# Image Burn Tool Help

Overview

Image Burn Tool is a Windows application used for burning Altair SW images and configuration files. This application should be installed on a Windows PC as part of the Altair PcTools installation. It can be used for one or multiple devices. It is accessible from both the Start Menu and the CLI.

Image Burn Tool supports the following chip SW versions:

- BF_01_XX…(ALT1350)
- RK_03_XX… (ALT1250)
- RK_02_01_02/1… (ALT1250)
- CP_01_XX… (ALT255)
- NQ_01_XX… (ALT1210)
- CM_01_01_XX… (ALT1160)
- CM_01_02_XX… - CM_02_XX (ALT1160)

Before Using This Tool
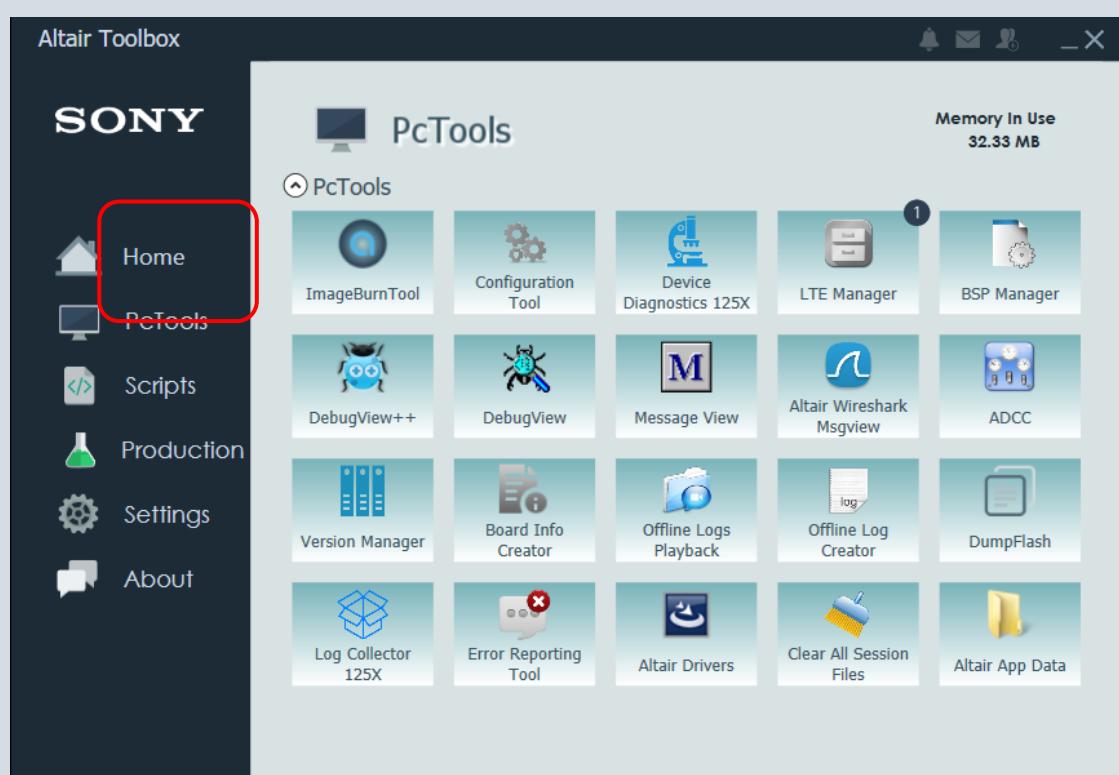
1. Verify that the necessary USB or UART drivers that match your board are installed on the PC.
2. Connect the board to the appropriate debug port on the host: COM or USB (consult the UE manufacturer for details).
3. Connect the board via the UART1/2 micro-USB connector.
4. Open the Image Burn Tool:

From the Windows Start menu, select Start → Altair Semiconductor → Image Burn Tool.

Or,

From Altair Toolbox → PcTools:
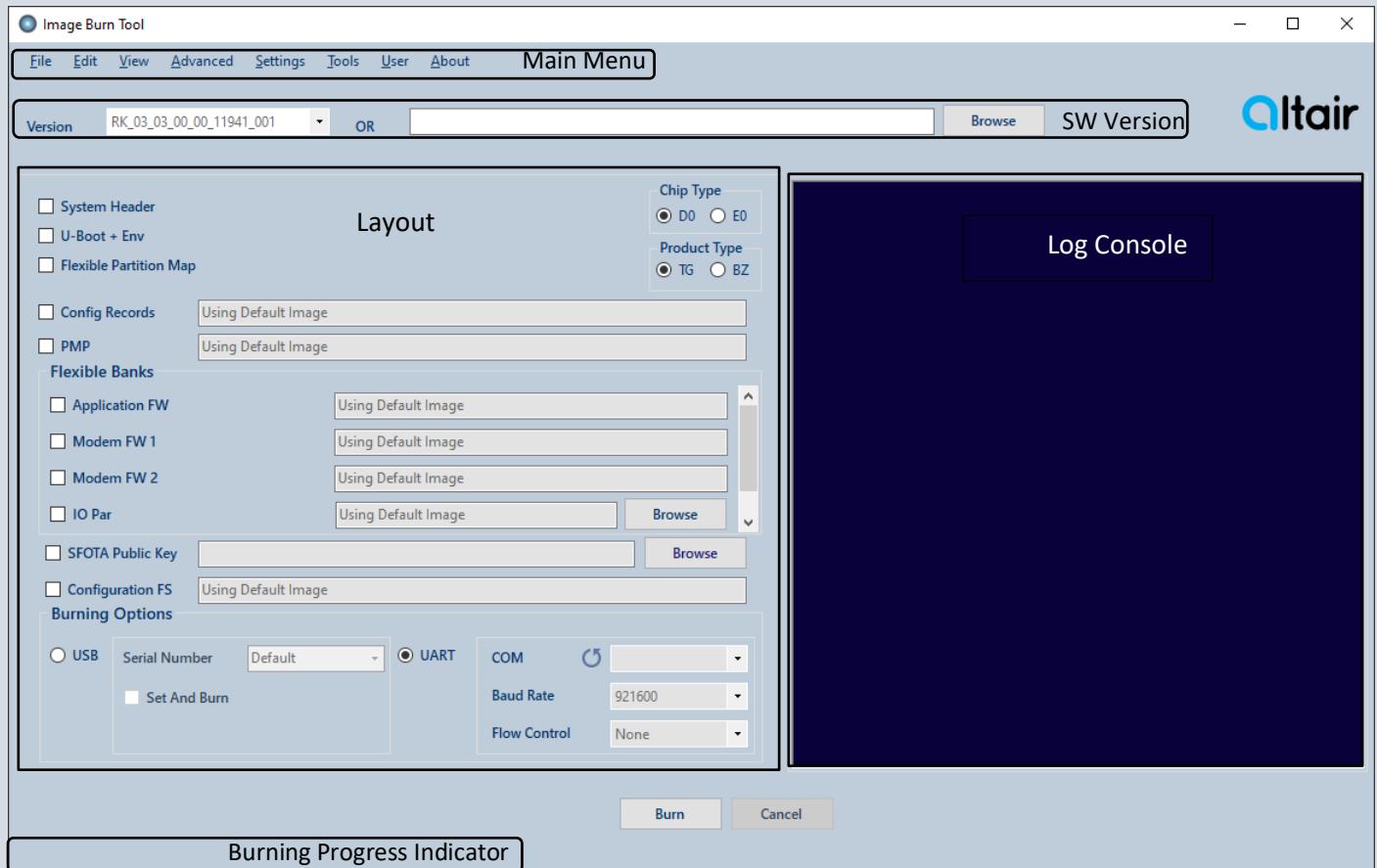
Image Burn Tool Main Window

The Image Burn Tool main window contains the following sections:

- Main Menu
- SW Version
- Layout
- Log Console
- Burning Progress Indicator

Important: *The Layout options (burning options) vary depending on the selected chip's SW version, burning mode, chip type and product type. For details, see*

Layouts Description.

Image Burn Tool   — ☐ ✕

File   Edit   View   Advanced   Settings   Tools   User   About   **Main Menu**

Version   RK_03_03_00_00_11941_001 ▾   OR   [Browse] **SW Version**   **altair**

Layout

☐ System Header

☐ U-Boot + Env

☐ Flexible Partition Map

Chip Type
◉ D0   ○ E0

Product Type
◉ TG   ○ BZ

☐ Config Records   Using Default Image

☐ PMP   Using Default Image

Flexible Banks

☐ Application FW   Using Default Image

☐ Modem FW 1   Using Default Image

☐ Modem FW 2   Using Default Image

☐ IO Par   Using Default Image   [Browse]

☐ SFOTA Public Key   [Browse]

☐ Configuration FS   Using Default Image

Burning Options

○ USB   Serial Number   Default ▾   ◉ UART

☐ Set And Burn

COM ↻ ▾

Baud Rate   921600 ▾

Flow Control   None ▾

Log Console

[Burn]   [Cancel]

**Burning Progress Indicator**

Main Menu

File menu

|	
Open Log File	Open the log file:
Open Log's Directory	Open the C:\ProgramData\Altair\ImageBurnTool\Logging folder (default). You may choose another location from the *Preferences* Window.
Open Backup's Directory	Open the C:\ProgramData\Altair\ImageBurnTool\Backup folder (default). You may choose another location from the *Preferences* Window.
Open Containing Folder	Open the C:\Program Files (x86)\Altair Semiconductor\PcTools\ImageBurnTool folder to run application from the CLI.
Exit	Exit the application.

