Version 5.4.0

RC1

Feature updates

- Added VERTEX_FORMAT to generated commands to support a wider coordinate range.
- Improved the appearance of the Converter dialog.
- Enhanced content classification and highlighting.
- Added support for VM820B10A in device synchronization.
- Updated the Converter plugin to the Aug26 release.
- Added a reusable EVE device connection library (eve_hal.dll) for EAB and ESE.
- Added REG_PLAY_CONTROL to the Registers window for BT820.
- Improved thread handling for data retrieval and UI updates in the Inspectors window.
- Added the BT820 patch version to the Toolbox.
- Added UI support for loading patch files on BT820.
- Added support for Full HD (1920 × 1080) resolution on BT820.
- Added support for .avi and .mov file extensions for video conversion in the Content window.
- Updated command descriptions.
- Removed support for CMD_WORKAREA.
- Updated the BT81X/Charset example to align with the current ESE version.
- Update BT817/7A/8 Blob v186 release.

Resolved issues

- Fixed an issue that caused the "Set REG_PLAY_CONTROL" section of the ESE main loop to trigger repeatedly on BT815.
- Corrected the device name displayed as VM820B15B to VM820B15A.
- Fixed RAM_G upload failures when using FT4222 with VM816C50A.
- Corrected the displayed end address of RAM_CMD for BT820.
- Added the missing OPT_BASELINE option to CMD_TEXT.
- Fixed a "Corrupted AVI" error when running the video_frame_playback example in the emulator.
- Fixed an issue that prevented flash fast mode from being restored before RAM_DL uploads.
- Fixed hardware synchronization for the cmd_runanim example.
- Corrected the handle range for CMD_SETSCRATCH on BT820 to 0–63.
- Corrected the address increment/decrement step for CMD_ANIMFRAME to 64 bytes.
- Fixed CMD_FONTCACHE to allow font ID 255 and use 64-byte address increment/decrement steps.
- Corrected increment/decrement steps for CMD_FLASHWRITE and CMD_FLASHPROGRAM.
- Corrected increment/decrement steps to 4-byte units for applicable address (dst, src) and size (num) parameters in CMD_MEMCPY, CMD_MEMZERO, CMD_MEMSET, CMD_MEMWRITE, CMD_MEMCRC, and CMD_REGREAD.
- Corrected the increment/decrement step for the count parameter in CMD_SDBLOCKREAD(dst, src, count, result) from 512 to 1.
- Corrected the address increment/decrement step for CMD_RENDERTARGET to 128 bytes.
- Corrected the address increment/decrement step for CMD_FSREAD to 32 bytes.
- Corrected increment/decrement steps for PALETTE_SOURCE and BITMAP_SOURCE.

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- Fixed an issue that caused some content items to be missing when generated from the flash map.
- Corrected the increment/decrement step for REG_SCx_PTRx values in the Registers window to 128 bytes.
- Restored the missing CMD_INFLATE2 command in the Toolbox tab for BT81X.
- Fixed MPSSE connection failures on BT81X boards.
- Fixed issues with screenshot retrieval.
- Fixed an issue that prevented output files from being generated when converting images to formats with ZOrder enabled.
- Fixed LCD display corruption after connecting VM820C.
- Fixed the BT82X Relocatable_Anim_FS example in the emulator and on VM820C.
- Fixed device synchronization issues affecting file-system examples.
- Fixed duplicate values appearing in RAM_REG when switching to BT820.
- Fixed RAM_CMD upload hangs with the mediaFifo2Inflate example.

Version 5.3.0

RC1

Feature updates

- Added a color picker example project using Paletted8 format for BT815.
- Implemented text-matching functionality to display suggestions at any cursor position.
- Enabled the ability to drag and drop Content items into the DisplayList editor.
- Improved the project configuration dialog.
- Enhanced loading speed when switching device types.
- Provided additional details for Content items.
- Refined asset loading options in the property window for selected assets.
- Fixed an issue where the Device Manager displayed incorrect registers after cloning a device.
- Synchronized Swap Chain and Render Target registers with hardware.
- Improved register grouping for BT820.
- Enforced 32-byte address alignment for pointer parameters in CMD_LOADIMAGE and CMD_INFLATE.
- Set default values for SwapChain registers after modifying REG_SCx_SIZE.
- Updated REG_SO_FORMAT to automatically refresh default SwapChain register values.
- Added support for generating commands for z-order bitmaps.
- Introduced a method to calculate RAM_G usage, including commands such as CMD_LOADASSET and CMD_MEMCPY.

