Version 2.11.0

Feature Updates

ASTC Encoder
- Users can now select any version of astcenc for improved flexibility.
- The ASTC encoder has been updated to version 4.x.
- Added an ASTC Encoder link in the Info tab for quick access.

Font Converter
- The output file _charmap.txt has been removed for a cleaner output.

Flash Utilities
- A separate option for BT817A has been added for better usability.
- Added subtype for animation to enhance animation support.

Animation Converter
- Reversed the arrangement of .data and .object for user convenience.
- Removed the .anim file from the output folder.

Bin2C
- Aligned the converted value to the left for improved readability.

Image Converter
- Improved the generated SampleApp for DXT1 bitmap generation.

Custom Touch Compiler
- Added a new compiler for BT88X/FT81X.
- Included new macros and pseudo code in the Read Me tab.

Installer
- The setup file is now signed with a company certificate.

Resolved Issues

Animation Converter
- Resolved the issue associated with 2-frame GIF input.
- Addressed the bug that occurs when disabling the Tile Size.

Flash Programmer
- Corrected the text argument of Eve chip generation.

Font Converter
- Fixed the bug related to the wrong baseline in Font Converter.

Sample App
- Resolved the issue of excessive restore_context() command.

Image Utilities
- The layout of the Input File is no longer cut at the top.

DXT1
- Addressed the issue where the Sample App does not display DXT1 images correctly.

Session
- Resolved the issue with loading input files.

Version 2.10.2

Resolved Issues

- Rectified the text argument for the EVE chip generation in Flash Programmer.

Version 2.10.1

Resolved Issues

- Corrected the baseline offset in Font Converter

Version 2.10

Feature Updates

Font Converter
- Redesigned the UI of the bitmap format
- Enhanced JSON format
- Extended the log window to the bottom edge
- Enhanced the text quality of the output window
- Changed the address style of Lx format

Flash Utility
- Made the output message clearer
- Rewrote the text of the [Read Me] tab
- Added dummy asset for padding
- Supported BT817A
- [Pico] Improved progress dialog
- [Pico] Hidden Diagnostic tab if the programmer module is Pico
- [Pico] Safely aborted while programming

Custom Touch
- Added firmware for Sitronix, HYCON
- Added [Sample Code] tab
- Deleted the .bin file
- Renamed output.bin to output.load.bin in the [Read Me] tab
- Replaced "command interface" with "Command FIFO (RAM_CMD)" in .load.h
- Updated jtcdebug for both BT815 and BT817

Disassembler
- Improved cmd_execute

Asset Compressor
- Changed the tab name [Validate] to [Validate/Decompress]

General
- Display the help message when calling eab_tools <tool name>

Resolved Issues

Asset Compressor
- Fixed the bug that prevented the [Open Output Location] button from working

Asset Validator
- Corrected the error that made the [Output Folder] dialog reappear after the first cancel.

Custom Touch
- Resolved the problem of displaying an incorrect dialog box when the [Output Folder] dialog is canceled.

Version 2.9.1

Feature Updates

Font Converter
- Added a checkbox to enable/disable font color.

Version 2.9

Feature Updates

Session
- Changed default folder to <EAB Installation>/work_space/session.
- The active session is now enabled by default.
- Users are prompted to save when they stop a session.

Disassembler
- Added hint for Detail Output.
- Made improvements to the output text format.
- C-style comments are now supported.

Font Converter
- Added an option to reserve \x20 for the space character in ordinal mode.
- Simplified the layout.
- Revised the fnt_cvt tool manual.

PNG/JPEG Validator
- Provided a user-friendly conclusion.
- Utilized QGraphicsView to show preview images.

UI
- Made the ASTC Preset consistent.
- The command line is now shown by default.
- The Input File section can now be adjusted.

BIN2C
- Added the inclusion of "stdint.h" in the generated C file.

Animation Converter
- Added a JSON file to replace the readme file.

EAB
- Added support for BT88X.
- Added a new tool to optimize display list commands.
- Improved the JSON file for all utilities.

Resolved Issues

Video Converter
- Resolved an issue where a progress dialogue reappeared after the conversion process was completed

Version 2.8

Feature Updates

General
- Added JPEG Optimizer.
- Speeded up load session time.
- Made the progress bar consistent.
- EAB installer no longer requires admin rights.
- Changed the color of Tab Icons to orange.
- Updated the libmpsse to version 1.0.3 for supporting Power Delivery enabled chip.

Image Converter
- Generated the '.astc' file when converting to ASTC format.

JPEG Optimizer
- Added the size comparison of the input and output files.

PNG/JPEG Validator
- Clearly defined the output format.

