

## Version 2.8.0

### RC2

#### Feature updates:

Toolchain:

- Upgrade the GCC version from **11.2.0** to **13.2.1**.

Hardware Library and Examples:

- Added the new registers layout using the struct union for all interface (Except UART)

#### Resolved issues:

Toolchain:

- Small changes to FT9xx Programming Utility user interface for clarity. The "Config File" option is hidden when it is not needed for the operation.

Hardware Library and Examples:

- The issue with USB host transfers recovering from a timeout has been corrected.
- The issue with USB host resetting USB 1.1 full-speed hubs fixed.
- Optional C structures added for clearer mapping and easier access to device registers.
- Correct mis-named typedef in I2S header. "i2s\_bclk\_div\_t" deprecates "i2s\_bclk\_div".
- Fix declarations of the "USBDX\_pipe\_isr\_\*" functions in usbd.c to prevent compiler warnings.
- Add macro "SET\_GPIO\_FUNCTION" to setup GPIO pads and pins in one go. Rename pins to work with macro and to help prevent incorrect pin and gpio combinations.
- Add system API functions for common power management operations called as part of the USB device driver ("sys\_wake" and "sys\_sleep").
- Add "USBD\_power\_change" function to USB device API to perform commonly used power management operations.
- Control the PSWN control line actively on the USB host driver. This turns on and off power to the USB host port when "USBH\_initialise" and "USBH\_finalise" are called.
- Improve completion of the DFU driver to remove the need for power cycle.
- Modify code flow to allow USB host driver to run without interruptions.

#### Known issues:

Toolchain:

- The Eclipse IDE distributed with the installer is the 64-bit (x64) version. The Bridgetek plugins run with a 64-bit version of Eclipse.
- On Windows the cross-compiler tools are 32-bit executables. There are no issues running 32-bit tools from the 64-bit Eclipse application. Utilities included such as FT9xxProg and FT9xxProgGUI are 64-bit tools.
- TheFT9xxProg utility may trigger virus scanners since it can be connected to through a network port. If this happens then instruct the virus scanner or firewall to open port 3333 for access by the affected applications.
- If porting code from v2.6.0 of the toolchain or older, debug configurations need to be changed. The debugging configuration selected must be "Bridgetek FT9XX

Application Debug" and use the port 3333. The FT9xxProg utility is used for debugging rather than a script called "gdb\_bridge.py".

#### Hardware Library and Examples:

- The ADC rail-rail reference is disabled by default, as a result:
  - Voltages between 0 - 350mV are all read from ADC as zero.
  - Voltages between 3 - 3.3V are all read from ADC as max value (1023).
- The interrupt library does not work properly when the interrupt priority is changed.