Resolved issues

- OPT_NODL is not applicable to BT82X devices.
- CMD_SETBITMAP for BT820 incorrectly indicates support for flash address format.
- The Properties tab for certain commands does not display correctly.
- Spin box continues to increment or decrement once beyond its defined limits.
- Unable to establish a connection with the VM801B board.
- Primitive widgets in the Toolbox are not automatically selected or continuously inserted.
- The Save button does not update when the Flash address or Loaded status changes.
- Modifying REG_SC0_SIZE in the Register tab and then switching devices in the project causes a crash.

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- Changes to Swap Chain and Render Target registers in the Registers tab do not update the Save button status.
- Spin box adjustment (up/down) in the Register tab only take effect after losing focus.
- Text displays incorrectly after moving CMD_TEXT when it contains quotation marks (").
- The line stride value in BITMAP_LAYOUT_H properties uses 2 bits instead of 3 on BT820.
- The z-order increment step in the spin box should be 1 instead of 4.
- On BT820, the Content item generates a negative address for CMD_SETBITMAP in the Coprocessor editor.
- Disconnecting the device via the UI button does not turn off the screen.
- Retrieved screenshot do not match the actual display on the LCD.

Version 5.2.0

RC1

Feature updates

- Integrated the new EAB module into ESE.
- Enabled custom commands(extension) on ESE via patch loading CMD_LOADPATCH.
- Added new example projects for BT82X: Relocatable_Anim and Relocatable_Font.
- Added ability to stop and start the emulator.
- Added export target for EVE-MCU-Dev.
- When the user clicks “Reload,” ESE computes and recommends the appropriate offset in RAM_G/FLASH.
- Rechecked the example projects after applying the EAB module.
- The Flash option has been removed from the Properties window for BT82X when using CMD_SETBITMAP and BITMAP_SOURCE.
- Added “u8” prefix for the string to convert the "\uhhhh" and "\x" into UTF-8.
- Support for resources generated by EAB v4.0.1, with commands successfully generated when added to ESE.
- Added the new VM820B15B platform to the Device Manager for BT820.
- Removed the duplicated settings for screen resolution in the configuration window of custom platform in device manager.
- Improvement on custom device configuration dialogue.
- Open the FT4222 interface with name other than the index.
- Update the new version of the patch files.
- Removed Utilization window.
- Setting Default Values for REG_SC1_PTR0/1 and REG_SC2_PTR0/1.

Resolved issues

- Registers are displayed incorrectly in the Edit Device window for the selected device type.
- In the Devices window, the 'Write to RAM_G and RAM_DL' button takes noticeably longer to execute.
- Got error when programming the Eve connected flash on VM820C.
- Crash when CMD_SETFONT out of range.
- After modifying REG_RE_ROTATE, certain values fail to render in the viewport.
- The video_frame_playback example is not functioning.
- The glyph file is supposed to be in Flash, but it was loaded into RAM_G.
- When using CMD_TEXT to load a font, \xfe cannot be used; \u00fe works correctly.

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- The examples do not work on BT82X.
- The Source file and Name fields in the Properties window cannot be changed after applying the EAB module.
- ESE crashes when REG_SO_SIZE is increased.
- Reducing a button's width using the 'WH' input does not actually resize the button.
- Clicking a widget in the emulator and pressing Delete does not remove it from the screen.
- Dragging a new widget into the emulator sometimes results in only a black box being displayed.
- The ARC widget sometimes renders incorrectly.
- The status text is displayed incorrectly in the Content window.
- On the hardware, the REGION example of BT82X does not display the same as it does in the emulator.
- Incorrect display behaviour after Flash programming.
- The custom device is not functioning as expected.
- Device sync on the BT820, connected to a 15.6" 1920x1080 display via MPSSE, is not working.
- Some large PNG images (such as 1920x1080,1920x1200) are unable to be rendered with CMD_LOADIMAGE in BT82x project.
- ESE crashes when retrieving the screenshot with the BT820.
- The unicode_font example cannot display the text for the AgYinXiang font.
- CMD_SOFTBOOT, CMD_TOUCHRD, and CMD_TOUCHWR should not be supported in ESE.