Font Converter
- Created a tool to convert text to an encoded string.
- Added a preview tab in the output panel for the input characters.
- Saved converted characters in HTML format for proper viewing.
- Showed alpha channel background for color widget.

Flash Programing
- Supported CMD_FLASHSPITX and CMD_FLASHSPIRX.

Command Prompt
- Added ffmpeg support.

Video Converter
- Set output size to the original video resolution.
- Added a video preview tab.
- Added an "Eve Chip" drop-down box for users to select the target device.

Resolved Issues

UI
- Fixed the issue that showed an error message when canceling the folder selection dialogue.
- Fixed the issue that the Info icon is not highlighted when the mouse is hovered over.

Disassembler
- Fixed the issue that disassembled incorrectly at SCISSOR_XY and SCISSOR_SIZE.
- Fixed the issue of misalignment when reading from a hexadecimal text file.

Image Converter
- Fixed the issue of failing to convert the image to ASTC format.

Font Converter
- Addressed the issue that the dialog "Creating glyph and xfont..." is displayed after conversion is completed.

Version 2.7.1

Feature Updates

Font Converter
- [Legacy] RAM_G address must be a multiple of 4.
- [Extended ASTC] Added background and foreground color to converted characters.

Asset Compressor
- Added new tool to check if the user input file is valid for cmd_inflate or cmd_inflate2.

Version 2.7.0

Feature Updates

Font Converter
- Filtered out Combining character and Spacing Modifier Letters.
- Increased the font size limitation in the font conversion utility.
- Sped up the font conversion process for ASTC and L1->L8 extended format.
- Preview font can now be turned off.
- Added a checkbox to Select All/Deselect All in the Select Range dialog.
- Added an info button for a font size limit.

Flash Utility
- Supported updating the designated flash region.

Image Converter
- DXT1 images now get padded to black.

Disassembler
- Identified and skipped data appended for cmd_memwrite.

Version 2.6.1

Feature Updates

Custom Touch
- Adjusted the compiled custom touch firmware to make it patchable.
- Updated JTC to version 1.4.0.

Font Converter
- Sped up the font conversion process for ASTC extended format.
- Reduced the glyph file size.
- Opened the generated folder instead of the Output folder.
- Used escape character \u in generated source code.
- Added "All" option in the extension mode.
- Unified the preview image of both modes.

Video Converter
- Cleared video information text once the new session starts.

Disassembler
- Added the output file name in the Log window.

Image Converter
- Added the usage of options '-x' and '-g'.

General
- Updated "libMPSSE" which removes the Sleep in the API SPI_ToggleCS(), to improve performance dramatically.
- Replaced icons in the [Convert] button for clear meaning.
- Added recent file paths in [Load Session] button

Limitations

- Drawing preview images for converted characters doubles the conversion time. Therefore, drawing preview for Extended ASTC is disabled until a proper solution is found.

Version 2.6.0

Feature Updates

Font Converter
- Removed empty block in the font image preview.
- Added font encoding.
- Modified the introduction.
- Added explanation for Font Block Info.
- Added an index to the previewed image.
- Improved filter characters in Legacy mode.

Animation Converter

- Modified the introduction and added the Hint button.

Video Converter

- Removed CMD_SWAP in generated C code.
- Users can select to keep or remove an audio stream.
- Bitrate options are grouped.
- Added advanced mode to control the output bitrate.

Disassembler

- Modified the introduction and changed the tooltip in the input files area.

Image Validator

- PNG Converted color type Greyscale+Alpha to Truecolor+Alpha.
- Resized an image if its size exceeded the graphics ram's size.

User Guide

- Described the naming convention of the EAB output filename.
- Explained the folder structure of Sample App.

General

- Added a button to open a terminal window.
- Added a button to show the latest command line that has been executed.
- Renamed font and animation tools.
- Subfolders in "Assets For Test" have been renamed to align with their associated tools.
- Updated the Sample App folder.
- Moved "astcenc.exe" to sub-folder $EAB Install/tools.
- Changed application style from Fusion to Window Vista.

Resolved Issues

Animation Converter

- The convert button is clickable even when the output path is empty.
- Fixed bitmap type of animation frame.

Video Converter

- Stripped off the audio stream if "Keep Audio Stream" is unchecked.
- Fixed an issue where converted video cannot play due to the inverse order of video and audio streams.

Font Converter

- Modified the generated C-source for both Legacy and Extended.
- Some characters are cut off.
- Selected ranges are reset after changing font size.

Image Converter

- Layout is broken when displayed on a small screen.