Edit Menu
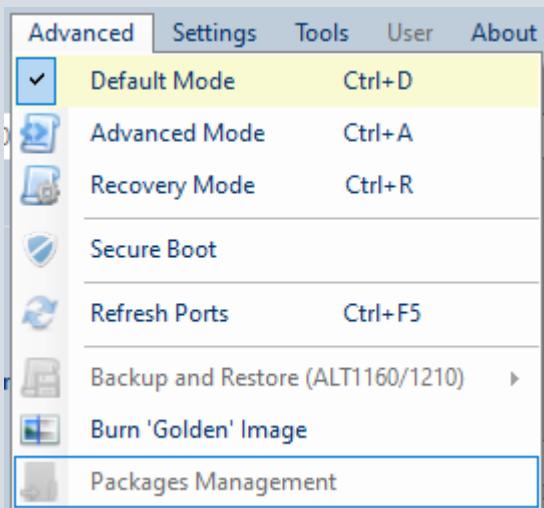
Reset All Fields	Reset all options in the Layout to Using Default Image.
Sort Versions	Sort the SW versions by Last Installed or Alphabetically.

View Menu

Select Theme	You may select from the following themes for the Image Burn Tool window:
Always On Top	Always keeps the Image Burn Tool window on top of other windows.
Toggle Full Screen Mode	Use for small laptops.

Advanced Menu

Default Mode	Use when ongoing SW updates are required. In this mode, the software components are taken from the default version directory. For details, see *Default Mode*.
Advanced Mode	Use when special ongoing SW updates are required. In this mode, the user can select software components from different directories. For details, see *Advanced* Mode.
Recovery Mode	Use this mode for burning a device with an empty serial flash or to recover a device that has a faulty System Header and/or U-Boot. Set the device to the Boot-ROM state prior to using this mode. For details, see *Recovery* Mode.
Secure Boot	Ensures the integrity of the chip firmware and software. Relevant for ALT1250 and ALT1255 only (Secure Boot is enabled for uBoot on ST and SB product types). See *step 8 on page 12*.
Refresh Ports	Displays the available device ports.
Backup and Restore (ALT1160/1210)	Backup and restore BSP files from the UE (for the ALT1160 and ALT1210 chips only).
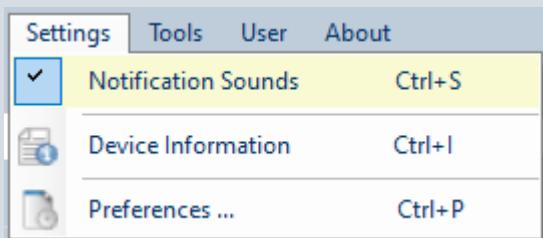
Burn "Golden" Image	Burn a customized image with predefined layout options. For RK and CP versions, select Chip Type and Product Type.

|	
Packages Management	For ALT1160 and ALT1210 chips only.

Settings Menu
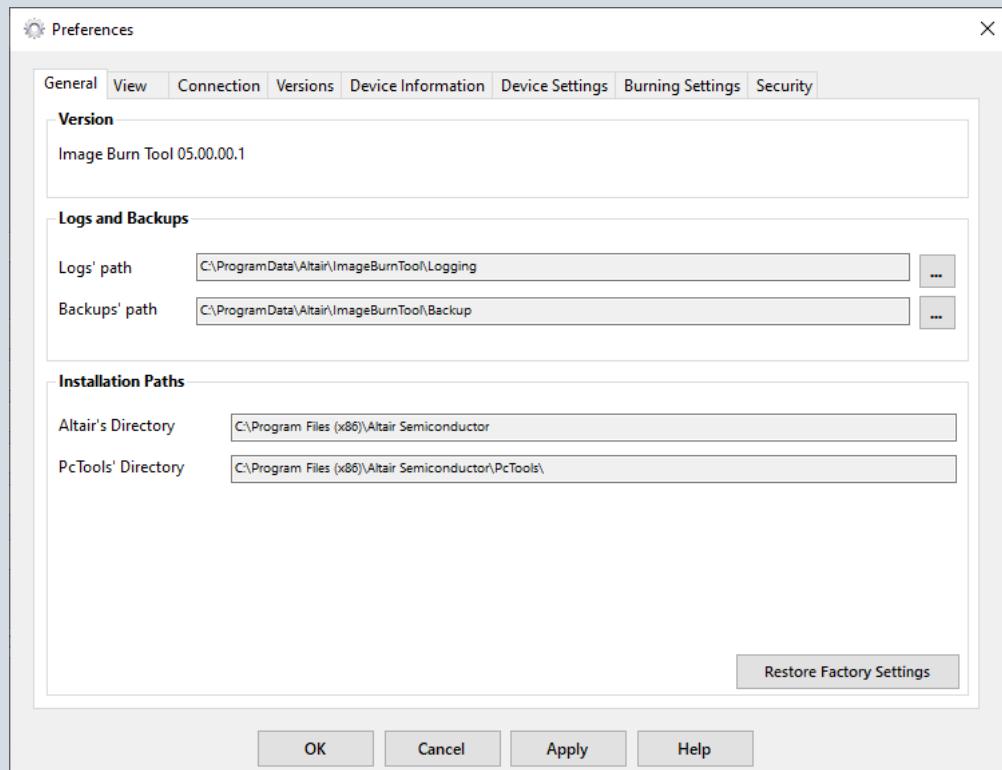
|	
Notification Sounds	Notifies user that the burning process is complete.
Device Information	Displays device information (enabled for legacy products).
Preferences	Opens the Preferences window. For details, see Preferences Window.
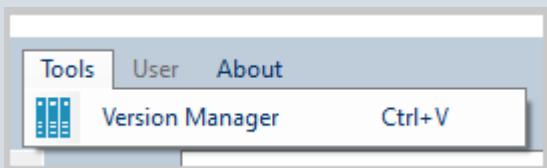
Tools Menu

| Version Manager | Opens the Version Manager window. Use this to select the desired SW version. |

Click the selected SW version to open the Version Information Page.

User Menu

| Manage Users | Create users, set a default user, sort the users list, and remove users. |
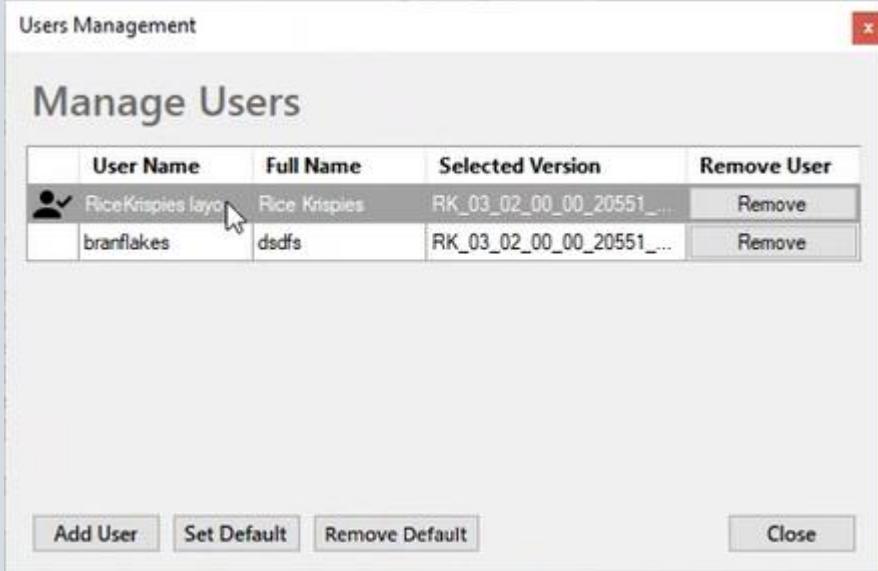
- To add a new user:

Enter the Full Name and User Name and click Add.
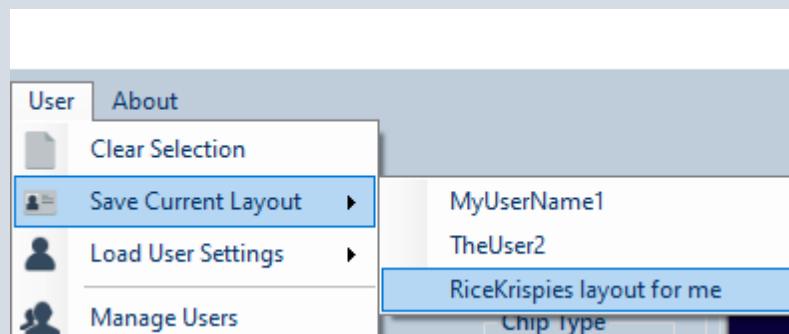
- To set a default user/remove default user:

- Sort users by clicking the relevant tab.
- Remove a user.
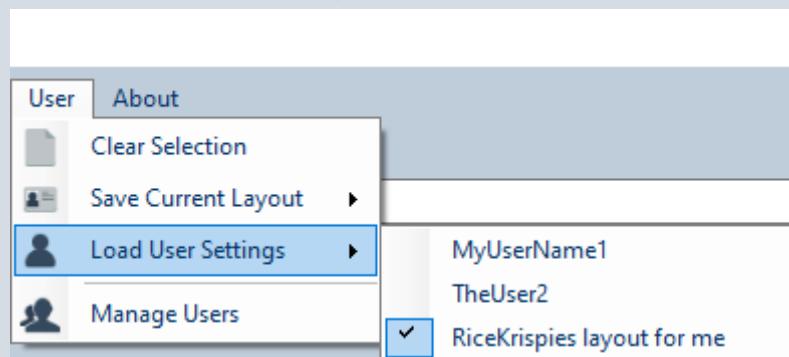
Save Current Layout	Use this feature to save a specific layout and version with the specific settings (images, fields, ports, etc.) the user needs, so the user can later load the settings and burn the version quickly. Click Save Current Layout and click the user you for whom you want to save the layout. The new settings will override the user's existing settings.
Load User Settings	Load a specific user's settings. ~~After saving the setting for a specific user, the settings can be loaded.~~ Click Load User Settings and select the user you want to load.
Clear Selection	To deselect the current user, click Clear Selection.
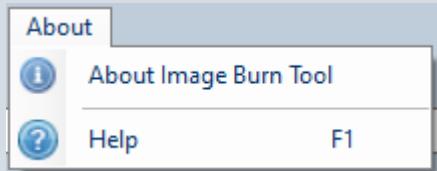
About Menu

About Image Burn Tool	

AltairToolbox
Version - PcTools 05.00.00.25

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Help	Open this document.
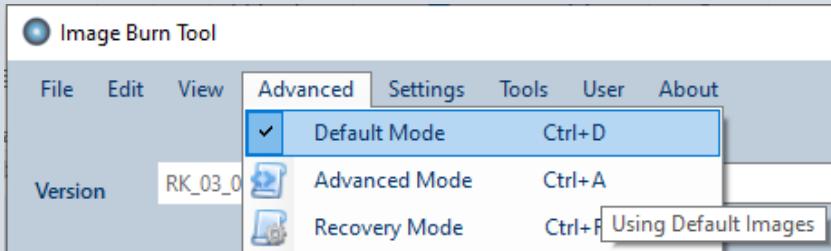
Burning Modes

The Image Burn Tool has three burning modes: Default, Advanced, and Recovery. The following sections describes the software burning procedure (this example uses the ALT1250).

Default Mode

Use Default Mode when ongoing SW updates are required. In this mode, the software components are taken from the default version directory.
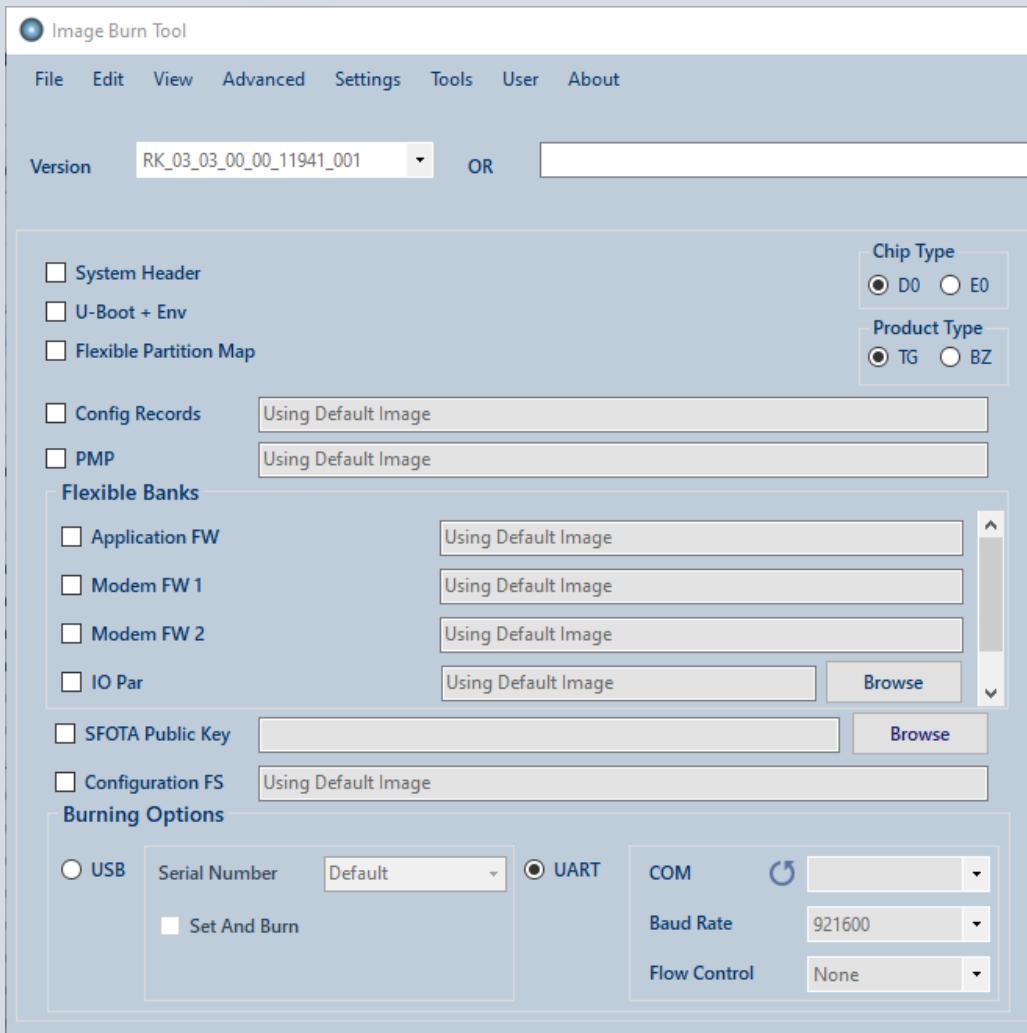
1. From the Advanced menu, select Default Mode.
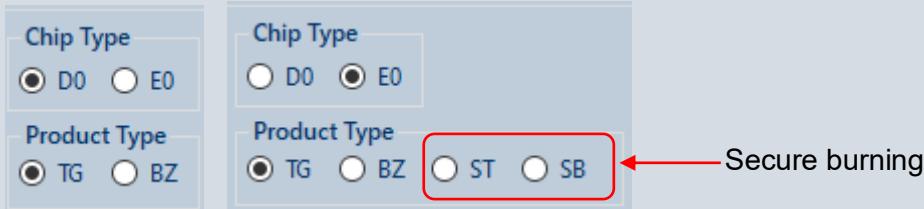
2. Connect the device to the PC.
3. Select the desired SW version.

    Important: *The layout options (burning options) will vary depending on the selected chip's SW version, burning mode, chip type and product type. For details, see*
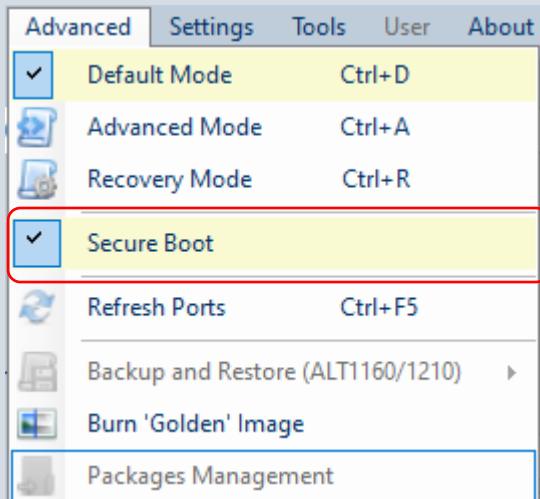
Layouts Description.