Version 5.1.0

RC1

Feature updates

- REG_RE_ROTATE in Registers tab.
- Add the BT82x specific formats into Bitmap_Formats example.
- Change the dialog of the Save action to make it more convenient.
- Restructure the example projects.
- Add a command list editor.
- Support the CMD_PLAYVIDEO in the device sync feature.
- Display the appropriate editor that contains content when opening a project.
- Improve CMD_MEMSET.
- Add a pseudo-command to support writing data for CMD_MEMWRITE.
- Update the ECG-Signal chart example project.
- Add an example of gradient buttons with blending.
- Add flash image label before the drop downlist of flash image size to make UI more consistent.
- Add one example project in BT82X to showcase the SD card usage.
- Provide support for constants related to SWAPCHAINs in the editor.
- New CMD API to send 32-bit data into RAM_CMD.
- Add one example project on REGION display list usage.
- Change icon for uninstaller to be different from the application.
- Retrieve the screenshot from the device.
- Specify the Unicode for the font file.
- Update the gradient example project for the BT82x.

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Resolved issues

- The flash files should also be saved when performing a 'Save As' action.
- The device sync feature is not working on FT800/BT81X based module.
- RGB6 has some problems when displayed.
- Some example projects do not display correctly on ESE 5.0.
- Add an area to set REGs related to CMD_RENDERTARGET.
- Experienced a crash when syncing the device with MediaFifo example.
- Image loading failed in BT820.
- Unable to move or resize widgets.
- Unable to load an image on the BT82X emulator.
- The number of DisplayList commands appears inconsistently in ESE.
- The RAM_DL value is displayed incorrectly.
- There is currently no support for CMD_CGRADIENT.
- ESE encounters a crash upon inputting CMD_LOADASSET in the editor.

Version 5.0.1

Resolved issues

- The device sync feature is not functioning via the MPSSE connection.

Version 5.0.0

RC2

Feature updates

- Add the support of BT820 and BT820 based module VM820C.
- Add CMD_NOP in ESE.
- Support dot character in the expression of coprocessor editor.
- Add ECG-Signals example project to showcase the usage of bargraph bitmap.

Resolved issues

- CMD_NOP is not shown on Toolbox.
- The Toolbox window is not displaying the correct items for the Display List editor.
- The application encountered a crash while attempting to open the most recent project via the Welcome screen.
- Error when displaying an image in ASTC format.
- The line stride and size are not correct on PALETTEDARGB8 format of BT820.
- LA1/LA2/LA4, PALETTEDARGB8 are not rendered correctly.
- Opening a project causes a crash.
- Unable to display an image in the PALETTED format on the FT800.
- The ARGB1555 format appears duplicated in the image format on the FT800.
- DXT1 formats are regenerating the commands incorrectly.
- In the Devices window, clicking "Write to RAM_G and RAM_CMD" does not render the screen on the BT8XX emulator unless "Write to RAM_G and RAM_DL" is clicked first.

Known issues

- BT820 | Update REG_ROTATE group in Registers tab.

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Version 4.11.0

RC1

Feature updates

- Include the default script for each example project.
- Load the script template for a newly created project.
- Make the dock widgets movable and floatable.
- After dragging the Text/Button into the emulator, the user can immediately change the text using the input.
- Add feature: Move widgets to back/front.
- Add an option to display the grid view on the emulator.
- Keep track of the visibility status and positions of the components.
- Allows the user to double-click to add an item from the toolbox to the Coprocessor editor.
- Remove nested BEGIN() and END() when the user drags and drops Primitives.
- When the user drops a POINT from the toolbox into the emulator, append a POINT_SIZE if it does not exist.
- When the user holds "CTRL" and drags a widget, clone that widget.
- When the user selects a widget on the emulator by clicking on it, pressing the arrow key can move the widget.
- Auto-correct the user's input to proper upper/lower case.
- When using Edge Strip or Rects, press Esc to exit Insert mode.
- Remove an unnecessary line in the Macro editor of the Registry window.
- The dial widget can now be easily zoomed, even when a keys widget appears in front of it.
- CMD_FLASHPROGRAM/WRITE is supported.
- Support programming blank flash in the device manager.
- CMD_CLEARCACHE is called after programming flash by the device manager.
- Update the DXT1_L2_RGB565 example.
- Explain the 'Image Coprocessor' option in the ESE document.