PNG/JPEG Validator

- Rounded up RAM_G usage to an integer.
- Removed the "Cancel" button in the "Generate the optimized file" information popup.
- Disabled the "Open Output Location" button if "Generate the optimized file" is unchecked.

General

- Prevented error code printing to console.

Limitations

Font Converter

- Characters are not vertically aligned in a button widget.

Version 2.5.1

Feature Updates

Video Converter

- Both width and height of video size are reset to 840x480 since session start.

Bin2C

- Updated notation in command-line to unify with UI.

Image Converter

- Added a Hint button for multi-cell bitmap.
- Added data padding function for ASTC based multi-cell bitmap.

Image Validator

- When the input file is PNG targeting FT0X chip, EAB shows a more accurate hint.

Animation

- Added button hint and a validator to ensure the address of animation must be divisible by 64.

Font Converter

- Added explanation for Font Block Info.
- Replaced the number of assigned glyphs with total glyphs.

Assets For Test

- Renamed "Flash Image for Test" to "Flash Utility Test" for consistency.

Disassembler

- Added Endianness hint in the UI.

Flash Image Generator

- Added information on how to add animation asset.

Custom Touch Compiler

- Updated the touch compiler to the latest version.

User Guide

- Added more details on EDF blocks.

Resolved Issues

Flash Image Generator

- Fixed the Sub Type value of PALETTED565, PALETTED4444 & PALETTED8.
- SubType in EDF block does not fit its definition.

Version 2.5.0

Feature updates

Font Converter

- Enabled users to select multiple ranges.
- Combined "Printable ASCII" into Range selection.

Video Converter

- Suggested users increase bitrate/buffer if they cause underflow.
- Added dynamic label for Video Quality.
- Added three spin box for the max bitrate, average bitrate, and video buffer size.
- Decoded video to JPG files, optimized them by the tool "jpegtran", then encoded to the video again.

Audio Converter

- Disclosed that output format will be ".mov" and showed a warning of not suitable for Eve playback when the option "add metadata" is checked.

Disassembler

- Changed the tool name from Decode to Disassembler.
- Continued to disassemble even detecting invalid command.
- Added CMD_SETBITMAP.

Image Validator

- Added RAM_G usage to log message.
- Made output folder disabled if user don't check "Optimize before validation" because validation does not generate new.
- Added bitmap format of loaded image in log area.
- Calculated the RAM_G usage based on the loaded bitmap format and width x height.

Flashing Programming

- Utilized the stable version of EveHal.

Bin2C

- Improved the format of the generated C array.

User Guide

- Modified the usage of the Font Converter tool.

General

- Added "Copy Log" button.

- Changed content margin of each utility tab.
- Users have the option to specify the folder to save session files.

Resolved Issues

Flash Programming

- Addressed the issue where the [Read] button is enabled after one of "program flash" actions is executed.
- [MPSSE] Addressed issue "Detect" and "Program" do not work if SPI clock greater than 15 MHz.

Disassembler

- Fixed the issue of CMD_SETBITMAP where changing the last two padding bytes to non-zero values affected the output file.

PNG/JPEG Validator

- Fixed error of lacking runtime dll when validating using command line.
- Fixed error happened when EAB validate a PNG image that has an invalid checksum.

Bin2C

- Addressed an issue when converting a binary file with hexadecimal notation.

Version 2.4.1

Resolved Issues

Audio Converter

- Utilized the "audioop" python module to convert the audio asset if the target format is IMA ADPCM.

Version 2.4.0

Feature Updates

Font Converter

- Limited input character.
- Made Font Block Info more readable.
- Listed out the valid character range based on the input font file.
- Added "Symbol" and "Printable ASCII" into [Extended Format] tab.

PNG/JPEG Validator

- Removed a bak file while using the command line.
- Removed *.bmp input file in validator.
- Specified EVE chip to enable EAB to select the appropriate validator.
- Optimized image before validating.

Animation Converter

- The RAM_G/FLASH address can be specified for animation asset.

Eve Decode

- Limited input file size up to 5 MBytes.

Video Converter
- Removed video codec combo box.

Audio Converter
- User can select to write file header or not.

Custom Touch Compiler
- Modified Focal Tech sample code.
- Users do not need to specify the compiler path.
- Added pseudo code on how to use the custom firmware in the readme tab.

Flash Utilities
- Provided clock frequency options when FT4222 and MPSSE are used.
- Added more description about EDF block in User Guide.

General
- Improved "eab_tools.exe" set output encoding to "utf-8".
- Removed command line mode from "Eve Asset Build.exe".
- Integrated Eve Decoder into EAB.