4. Select Chip Type.
5. Select Product Type. The product type depends on the selected chip type, as shown below:

— Secure burning
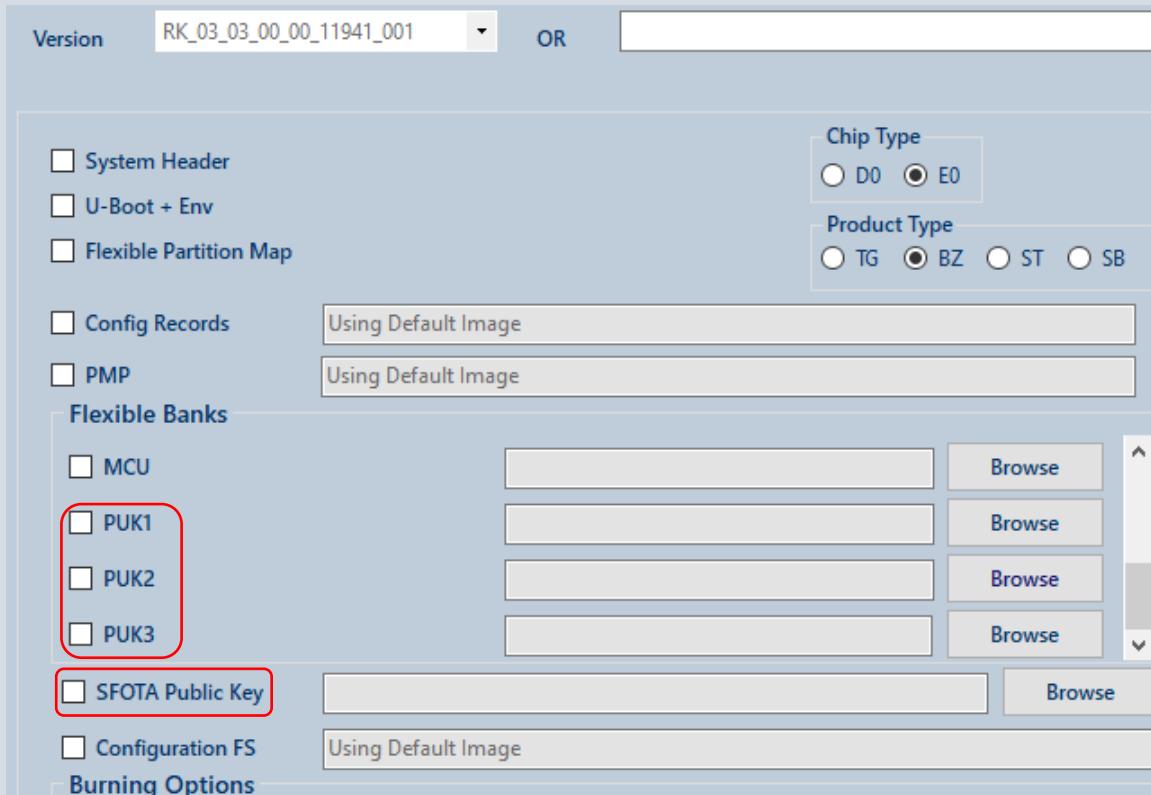
6. Select the SW components you wish to burn.
7. For RK versions, if needed, select SFOTA Public Key (secure FOTA public key) and enter its location.
8. For RK and CP versions, select Secure Boot to view the public keys. Enter the public keys location.
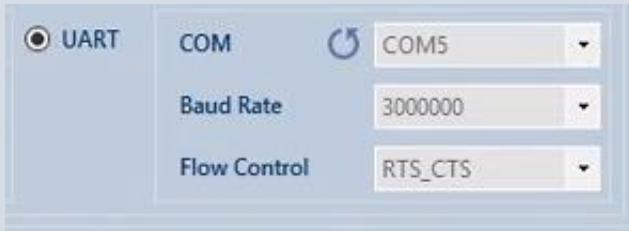
All RK versions (except D0 chip type + BZ product type) have private keys for Secure Boot, as follows:
o   PUK1 – ROM public key
o   PUK2 – Modem public key
o   PUK3 – internal MCU public key

9. Set the UART parameters (default), as follows:

- o COM is set automatically by the tool (click ↻) or selected manually.
- o Set Baud Rate to 3000000.
- o Set Flow Control to RTS_CTS.

Note: You may select the USB option if the selected SW version supports USB connectivity.

Note: The baud rate may be set higher than 921600 for devices in which the UART interface supports flow control. In this case, the Flow Control should be set to RTS_CTS. Consult your board vendor for the optimal UART configuration.

10. Click Burn to start the burning process; the process appears in the Log Console.

    The "SUCCESS" and "*** Complete ***" messages appear indicating that the burning process has completed successfully.

Note: Errors and process failure appear in red in the log console.

```
********* Complete *********

Restoring baudrate to 115200
Resetting device ...
Completion Time: 09-13-2020 2:39:37 PM

ERROR: Cannot open port
Could not find or connect to device on port: COM5
 Aborting ...

ERROR: Cannot open port
Could not find or connect to device on port: COM5
 Aborting ...

ERROR: Cannot open port
Could not find or connect to device on port: COM5
 Aborting ...

ERROR: Cannot open port
Could not find or connect to device on port: COM5
 Aborting ...


ERROR:
There were errors while executing the burning process ...
See log file for additional information


Restoring baudrate to 115200

ERROR: Cannot open port COM5
```
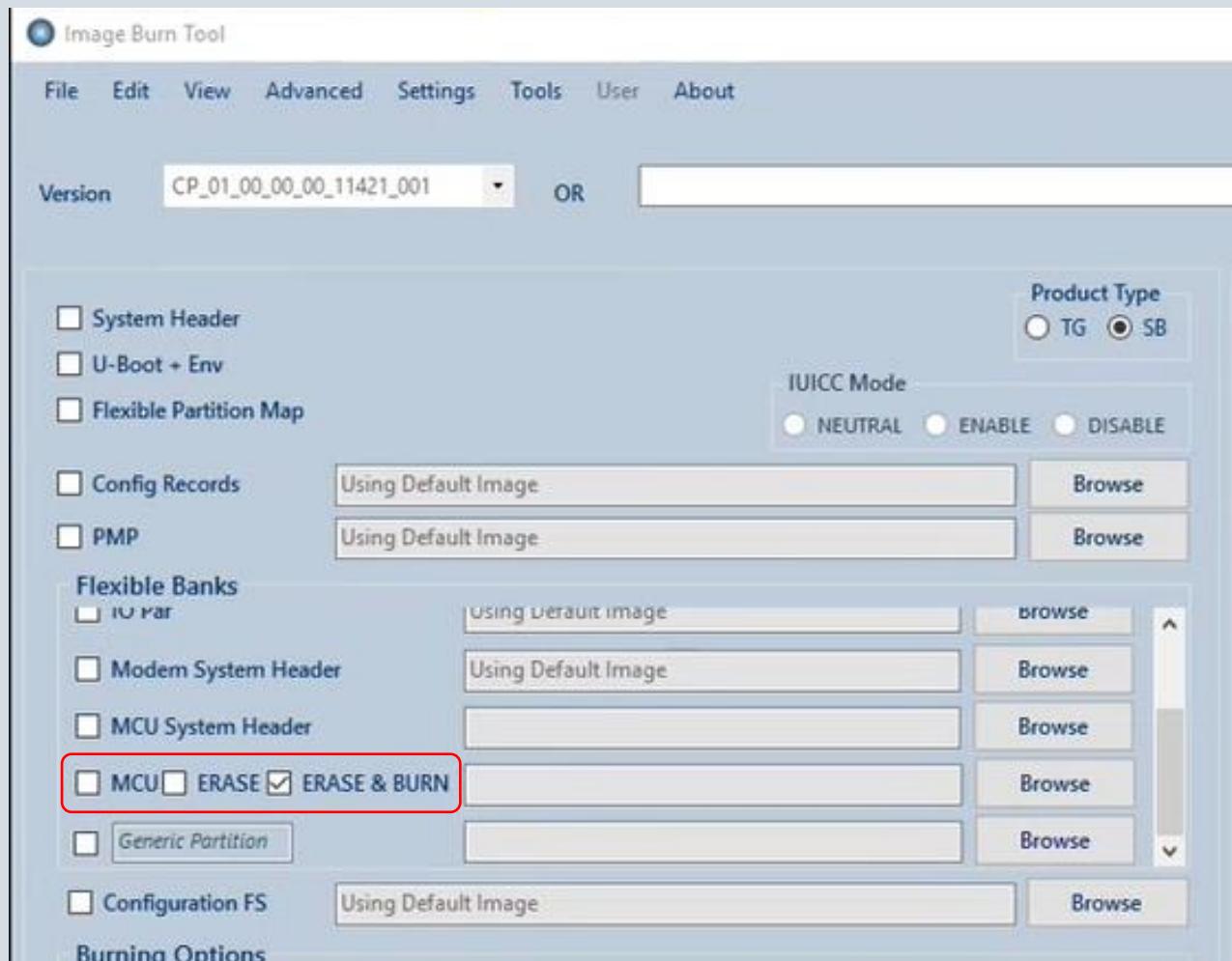
Advanced Mode

Use advanced mode when special ongoing SW updates are required. In this mode, the user can select software components from different directories.

1. Select Advanced Mode.
2. Connect the device to the PC.
3. Select the desired version.
4. Select Chip Type.
5. Select Product Type.
6. Select the SW components and their location.

    In the Advanced mode, the layout can contain addition options, as follows:

    - For CP versions:
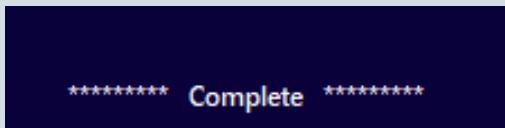
    - The Generic Partition option allows you to create a partition in the flash memory and burn the selected image to it.

7. Set the UART parameters as described in Error! Reference source not found.*Error! Reference source not found.*.

8. Click **Burn** to start the burning process; view the process in the Log Console. "SUCCESS" and "*** Complete ***" messages indicate that the burning process succeeded.

⚠   *Attention!* *The software version for Application FW and Modem FW 1 must match. In special cases (mainly for debugging purposes) one of these components may be taken from a different SW version.*
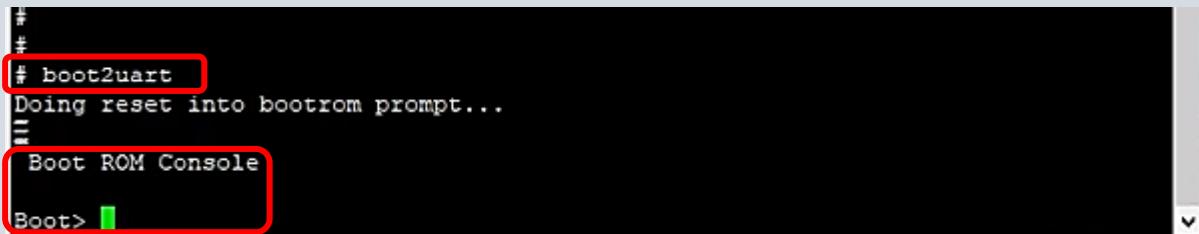
Recovery Mode

Recovery mode is a special mode intended for burning a device with an empty serial flash, or recovering a device that has a faulty System Header and/or U-Boot. Set the device to the Boot-ROM state prior to using this mode.