Resolved issues

- The Zoom feature stops working after entering 9999 in the Zoom config box.
- The Insert button is only selectable when the coprocessor is not empty.
- REG_PLAY_CONTROL does not update in the Inspector window.
- Unable to adjust the width of a toggle widget using the mouse.
- Hang up: Drag a text into the emulator, then press CTRL + D multiple times.
- The video_frame_playback example displays an issue.
- Custom fonts cannot be displayed when BT88x is selected in the device manager.
- Incorrect coordinates when using the Insert button to duplicate a widget.
- ESE crashes when dragging any panel after opening an example project.
- Cannot select items in the Content window when the pointer is on a blank line in the Coprocessor editor.
- Unable to create command when users load the resources generated by EAB into ESE.

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Version 4.10.0

RC1

Feature updates

- Show stencil value when user hovers the mouse on the pixel of viewport.
- Match hardware rendering, optimized.
- CMD_ANIMDRAW is not required in the generated commands when drag&drop a animation object in RAM.
- Add a console window to print the message of Script Editor out.
- Change text from "GameDuino2" to "Gameduino2" in ESE.
- Enable the inclusion of space characters within expressions.
- Blob version update.
- Enhance user experience in the script editor.
- Reduced redundant lines when converting from DXT1 format.
- Update examples for Script editor (filename).
- Keyboard support for deleting items in the Content window.
- Remove ftdi website reference in the About box.
- Create an example project to run multiple animation channels simultaneously on one screen by using CMD_RUNANIM.
- Enhance communication between Toolbox and Editor.

Resolved issues

- BITMAP_LAYOUT shows the wrong parameter in the property window.
- The Welcome dialog should not appear when a user opens ESE directly from a .ese file.
- The address of the padding file in flash storage is loaded incorrectly.
- Interpret the address as negative for BITMAP_SOURCE address in FT81X device.
- Cannot display full-screen when running the exported Emulator project after changing the project's device.
- The NOP command is displaying incorrectly in some places.
- Improper communication between the Content window and the RAM_G window.
- ESE crashes when changing Image formats.
- Unexpected alignment is shown.
- Using incorrectly commands on the Display List editor for DXT1 format.
- Text is generated incorrectly for some commands in the editor.
- ESE crashes when dragging and dropping primitives into viewport.
- Issues with the generated commands of the animation in Flash address.
- The initial values are not correct with BITMAP_TRANSFORM commands.

Version 4.9.0

RC3

Feature updates

- Add python-like editor to write a simple emulator based application.
- Support "+-*/" (four basic operations) in coprocessor editor/display editor.
- Improve content window:
    - Add the sorting function in the content window.
    - Support multiple files delete in the content window.
- Add DXT1 support in image converter.
- Add a DXT1_L2_PALETTED format project into example project.

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- Support C style comments syntax highlight in coprocessor and display list editor.
- Add a DXT1_L1_RGB565 example project.
- Add DXT1_L2_RGB565 example project.
- Improve "bitmap_rotate" example project to showcase the usage of script editor.
- Enable script editor to load the sample script when it is available in the opened project.
- Improve the opening and saving script feature of screen editor.
- Update the copyright year from 2023 to 2024.
- Add one example project "DXT1-FT800" for FT800.
- Change the text of the formats in the script editor.

Resolved issues

- CMD_INFLATE does not work as expected.
- [Save Display List][Save Coprocessor Command] ESE inserts some redundant random '0D' bytes into the saved file.
- [Save Display List][Save Coprocessor Command] The Hexadecimal String notation does not apply byte order because the byte order is fixed.
- [Save Display List][Save Coprocessor Command] The byte order of the saved file is incorrect.
- [Save Display List][Save Coprocessor Command] The name of the saved file does not match the entered file name in the input field.
- Cannot display CMD_TEXT command with EVE HAL library.
- [Flash Image] Issues with importing flash and undo action after removing file in flash image.
- Cannot click on the point to calibrate using the CMD_CALIBRATESUB command.
- Show the coordinate on the viewport window when SCISSOR_XY is on focus.

