BLACK WIDOW™

Software Release Notes | Version 2.13.0

Release Date: November 2, 2026 ▪ Black Widow sUAS / Warfighter Electronic Bridge™ (WEB)

What's New in 2.13.0

Version 2.13.0 improves flight performance, camera and gimbal operation, ground control usability, and system reliability.

- **Flight and Imaging:** Improved image stabilization, camera controls, and gimbal behavior.
- **Ground Control:** Improved pairing, joystick configuration, and controller functionality.
- **Battery and Radio:** Expanded battery compatibility and improved radio update reliability.
- **Localization:** Added Ukrainian language support.

Important Update Notes

ⓘ **Before Updating**

Updates from 2.0.3 to 2.13.0 may require multiple attempts. Aircraft pairing may need to be repeated after updating. A USB-C connection is recommended; see the Operator Manual for instructions.

Approved Software Versions

Software	Version
Aircraft Firmware	2.13.0.3814
WEB Control	2.13.0.180292
ATAK	5.8.0.5 (A306924)
UAS Tool	13.0.6.1 (d6d81c4f)
Network Monitor	7.9.0 (B716549)

Key Resolved Improvements

- Improved aircraft pairing guidance, status feedback, retry behavior, and USB pairing workflows.
- Corrected gimbal/zoom rocker operation and improved access to joystick mapping and calibration.
- Improved Doodle/external radio firmware update reliability.
- Addressed camera zoom, infrared settings, exposure metering, and MAVLink camera parameter issues.
- Improved 3CP gimbal stability and reduced remaining rolling-shutter distortion.
- Addressed WEB Control crashes when removing a paired device and issues with radio profile access.

Detailed resolved issues and known issues are provided in Appendices A and B.

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Appendix A — Resolved Issues

ID	Area	Resolved Issue / Improvement
1289	Gimbal Control	Improved gimbal pan-step behavior when zoomed in using UAS Tool or QGC.
1968	Camera Positioning	Corrected inaccurate CFOV MGRS coordinates displayed in Teal QGC.
2480	UAS Tool	Addressed intermittent failures when loading aircraft parameters into UAS Tool.
2511	Remote ID	Corrected the operator location type reported in Open Drone ID system messages to Dynamic.
2751	USB Storage	Corrected an issue preventing USB Mass Storage mode from enabling properly.
2920	WEB Control	Corrected an issue preventing the Radio Profiles page from opening after a reboot.
3041	Radio Updates	Addressed failures when updating external radio firmware through WEB Control.
3382	Camera Communication	Corrected missing camera mode capability information in MAVLink CAMERA_INFORMATION messages.
3447	Anti-Jammer	Corrected an issue where the Doodle Sense Anti-Jammer profile displayed as "Profile Unknown."
3524	WEB Control	Corrected brightness slider behavior on the connected device.
3579	ATAK	Addressed an issue preventing previously saved missions, including AFLR missions, from loading.
3593	3CP Gimbal	Updated minimum and maximum gimbal tilt limits for the 3CP payload.
3602	Radio Updates	Improved reliability of Doodle radio firmware updates.
3610	WEB Control	Corrected an unresponsive Sleep/Wake button.
3714	WEB Control	Improved the initial setup experience.
3717	WEB Control	Improved aircraft pairing instructions.
3718	WEB Control	Improved safeguards against accidental cancellation during pairing.
3723	WEB Control	Improved feedback when no aircraft are detected during pairing.
3724	WEB Control	Added physical proximity guidance to the aircraft pairing workflow.
3725	WEB Control	Improved pairing status feedback.
3726	WEB Control	Refined pairing cancellation and retry behavior.
3728	WEB Control	Improved the USB pairing workflow.
3729	WEB Control	Improved USB pairing status messaging.
3753	Camera Controls	Corrected an issue where the default image capture button also activated the Mapshot function.
3754	Camera Settings	Corrected a timeout error displayed when resetting camera settings to defaults.
3775	Video Stabilization	Improved electronic image stabilization to reduce remaining rolling-shutter distortion.
3802	Radio Configuration	Added configuration support for TPC and multicast settings.
3821	Camera Zoom	Corrected intermittent duplicate zoom actions on the 2CP payload.
3823	Infrared Camera	Corrected an issue preventing infrared zoom settings from returning to their defaults.
3836	Target Tracking	Improved visibility of the target-tracking bounding box in the 1K camera view.
3843	Camera Settings	Corrected an issue where changes to exposure metering settings were not applied.
3853	Gimbal Stability	Addressed gyro bias drift while the gimbal was stationary.