Boot_ROM

The device enters the Boot-ROM state in the following cases:

- When the Boot-ROM searches for the System Header on the device serial flash (at boot time) and cannot find it. This is relevant for a device with empty serial flash or a missing System Header.

- If the Boot-ROM locates the serial flash, but the U-Boot is faulty or does not exist on the serial flash. In this case the device will hang. The user will need to force the device into the Boot-ROM state. To force the Altair ALT1250 reference board into the Boot-ROM state, press the RECOVERY button on the device for more than 1 second.

- By running the boot2uart command in the U-Boot terminal. Press any key during the power up counter to enter the U-Boot terminal.
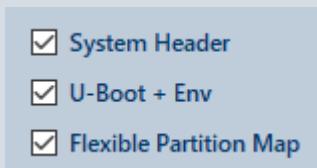
Burning Process

To start the burning process:

1. The following components are automatically selected when burning in Recovery mode: System Header, U-Boot + Env, and Flexible Partition Map.

Note: Manually select these components if not selected automatically.

2. Select Recovery Port and Recovery Baud Rate.
   - The Recovery Port is the COM port through which the selected components will be loaded into the device.
   - The Recovery Baud Rate is the rate in which the U-Boot is loaded into the RAM before the components are burned to the flash.

Note: The Maximum Recovery Baud Rate is 460800; this is the recommended setting.
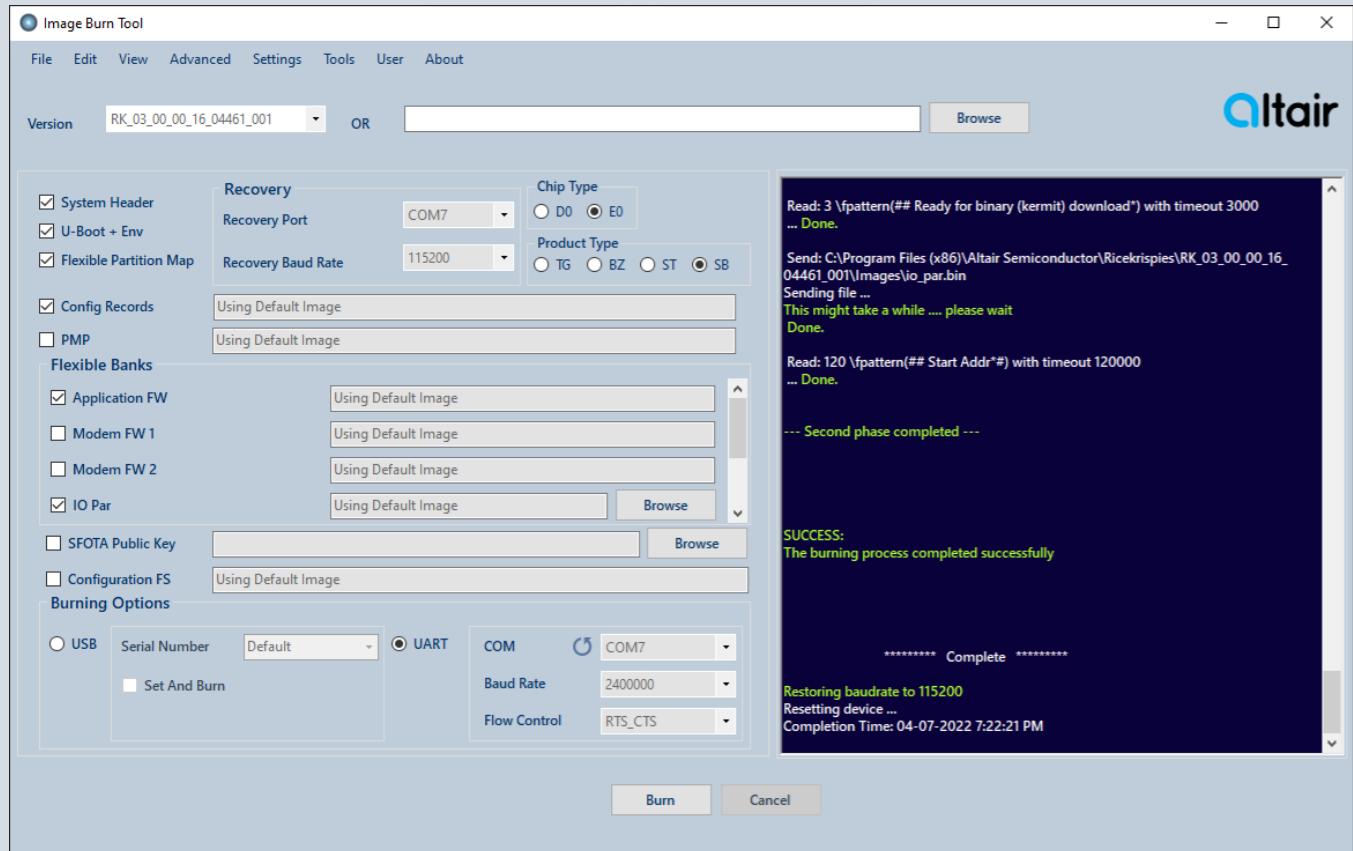
Note: Secure Boot is much slower than unsecure boot.

3. Set the UART parameters as described in <mark>NEED TO ADD LINK</mark>.

   Note: The Baud Rate may be set higher than 921600 for devices in which the UART interface supports flow control. In this case the Flow Control should be set to RTS_CTS. Consult your board vendor for the optimal UART configuration.

4. Click **Burn** to start the burning process; the process appears in the Log Console. The "SUCCESS" and "*** Complete ***" messages appear in the Log Console indicating that the burning process has completed successfully.

   Note: You will not need to reset the device.

⚠ **Attention!** *Interrupting the burning process may damage the device.*

Preferences Window

The Preferences window contains the following buttons:

OK – save changes and close the window.

Cancel – cancel changes.
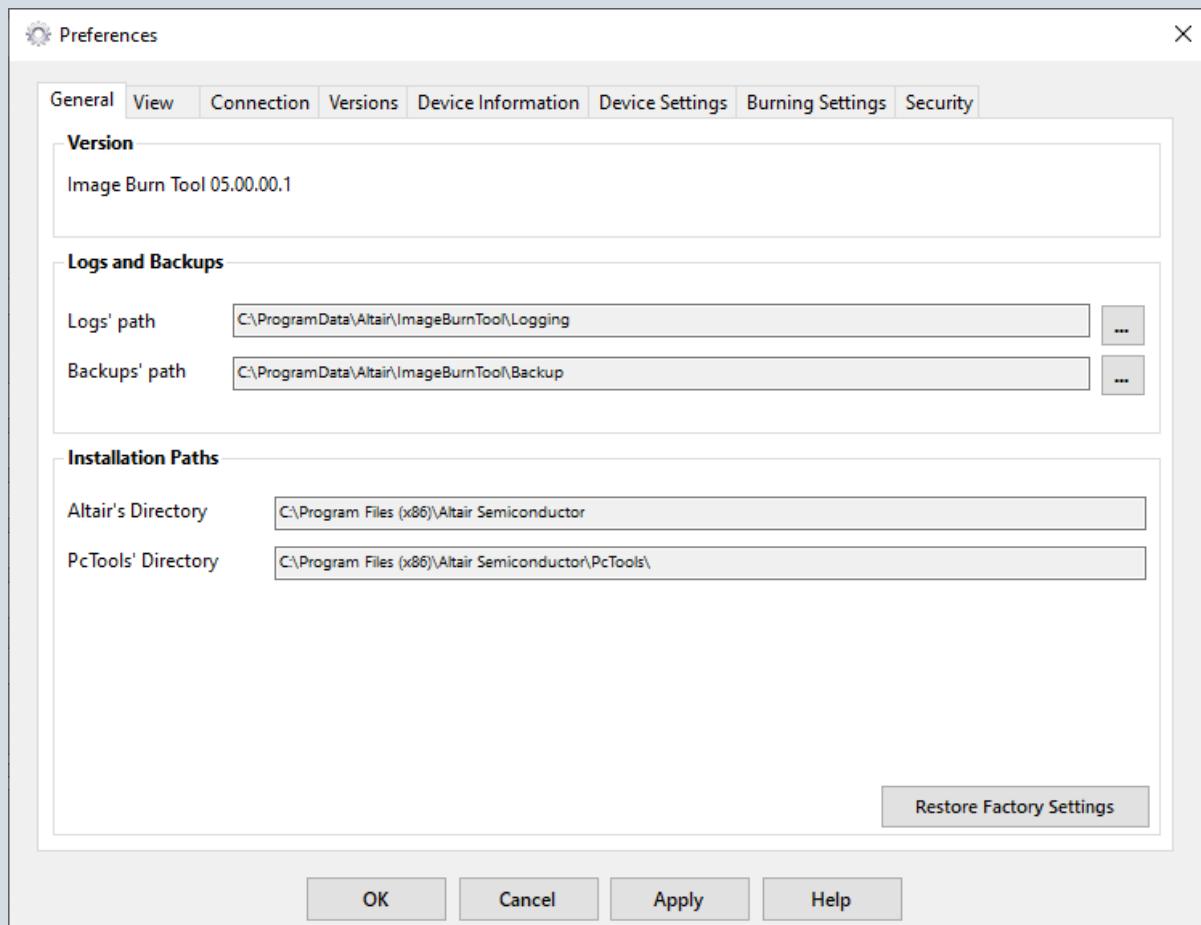
Apply – apply changes and leave the window open.