Version 4.8.0

RC2

Feature updates

- Supporting the Exporting feature for BT817's commands.
- Add cmd_nop in ESE.
- [Script (Python)] Add one example to play video using cmd_videoFrame.
- The status column of content manager should be consistent.
- Add description for setfont_charlotte example project.
- Add a new example project for textVGA.
- Enhance parameters for some Coprocessor commands.
- Enhance description for CMD_MEMWRITE.
- Prompt users if the file does not exist or cannot open.
- Add new example project -- Rotate Built-in Font.
- Show the search result in one separate tab.
- Add the new example project to calibrate with new bitmap.
- Add BT817A support.
- Add read/write REG_FREQUENCY in ESE.

Resolved issues

- Generating the incorrect commands when drag & drop the animation asset from content manager to viewport.
- List the right asset name in content manager when loading the flash image into ESE project.

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- The content manager changes the name of the input item.
- CMD_CALIBRATE is not shown while typing "cali" in the toolbox search bar.
- CMD_CALIBRATESUB does not work correctly.
- ESE crashes when opening calibrateWithBitmap project.
- Content windows | Issues with undo/redo action.
- [Properties Widget] Inconsistent text in BITMAP_SIZE_H.
- "nonASTC_img_flash" example does not work.

Version 4.7.0

RC2

Feature updates

- Implement a script editor to facilitate the modification of Python code for generating dynamic screen content.
- Add the example browser dialog.
- Add the welcome dialog.
- Add IDM2040-43A support in the submenu of export menu.
- Add the missing command “cmd_memcrc” support.
- Define "Unsaved"/ "Saved" states for Save tool button.
- Add more custom devices from NewHaven® Display International in the device
- manager:
    - NHD-7.0-800480FT-CSXV-CTP
    - NHD-5.0-800480FT-CSXP-CTP
    - NHD-4.3-800480FT-CSXP-CTP
    - NHD-3.5-320240FT-CSXP-T
- Add Horizontal Scanout Filter support in Registers window.
- Update the text of device manager sync up feature.
- Add example project for cmd_runanim in loop mode.
- Improve the content manager.
- Improve the user manual.
- Improve the inspector windows.
- Update the copyright date to 2023.
- Support parsing both JSON files and README files for metadata when handling assets generated by various EAB versions.

Resolved issues

- ESE crashes when dragging and dropping cmd_fillwidth into view port.
- Emulator window is not working correctly.

Known issues

- The Export function is not functional for commands specific to BT817.

Version 4.6.0

RC1

Feature updates

- Improve inspector.
- Improve the registers window.
- Improvement on RAM_CMD window.
- Add an inspector window for RAM_CMD.

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- Add one more section for exporting projects.
- Add one more example project "Circle Line".
- Add the support of IDM2040-7A board in export menu.
- Apply the anti-aliasing effect to the inner circle in the "stencil fanshape" example project.
- Add NOP into register MACRO 0 and 1.
- Add one more chapter Work with EAB in the user guide of ESE.
- Add button in toolbar to toggle on/off alignment behavior.
- Enhance 3rd party lib usage.
- Change font size of Coprocessor and Display List editor.
- Keep one instance of inspector window when it pops up.
- Add VM880C module (480x272) submenu in the export menu.
- Support screen rotation by configuring the REG_ROTATE without touch coordination system rotation.

Resolved issues

- The Properties window should not pop up when changing steps in the Controls window.
- A widget cannot be deleted if its command is the last one in the Coprocessor window.
- Unexpected behavior when user drops a new Content item with the Examples.
- Toolbox does not resume from display list mode to coprocessor mode.
- The source file should be relative file path.
- The app crashes when the line limit for the Coprocessor/Display List editor is exceeded.
- The error popup does not close when we already have a content item.
- Unable to build the export project successfully with FT81X devices.

Limitation

- When the REG_ROTATE is changed, the emulator does not allow for item selection on the newly rotated screen. Instead, users must select items from the previous position.