Resolved Issues

Font Converter
- Valid Unicode range is added twice.
- Cannot convert Symbol font in Extension format.
- Fixed converting font by installing an appropriate ASTC encoder based on local CPU specification.
- Fixed the address field for font data only allows for 5 digits.
- Removed the option "Full Unicode" because it's not useful and spends much time.

Image Converter
- Could not convert into DXT1 format.
- SampleApp is not generated.

Flash Image Generator
- Failed to generate flash if an asset is an ASTC.

Asset Compressor
- Removed option "-c" to prevent confusion.

Bin2C
- The last line is in hex while the format is set as "decimal".

Version 2.3.0

Feature Updates

Flash Utilities
- Inserted EDF Block information in edf file and map file.
- Reduced step of programming flash through Pico by automatically copying file "eve_flash_pico.uf2".

- Removed argument "--deploy" of tool uf2conv4eve.exe.
- Users can program Eve-flash through Raspberry Pi Pico.
- Added feature to convert Eve flash image file into UF2 file.
- Added Verify function in flash programming utility.
- Generated a binary form of flash image description file and stored them after blob driver.

Font Converter

- Exported the converted characters after font conversion is done.
- Users can input a subset of characters to convert.
- Corrected legacy font-kerning.
- Refused to convert font if UCS-2 Byte Order Mark is detected.

Video Converter

- Added quality control option

General

- Added hint to file browser button and folder browser button.

Resolved Issues

Flash Image Generator

- Fixed the failure of generating flash image if the animation object is added as an asset.

Font Converter

- Fixed font conversion fail if code point mode is 'Ordinal'.

Version 2.2.0

Feature Updates

Font Converter

- Reported only valid characters.
- Statisticized the number of characters in each Unicode range.
- Added option for FT80x chip
- Changed generated function name for Legacy Format.

Flash Utilities

- Improved flash programming utility to work with 128 Mbytes flash chip.

Custom Touch Compiler

- Adjusted the compiled custom touch firmware to make it patchable.

JPEG Optimizer

- Added option to optimize JPEG file by using "jpegtran".

General

- Upgraded to astcenc.exe v2.0 for faster encoding.

Version 2.1.0

Feature Updates

General

- Added new tool Bin2C to convert binary file to C array.
- Updated SampleApp under folder "Assets For Test".
- Improved sample code generation in EAB.
- Upgraded to Python 3.8.5 64bits.

Resolved Issues

Font Converter

- Fixed font conversion fail in "Extended Format".
- Fixed the input file path of 'Characters To Be Converted' changing unexpectedly.

General

- Fixed conversion fail if the output folder is on the C drive.

Version 2.0.0

Feature Updates

Font Converter

- Added an option to escape line breaks.
- Added bitmap format options in the Legacy format.
- Generated the preview PNG for extended format in font conversion utility.

Animation Converter

- Supported the animation object in RAM_G (for BT817/8 only).

Flash Utilities

- Added one more option to program the flash.
- Made programming module and EVE chip appear at the programming tab.

General

- Added a utility for custom touch firmware support (for BT817/8 only).
- Updated flash blob to the latest version to support BT817/8.
- Migrated the application EAB as well as the background utilities to x64.
- Improved image converter.
- Added two flash images to the "Assets for Test" folder at the installation path.

Resolved Issues

Font Converter

- Addressed an issue that caused the degree symbol to not be converted correctly.
- Fixed font conversion for font size of 240.

Version 1.6.0

Feature Updates

- Improved the session functionality in EAB.

- Added the keyboard shortcut for changing the order in the flash image generator.
- Added shortcut key for deleting an item in the list widget.
- Added one "Clear" button for the log panel.
- Added one warning window to prompt the user for "Data Alignment" of EAB.
- Added a question mark to explain the hardware configuration of the flash programmer.
- Showed glyph information in a different place.

Resolved Issues

- Flash detection fails but program succeeds.

V1.5.0

Feature Updates

- Add alignment option in Flash Image Generator.
- A question mark to give the hint for code point mode of font conversion utility.
- Force 64-byte alignment for Flash address of Glyph file.
- Unknown FreeType error when converting the symbol font file.
- More information provided while previewing the input font file.
- More information on the result panel of font conversion utility.
- BMP file support in Image conversion and Animation Converter.
- Compression disabled for a LUT file of the paletted format.
- More information on compression mode in the image conversion utility.
- Support of compression output in PNG2DXT1.
- Improvement on flash utility in EAB.
- Sample code improvement for the flash utility.
- Description about re-ordering assets in the flash image generator.
- More information for the "compressed" option of image conversion utility.
- Add file size and full extension name to output log of Image Converter.
- Added BMP files to the 'Assets For Test' folder.
- Add a section in the user guide to list down the flash programmer modules.