Help – open this document.

Restore Factory Settings - restore the device to its original manufacturer settings.

The following sections describe the Preferences window tabs.

General Tab

Version	Image Burn Tool version.
Logs and Backups	You can choose a location for the Logs and Backups.
Installation Paths	You can choose a location for the Altair Semiconductor applications.
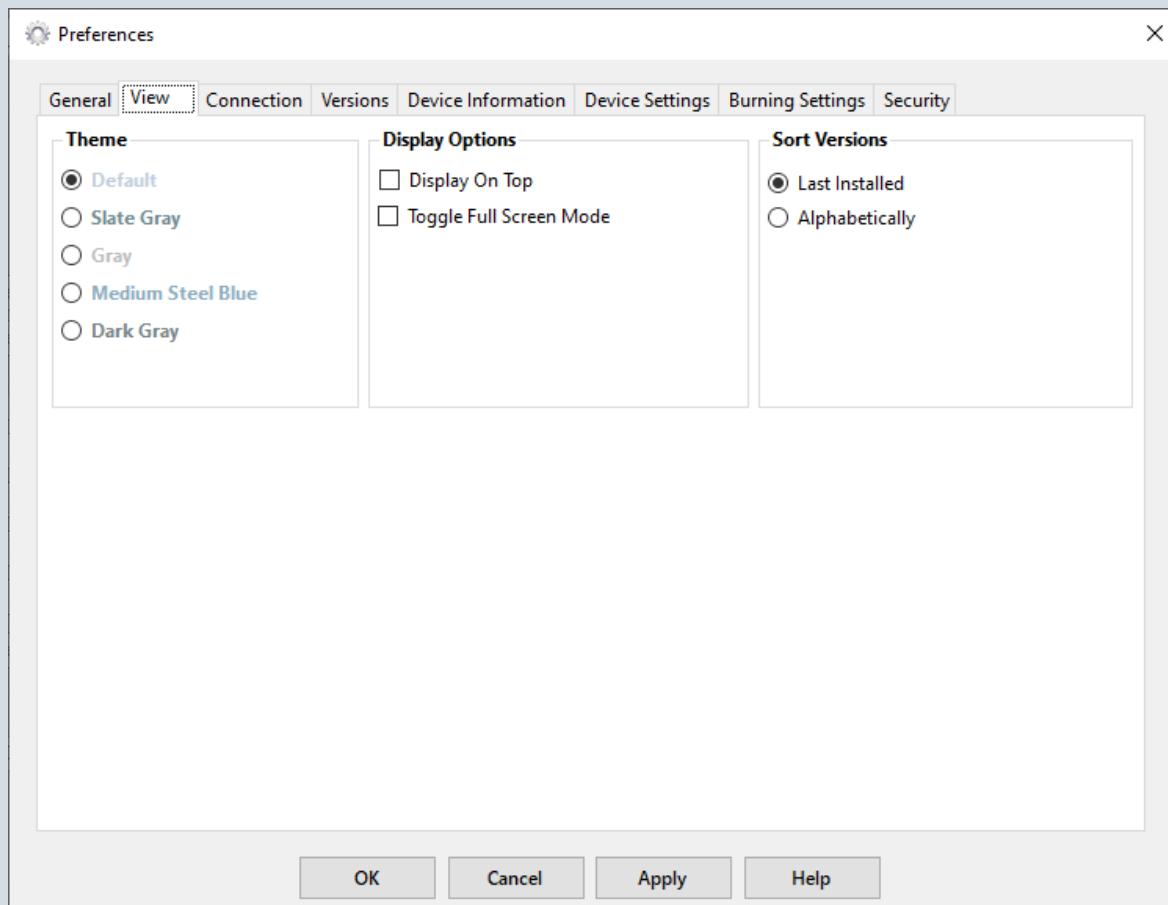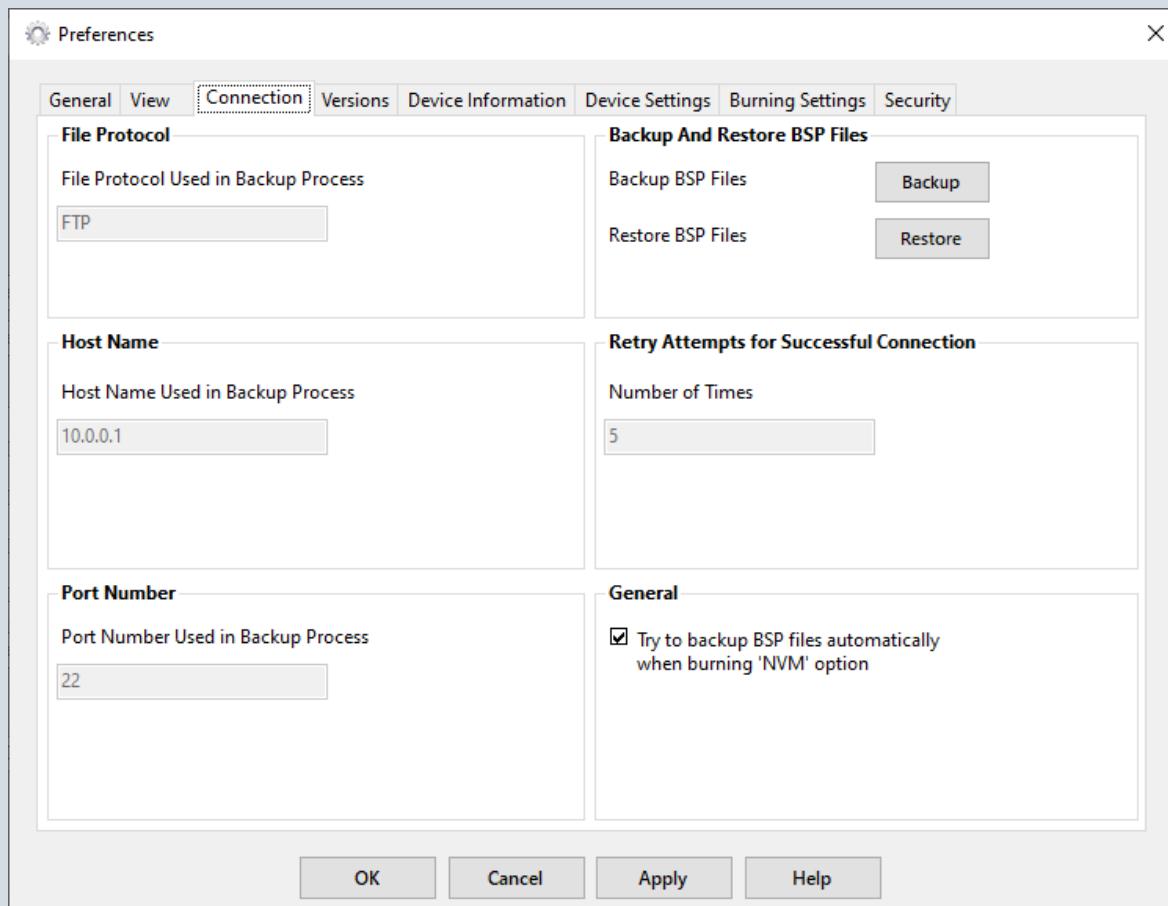
View Tab

The View tab contains options duplicated in the *Edit Menu* and View Menu.

Connection Tab
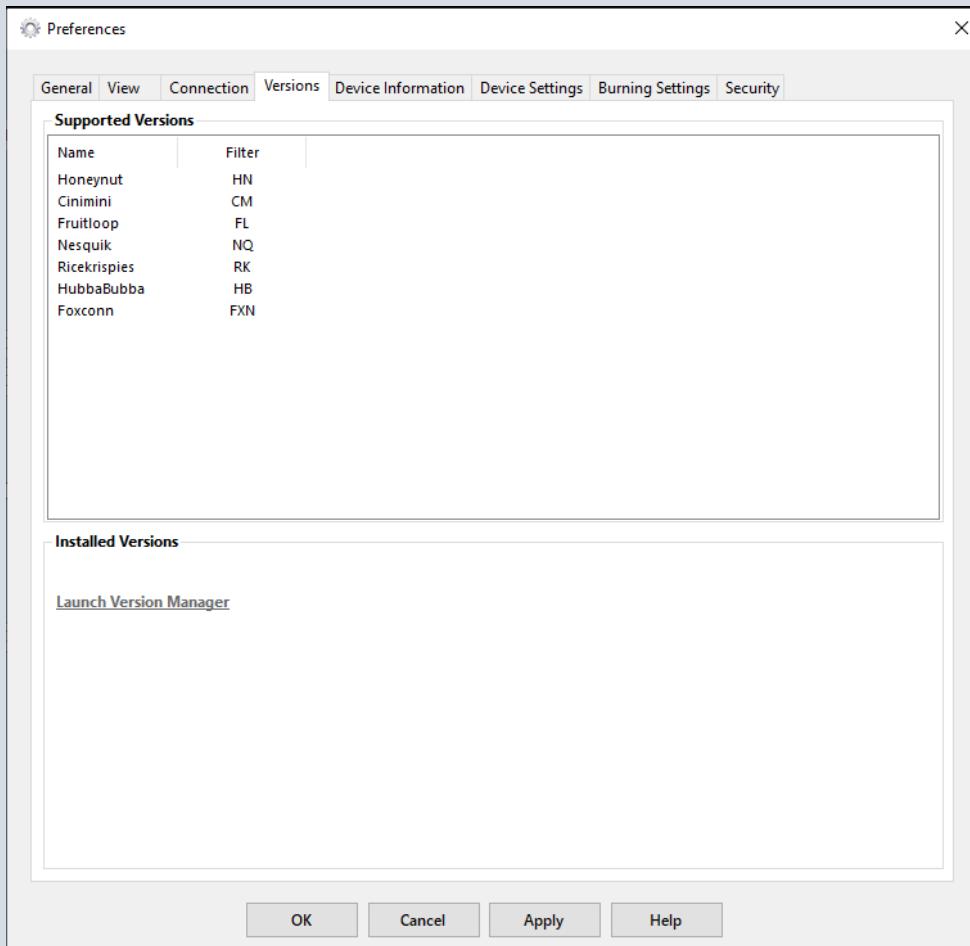
The Connection tab displays the device connection details.