Version 4.5.0

RC1

Feature updates

- Add one inspector window to view the content of RAM_G.
- Save coprocessor command and display list in the binary form.
- Support for PALETTED565/PALETTED4444/PALETTED8 bitmap.
- Add pixel ruler in the view port.
- Add predefined constants in editor.
- Support area selection using mouse to select and move multiple elements.
- Add properties UI and help text for BT817/8 CMDs.
- Add both glyph and xfont if the user selected one.
- Generate coprocessor commands for legacy font with new information from EAB v2.7.1.

Resolved issues

- The popup at top-left corner should not take place.
- CMD_SETFONT needs more commands to work.

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- EOL character is transcoded while copying the lines from coprocessor editor of ESE.
- Failed to export the example project bitmap_rotate for raspberry pi pico.

Version 4.4.0

RC1

Features updates

- Add the appropriate bitmap setup when dragging and dropping CMD_SKETCH into the emulator viewport.
- Improve zoom-in precision.
- Display the RGBA value along with the coordinate position of the cursor in the Emulator screen.
- Enable drag and drop to open an existing project in ESE.
- Update LibFT4222-64.dll to remove the dependency.
- Show a warning message when the memory size required by CMD_SNAPSHOT2 is too large.
- Give more explanation for the escape character usage in CMD_TEXT.
- Improve format string example.
- Auto detect and load the contents.
- Widget alignment guide line.
- Generate coprocessor commands once user drops a content item.

Resolved issues

- Removed glitched bitmap line in BT817 and BT818.
- Fixed an issue that occurs when dragging and dropping an existing item in the Content manager.
- Failed to build the exported project using MSVC.
- Crash in a special PC with Qt6.

Version 4.3.0

RC1

- Improve the device editing dialogue, add PCLK Frequency and hide inappropriate registers based on Eve chip.
- Report "unsupported JPEG" as coprocessor faults when a progressive JPEG image is loaded.
- Explain Raspberry Pi Pico support.
- Improve the default file path of project open dialogue.
- Update extension name of example ESE project from .ft8xxproj to .ese.
- Change the location of example assets.
- Add a new mediaFifo example to use cmd_inflate2.
- Improve format_string example project.
- Correct parameter of cmd_videoframe and change the video asset in video_playback example.

Version 4.2.0

RC2

- Install ASTC encoder based on the user's CPU done.
- Improve video playback example.

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RC1

- Export Python script for Raspberry Pi Pico.
- Add a new example to demonstrate the usage of BITMAP_TRANSFORM_A~F.
- Improve the device editing dialogue.
- Update the configuration for module ME817EV with 10-inch LCD.
- Fixed fail to inflate the data in content manager.

Version 4.1.0

RC2

Resolved issues

- Fixed exporting project with BT815/BT816 and FT80X-GameDuino2.
- Fixed fail to load image in example project.

RC1

Feature updates

- Add filter textbox in Toolbox window.
- Upgrade to astcenc 2.1 for faster ASTC encoding.
- Improve the placement of primitive commands.
- Support loading content from local file for cmd_inflate, cmd_inflate2.
- Add description for cmd_calllist/cmd_endlist/cmd_newlist.
- Implement cmd_memwrite and cmd_regread.
- Add new example to demonstrate the usage of command list.

Resolved issues

- Fixed the device sync fail after writing to flash chip.

Version 4.0.0

RC1

Feature updates

- Support new EVE chip BT817/8.
- Add new registry values in device configuration window.
- Add BT817/8 specific commands to Toolbox.
- Add new gauge example.
- Add ME817EV board in Device Manager.
- Add new resolutions when BT817/8 is selected.
- Add cookbook examples for new chip BT817/8.
- Add new Python script for exporting BT817/8 project.
- Provide more user friendly value options for REG_OUTBITS.
- Set shortcut Ctrl+R for Reset Emulator menu.
- Make improvements on the register window.
- Update the latest flash blob.
- Update Python to 3.8.0, FreeType to 2.10.2.
- Get output results for CMD_GETPROPS and CMD_GETPTR.

Resolved issues

- Fixed ESE projects opening issue.
- Fixed Paletted PNG image is not loaded correctly with 'Image Coprocessor' format.

