

QATCH openQCM Real-Time FW Change Control Document			
Release Version	Date	Author	Description
v2.6b1	06/18/2023	A. Ross	<p>SWEEP PERFORMANCE: FW: 1.5-7.5ms E2E: 1.5-7.5ms CAL: <2s</p> <ul style="list-style-type: none"> - Initial beta version for the v2.6 branch - Updated build information - Initial support for ILI9341 TFT touchscreen - Add custom font and icon support files - Move Temp Control stability checks to FW - Keep track of "ready" status and label states - Bug Fix: Add FW weak pullup to SDO of MAX31855 - Remove support for Seven Segment Display - Increase Temp Control timeout from 1 to 15 minutes - Remove LED_SEGMENT pin definitions - Add screensaver support for touchscreen - Improve error detection of MAX31855 readings - Add ledWrite() method to allow PWM led states - Revert to old HW GPIO configs if not 'USE_ILI9341' - Blink BLUE led during FW update instead of DP seg - Re-detect HW errors on each read, no reboot req'd - Flush serial data at end of calibration sweep - Add UI interface support screens for ILI9341
v2.6b1	06/20/2023	A. Ross	<p>SWEEP PERFORMANCE: FW: 1.5-7.5ms E2E: 1.5-7.5ms CAL: <2s</p> <ul style="list-style-type: none"> - Updated build information - Bug Fix: Set proper TFT rotation for LCD orientation
v2.6b1*	07/12/2023	A. Ross	<p>SWEEP PERFORMANCE: FW: 1.5-7.5ms E2E: 1.5-7.5ms CAL: <2s</p> <p>The source code for a half-baked version of FW v2.6b1 was released with SW v2.6b3 that indicates HEATING vs COOLING but which has a completely re-worked PID controller in the L298NHB driver which was later decided not yet ready for release due to a lack of testing and so it was not included in the v2.6b4 release. The executable "QATCH_Q-1_FW_py_v2.6b1.ino.TEENSY41.hex" in SW v2.6b3 is identical to that of the previous build and it is therefore not a high risk of this code being programmed into a device; however, you should NOT compile the FW source from SW v2.6b3 since it is only half-baked. You have been warned!</p>

FW Changes

v2.6b4	07/18/2023	A. Ross	SWEEP PERFORMANCE: FW: 1.5-7.5ms E2E: 1.5-7.5ms CAL: <2s <ul style="list-style-type: none">- Updated build information- Improve MAX31855 error detection and reporting- Detect TFT error on power up- Report hardware errors (if any) in "INFO" reply- Only draw idle UI on "STOP" if it was streaming- Indicate "SERVICE REQUIRED" on HW errors- Reduce unneeded UI redraws on Temp Control- Indicate HEATING vs COOLING when cycling
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