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ID	Area	Resolved Issue / Improvement
3883	Mission Safety	Addressed an issue allowing missions to run when joystick calibration had failed.
3909	QGC Interface	Improved the appearance of mission-list controls.
3956	WEB Control	Corrected an application crash when deleting a paired device while multiple devices were paired.
4036	Camera Communication	Corrected MAVLink parameter responses for infrared palette, camera mode, and electronic image stabilization settings.
4077	WEB Command	Improved access to joystick mapping and calibration settings.
4078	WEB Command	Corrected nonfunctional gimbal and zoom rocker controls.
4079	QGC Interface	Addressed unintended touch-input behavior when minimizing QGC.
4082	Battery Compatibility	Added identification and approved configuration support for smaller KULR batteries.
4145	Camera Settings	Corrected an issue where EO zoom did not reset when restoring default camera settings.
4159	Gimbal Calibration	Addressed gimbal calibration instability associated with firmware updates performed using the flash_mk2.sh method.
4217	Aircraft Battery Status	Corrected an issue where the aircraft battery status displayed “N/A” instead of the battery information.
4220	3CP Gimbal	Addressed vibration and buzzing associated with updated 3CP housing components.

Appendix B — Known Issues and Operator Actions

Review applicable limitations before operation. Follow the actions below when an issue occurs.

ID	Known Issue	Operator Action / Additional Information
2073	A “Switch Video Processor” pop-up may appear.	Select Do Not Ask Again, then select Switch to GStreamer.
2479	The UAS Tool icon may not be visible in the ATAK toolbar.	Open the ATAK menu and select UAS Tool. If it is not listed, go to Settings → Plugins and verify that UAS Tool is present and marked as Loaded.
3576	A camera that is not enabled through JSON configuration and is unavailable during VideoCore startup may result in an unusable VideoCore state.	The aircraft needs a firmware update.
3595	The 3CP gimbal may exhibit subtle side-to-side movement while the aircraft is stationary.	The movement is not noticeable during flight.
3596	The left rocker may stop controlling gimbal movement up and down.	Power-cycle the aircraft and force close ATAK. Waiting before retrying has also helped in some cases.
3601	ATAK may request gimbal control during startup. If the request is dismissed or denied, the operator may lose access to gimbal movement and may not receive the prompt again.	Clear the cache and try again. When prompted, accept the gimbal control permission.

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ID	Known Issue	Operator Action / Additional Information
3694	Sensor calibration may fail.	Exit and reopen the sensor calibration page and retry. If the issue continues, force close and reopen ATAK. If it persists, power-cycle the aircraft and WEB/GCS, reopen ATAK, and retry the calibration.
3824	The ATAK video recording timer may continue running during a mission.	Manually tap the Record button to stop recording.
3828	Target Tracking may continue to report an active track after tracking has stopped.	Use the gimbal rocker to regain manual control of the gimbal.
3858	ATAK may display an “Updates Available” pop-up.	Select OK, verify that UAS Tool is marked as loaded, and then return using the Back arrow.
3859	Required aircraft telemetry may not be available or updating correctly before arming.	Verify battery information, GPS data, Local and Remote RSSI values, horizon/attitude response, and compass heading before attempting to arm.
3860	The pairing process may fail or display an error code.	Exit and restart the pairing process. If the issue persists, power-cycle the GCS and aircraft and retry. If an error code continues to occur, record the error code for further troubleshooting.
4086	The aircraft may repeatedly jump during manual landing in Follow Me mode.	Switch to Position Mode before landing the aircraft.
4160	Aircraft indicator lights may stop flashing during a firmware update, followed by a red flash on the right-side indicator.	Wait for the red indicator to stop flashing and allow the firmware update to complete.
4223	ATAK may allow geofence uploads when the aircraft's home position is invalid.	Do not create an occlusion geofence around the aircraft's current location.
4224	Missions with distant launch locations may be accepted without an error.	Verify that the correct mission is selected and review the mission's launch location before starting the mission.
4232	WEB battery level may incorrectly display 0%.	Wait a few minutes for the battery indicator to update. If the issue persists, reboot the WEB. The WEB may continue operating normally while displaying 0%.

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