Versions Tab

The Version tab shows all supported SW versions and installed SW versions. The Version Manager is recommended (see
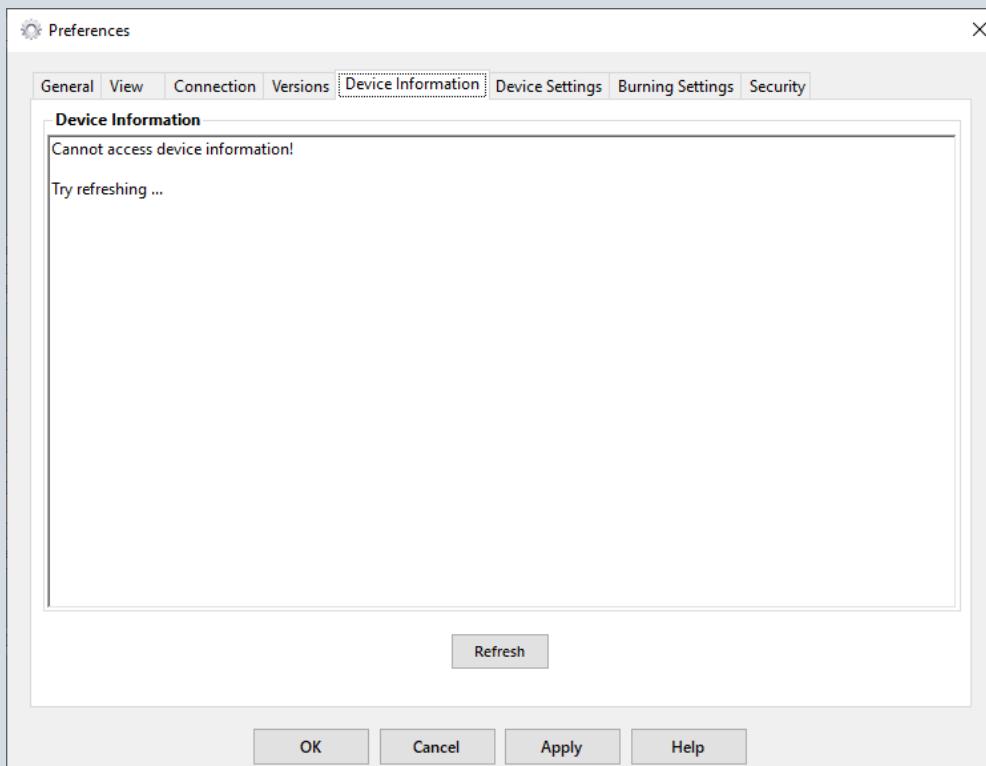
Tools Menu).

Device Information Tab
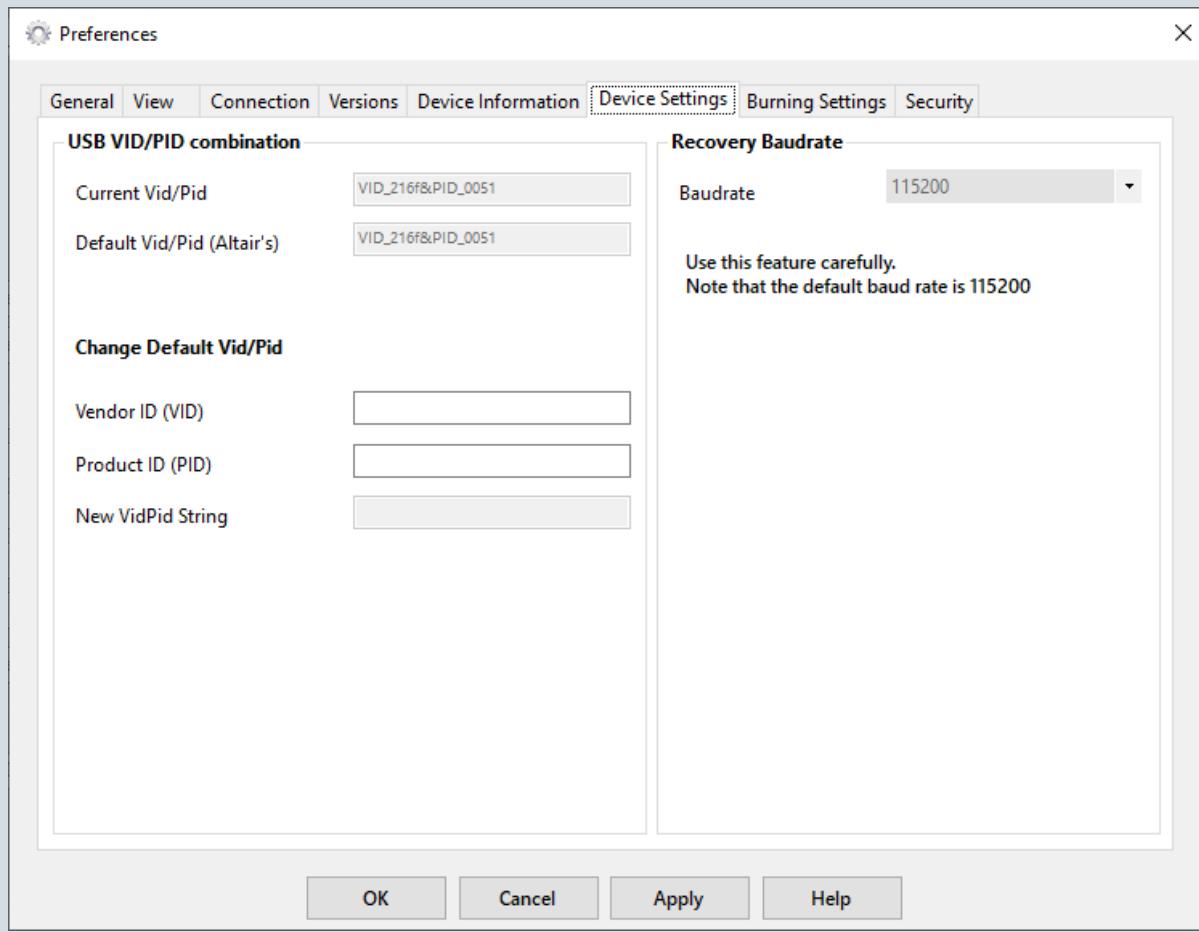
To view the device information, connect the device to the PC.

Relevant for the ALT1160 and ALT1210 only.
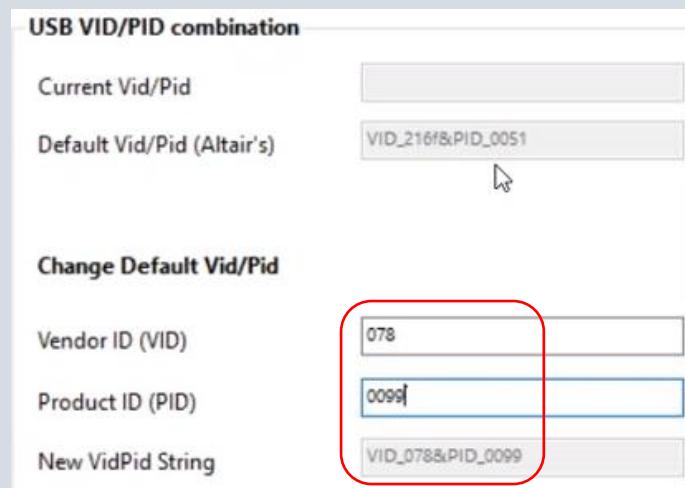
Device Settings Tab

These settings are for devices using a USB connection.

USB VID/PID combination	Vendor can change the default Altair's VID and PID to their own and create a new VID/PID string.

Recovery Baud rate	Used for legacy products. Do not change this setting for devices using a UART connection.

Burning Settings Tab

Preferences

General | View | Connection | Versions | Device Information | Device Settings | **Burning Settings** | Security

USB Detection Mode

This feature allows user to specify which USB detection to use

◉ **Default USB Detection**   No need to specify the designated port. The application will find the COM port by itself.