Resolved Issues

- Some characters disappear from glyph if the code point mode is UTF-8.
- Typo on code point mode drop-down box of font conversion utility.

V1.4.0

Feature Updates

- Add [Verify] feature in the Flash Programming.
- Recognition of UTF8-BOM and removal before converting.
- Speed improvement in generating font when code point mode is UTF-8.
- Replacement of 'numpy' by 'tinynumpy' to reduce distribution package size

Resolved Issues

- The UTF-8 code point 0xF09FA183 (i.e. 0x1F843 for Unicode) cannot be displayed.
- The glyph file is not compressed when the code point is in UTF-8.

- eab_tools.exe will not run on a fresh 64-bit Win10 machine.
- Image Converter fails if the current output folder does not exist.

V1.3.0

Feature Updates

- Adjustment of the sequence of assets in the flash image generation utility.
- Warning to the user about flash content damage detection.
- Warning to the users if the bitmap data is more than 1 Mbytes.
- Deflation and combination of multiple files into one file.
- Add "Dithering" checkbox in Image Converter.

Resolved Issues

- ProgFlash.exe still running after EAB closed.
- Updating flash does not work with 512Mb chip.
- Erasing flash does not work with 512Mb chip.
- Flash image generation cannot work if the total size of assets is too big.

V1.2.0

Feature Updates

Flash Utilities

- Add new utility to detect flash information.
- New tab in flash utility to show the sample code of programming flash.
- UI improvements in Flash Utilities.

Animation

- Limit "Playback FPS" from 1 to 100.
- Change "Frame Output" to "Playback FPS".

General

- Deflate (compression) support to compress the asset.
- Handling '\x0A' in Font Conversion, Legacy format.
- A dialogue in the installation process of EAB to show the release note.

Resolved Issues

Flash Utilities

- Some icons are invisible if the EAB window is adjusted till the smallest size.

V1.1.0

Feature Updates

Animation Conversion

- User can choose Tile Width, Tile Height, or disabled Tile.
- Detailed information added for generated animation.
- Playback issue fixed in animation previewing.
- Flash usage and display list usage provided for each frame.

- Updated Python script to accept Tile Size from 1 to 6.

Flash Utilities

- Error code given when flash fails to enter into full speed mode.
- Data integrity of flash image files checked before updating/writing to flash.
- Added "Introduction" label to align with other utility.
- Show warning message box when erasing the flash.
- Flash status code displayed when it fails to program.
- "Write" button removed in Flash Programmer.
- Tooltips added to the buttons in Flash Programmer.
- "Install Blob" button hidden by default.
- Typo fixed: changed "Existing" to "Exiting".

General

- Version number and building time added to EAB title bar.

Resolved Issues

- Generation of C source file in Font Conversion.
- Incorrectly generated C code for Paletted8 format in the image conversion utility.
- Incorrectly generated C code for non-ASTC image conversion.
- Failure of Image Converter with two specific images.
- Inability to enable "New Blob" function after selecting the flash bin file.
- Failure to write to the flash image.
- Missing default unified blob from the input editor box of the Generate Flash Image.

V1.0.0

Feature Updates

- Signature checked when opening session file.
- Tweaked generated C source file.

Resolved Issues

- Image preview and Image selected now match each other.

V0.6.0

Feature Updates

- Minimized size of command-line utility to improve executing speed.
- Added support for L1/L2/L4/L8 format in extended format tab of font conversion utility.
- Updated UI of font conversion utility.
- Fixed invalid function name in generated C file of Image Converter.

Resolved Issues

- Corrected conversion for L4 and L1 formats.
- Corrected conversion for RGB332 and RGB565 formats.
- Ensured font in flash is aligned to 64 bytes.

- Rectified arbitrary glyph file due to using Python unordered set.

V0.4.0

Feature Updates

- Default compression speed set to thorough.
- Improved start time and font converting time.
- Optimized JPEG files with *jpegtrans* tool.
- Supported selection of items to generate flash from multiple directories and adjusted the order of items.

V0.3.1

Feature Updates

- New dlls for Qt5.11.1 and msvc2017 updated.
- Console mode added.
- ft8xxemu.dll updated to be compatible with Verify.exe.
- User can resize the UI.
- Support for MPSSE Program Module.
- Audio Converter supported format changed from 16 bits PCM to 3 formats that EVE supports.
- C sample code generated for Audio and Video converter.
- SampleApp project added in Asset for Test.
- Link to User Guide added in the Info tab.
- Latest blob file V4 updated.

Resolved Issues

- Fixed the issue that display failed for incompatible png file.
- Sample code for paletted8 fails when a picture is bigger than 511x511.