.13.7	14/5/23	<p>Fix- 'Go To Target' operation for Roll & Tilt systems</p> <p>Improvement- Adding filter for IMU readings in stabilization loop. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Issue- Absolute movement with short path</p> <p>Unavailable Firmware</p>
2.13.6	27/4/23	<p>Fix- The return opcode of 'get OvdGPS' command.</p>

		<p>Fix- Absolute encoder readings timing.</p> <p>Feature- Offset for IMU readings. Description can be found in the '<i>Command and Control API</i>' document.</p>
2.13.5	19/3/23	<p>Fix- The calculation of Euler angles from IMU readings.</p> <p>Fix- Changing the minimum value of stabilization acceleration.</p>
2.13.4	7/12/22	<p>Fix- Opcodes of stabilization settings commands.</p>
2.13.3	29/9/22	<p>Improvement- Stabilization loop- settings of control type, max error and speed command for position control loop were added. Description can be found in the '<i>Command and Control API</i>' document.</p>
2.13.2	30/8/22	<p>Improvement- Homing function according to the absolute encoder</p> <p>Fix- Using 'General Spd' variable in Leveling operation (instead of fix speed value).</p>
2.13.0	28/8/22	<p>Feature- Bootloader implementation</p> <p>Improvement- Stabilization loop of Roll & Tilt systems</p> <p>Fix- Stop motors in Keepalive mechanism</p>
2.12.6	20/7/22	<p>Fix- Software limit switch with reverse axis.</p>
2.12.5	22/6/22	<p>Improvement- Software limit switch with absolute encoder.</p> <p>Fix- Limiting the number of leveling attempts.</p>
2.12.4	13/6/22	<p>Improvement- Targets, Presets, scanning and stabilization operations for one axis systems.</p> <p>Improvement- Targets, Presets and scanning operation while stabilization is active.</p>
2.12.3	24/5/22	<p>Improvement- Stabilization loop- Roll compensation was added. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Fix- Reset VN IMU</p>
2.12.2	31/3/22	<p>Improvement- Motion commands while stabilization is active.</p> <p>Fix- Initialization position of Scanning.</p>
2.12.1	21/3/22	<p>Fix- Drivers communication for one axis systems.</p>
2.12.0	15/3/22	<p>Feature- Keep Alive mechanism. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Feature- Startup register. Description can be found in the '<i>Command and Control API</i>' document.</p>

		<p>Feature- Set the position range. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Feature- Leveling operation. Description can be found in the '<i>Command and Control API</i>' document.</p> <p>Improvement- Drivers communication- reading motors data.</p> <p>Fix- blocking movement commands while one of motion operation is active.</p>
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