

C2 Field Firmware v10.001 Release Notes

Release information | Details |

Firmware version | v10.001 |
Release date | August 4, 2026 |
Package | `C2\_Field\_v10\_1.bin` |

Overview

Firmware v10.001 is a substantial update focused on frequency-hopping resilience, low-probability-of-intercept and low-probability-of-detection (LPI/LPD) operation, CRSF integration, dual-radio operation, pairing, telemetry, and remote configuration. It also includes reliability improvements across hopping synchronization, radio selection, configuration persistence, system control, and device status reporting.

Highlights

Frequency hopping and LPI/LPD

- Improved entry into and exit from frequency-hopping operation.
- Improved reconnection and resynchronization after missed hops or a broken link.
- Improved transitions between static-frequency and frequency-hopping modes.
- Matured LPI, LPD, and over-the-air (OTA) operating modes.
- Improved synchronization when transitioning from pairing to flight operation.

CRSF and SBUS interfaces

- Added CRSF support over UART1, including transmit and receive operation between the MCU and controller.
- Expanded CRSF parsing, link-statistics reporting, and RC-validity handling.
- Added switching between SBUS and CRSF operation.
- Improved telemetry enable and disable behavior.

Lua and configurator control

- Added OTA configuration through Lua commands.
- Added telemetry enable and disable controls.
- Added acknowledgments for system-control commands.
- Added parameter persistence and reset controls.
- Added the ability to reconfigure or recover the AU and GCU without manually reflashing them.

Dual-radio operation

- Expanded independent operation and scanning for both radios.
- Added per-radio antenna handling and dual-radio link operation.
- Improved binding using both radios.

Binding

- Redesigned bind-state handling with explicit, persistent bind status.
- Improved UID handling and added related command-line controls.
- Added pseudo-randomized binding frequencies on AU.
- Improved interference rejection and multi-radio connecting behavior.
- Prevented an unbound unit from responding to an interfering connecting unit when UIDs do not match.

Link statistics and telemetry

- Added LinkStats support as a primary interface feature.
- Replaced diagnostic values with measured RSSI, SNR, and frequency data.
- Adjusted reporting cadence for different spreading factors.

LED and device status behavior

- Redesigned LED status codes for pairing, OTA updates, telemetry loss, killed state, and covert mode.
- Added distinct indications for short, medium, and long button presses.
- Improved firmware-update and device-reset indications.

OTA and system control

- Expanded OTA configuration controls.
- Added remote kill functionality.
- Added software-reset controls.
- Added automatic GCU reset after an OTA update.

Important fixes

Hopping synchronization and reconnection

- Improved recovery after missed packets and CRC errors.
- Improved return to a known frequency after loss of synchronization.
- Corrected synchronization during static-to-hopping transitions and pairing-to-flight transitions.
- Fixed broken-link resynchronization behavior.
- Prevented flash-save timing from causing a missed packet, loss of hopping synchronization, and an unintended failsafe. Flash saving now occurs during the reset path to avoid disrupting time-sensitive radio operation.

CRSF and SBUS reliability

- Corrected UART inversion and SBUS output.
- Corrected RC transmission behavior.
- Improved telemetry disable and re-enable behavior.
- Corrected link-statistics timing.

Dual-radio and band selection

- Corrected channel and antenna selection behavior.
- Corrected RSSI and link-statistics reporting.

- Improved consistency between single-radio and dual-radio configurations.

Connecting and binding reliability

- Corrected binding-frequency errors and UID-handling issues.
- Improved connecting in the presence of interfering units.
- Corrected preservation and reset of bind state.

Configuration persistence and reset behavior

- Improved flash-save and default-setting behavior.
- Corrected persistence of local parameters, radio selection, and remote IDs.
- Improved factory-reset behavior and software-reset sequencing.
- Ensured configuration changes are retained and applied predictably.

LED, covert mode, and button states

- Prevented LEDs from turning on unexpectedly in covert mode.
- Corrected long-press indications and OTA LED sequences.
- Corrected killed-state and lost-telemetry indications.

Known issues

- LEDs may flicker the wrong color briefly on both the transmitter and receiver, especially during power-up and connection. Ensure you observe the LED for at least 1 second to determine radio state.
- Units may get stuck trying to connect if signal levels are inadequate, or a configuration change was unsuccessfully sent to the air unit.
 - In the configurator, the looping will appear as a link status rotation between UNLINKED, SEARCHING, CONNECTING, then back to UNLINKED.
- USB-C can be used for powering the GCU during flying but cannot be used during PC configuration.
- If multiple air units are bound to one GCU, they all must remain on the same radio to reconnect.
- Telemetry must be enabled to save configurations on the air unit.
- GCU remains in binding after power-cycling the unit. Factory reset the GCU to exit binding

Compatibility, rollback, and support

If updating from v9.XX to v10.XX, consult with NextGen RF Design, Inc. before proceeding as this requires a separate process.