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Known issues

- Rendering ASTC bitmap with WRAPX=REPEAT has different behavior.
- Emulator touch behavior for CMD_SETROTATE/REG_ROTATE does not work correctly.
- Drawing invalid animation frame will cause ESE hang.
- When using device sync up, flash contents need written before updating display list or coprocessor.
- Primitives cannot be dropped into viewport area beyond [(0,0), (511,511)], because of the limitation of VERTEX2II.

Version 3.4.0

RC1

Features

- Add system clock configuration in the device manager.
- Integrate latest Eve Emulator to accelerate ASTC decoding.
- Caching functionality for ASTC module.
- Migrate ESE to 64 bit Windows release.

Bug Fix

- The assets under resource folder of ESE project are deleted after another project is opened.

Version 3.3.0

RC1

Features

- Constrain either horizontal or vertical positioning when dragging an object.
- Support Riverdi EVE 3 modules in device sync feature.
- Disable "Refresh, Device Manage, Device Display" buttons after device is connected.
- Add REG_OUTBITS to device configuration dialogue.
- Show the pixel value at status bar when mouse hover over the viewport window.
- Add Blend_Func example project.
- Add the circular progress bar widget example.
- Add two bitmap rotating example projects.
- Add ASTC memory layout example project.

Bug Fix

- Copying the text is failed in property window.
- ESE crash and exit when copying some data into coprocessor editor window.
- Cloning device produces the wrong name in device manager.
- '\x0A' is not handled in Font Conversion with Legacy format option.

Known issues

- Playing the invalid animation frame data in flash may cause ESE hang.

Limitation

- Device sync up feature: CMD_PLAYVIDEO without OPT_MEDIAFIFO is not supported.

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Version 3.2.0

RC1

Features

- Add a new example project to illustrate ASTC layout.
- Add a setfont example.
- Add setfont2 for extended format on bt81x.
- The add button in content browser shall open the last recent folder.
- Update the vc1dump export to 110 version.
- Enhance device sync feature to support more platforms.
- Update the “device sync up” feature with RAM_G and coprocessor content.
- Save display list in raw binary format done.
- Save the coprocessor commands in "Coprocessor" tab window done.
- Set bold font for radio button in case of build-in device.

Bug Fix

- Wrong implementation for the paletted8 format in emulator.
- Reloading the screen shot file but get the wrong effect.
- "OPT_FLAT" is missing from cmd_button properties window.
- Exporting is wrong if character ")" exists in CMD_TEXT.

Known issues

- Playing the invalid animation frame data in flash may cause ESE hang.

Limitation

- Device sync up feature: CMD_PLAYVIDEO without OPT_MEDIAFIFO is not supported.

Version 3.1.6

RC1

Features

- Add support of BT815, including ASTC, flash, Unicode and more features.
- Support FT4222 board in device manager.
- Change the user guide from .chm format to .pdf format.
- Support BT81X modules in export feature for MSVC platform:
  - VM816C50A
  - VM816CU50A
- Support more FT81X modules in export feature for MSVC and FT90X platform:
  - ME810AU-WH70R
  - ME811AU-WH70C
  - ME812AU-WH50R
  - ME813AU-WH50C
  - ME810A-WH70R
  - ME811A-WH70C
  - ME812A-WH50R
  - ME813A-WH50C
- Open the last location of loaded file in content manager.
- Force to save project in an empty folder.
- Add example "Bar graph usage".
- Add example for CMD_TRACK.

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- Add example Paletted8.
- Rebuild the project with Qt5.7.0 and MSVC 2017.
- Add the missing firmware folder in the installation package.
- Add zooming function of emulator viewport.
- Upgrade C++ source and Python script to work with Python v3.6.5.
- Clone resource so that project can be moved to another location safely.
- Add more comprehensive bitmap rotate example.
- Add bar graph invert example.

Bug Fix

- Link library free-type into executable file.
- Update REG_CMD_DL correctly.
- Fix the crash issue when export menu is clicked for FT813 device.
- Fix the improper emulator library of export project.
- L1/L2/L4/L8 formats are not converted correctly.
- Wrong bitmap_transform_A/B/D/E value when parameter p is 1.
- Update the bitmap_source in ESE for negative address case.

Known issues

- The Coprocessor commands without Display list output are unable to synced to hardware in device manager.
- Playing the invalid animation frame data in flash may cause ESE hang.

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