○ **Physical USB Detection**   Please specify the physical address, i.e. COM port's 'Location Path' string

Example: PCIROOT(0)#PCI(1A00)#USBROOT(0)#USB(1)#USB(6)#USB(4)#USB(2)

☐ Save to configuration file

Skip Erase

☐ Skip erase instructions (used when the flash is empty)

Uboot Stop Character

☐ Use this single character in order to stop the Uboot countdown (example: s)

Default Uboot Baudrate

Baudrate   [▼]   (Default uboot baudrate is 115200)

Port's Auto Detection

☑ Allow port's auto detection

Burning Timout (seconds)

☑ Set customized burning timeout (per partition)   600

Upon Burning Completion

☑ Reset device upon burning process completion

Kermit Dll In Use

◉ **Kermit DLL**   ○ **Kermit DLL SPL**

Fast Burning Mode

☐ Run the burning process without verifications (lead to faster burning), please use with caution

OK   Cancel   Apply   Help

USB Detection Mode	A physical USB address is used for burning multiple devices, which is supported by Image Burn Tool. You should specify a physical USB address via Device Manager, i.e. COM port "Location Path" string and enter it in the Burning Settings tab.
Skip Erase	Used to cancel erase when the flash memory is empty. For example, use it to save time when configuring a new device.
Uboot Stop Character	Define the single character to stop Uboot countdown.
Default Uboot Baud rate	Do not change this parameter unless there is a special need.
Port's Auto Detection	Automatically detect ports.
Burning Timeout (seconds)	Set the burning timeout (per partition).
Upon Burning Completion	Cancel reset after the burning process is complete.
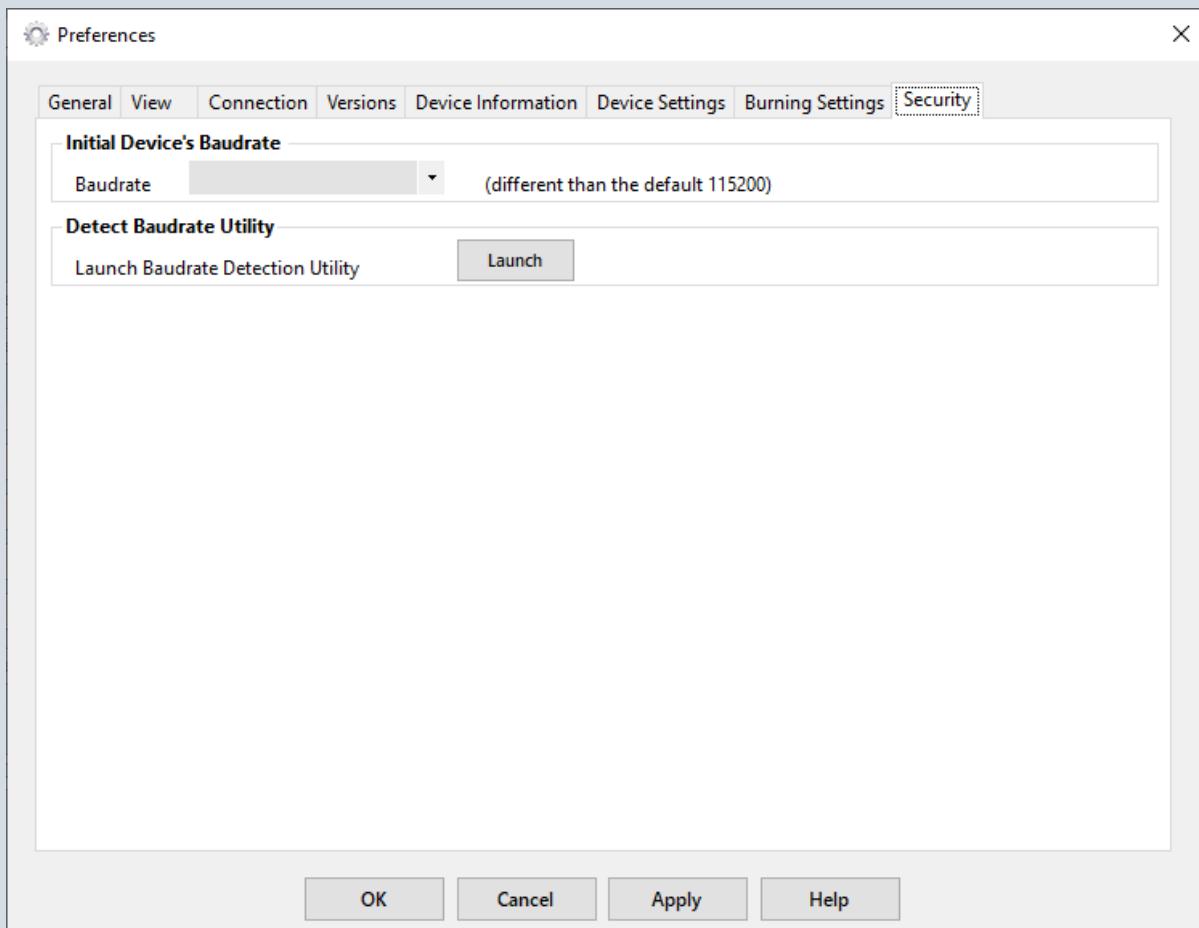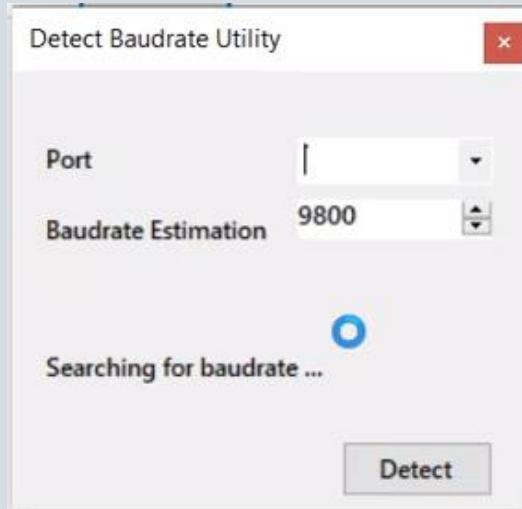
Security

Initial Device's Baud Rate	If the device has a baud rate different than the default (115200), the baud rate must be entered manually.
Detect Baud Rate Utility	
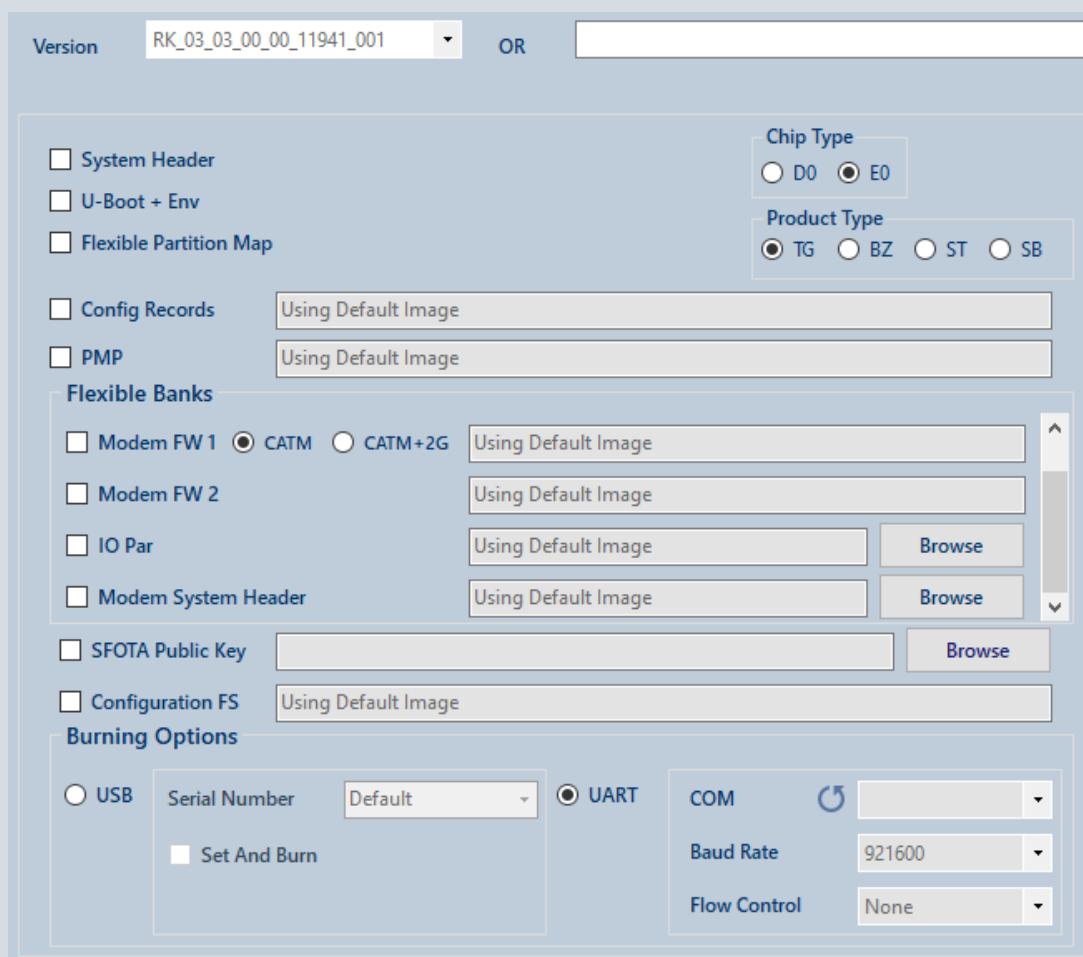
Layouts Description

The Image Burn Tool supports the following chip SW versions:

- *RK_03_XX… (ALT1250)*
- *RK_02_01_02/1… (ALT1250)*
- *CP_01_XX… (ALT255)*
- *NQ_01_XX… (ALT1210)*
- *CM_01_01_XX… (ALT1160)*
- *CM_01_02_XX… - CM_02_XX (ALT1160)*
- *BF_(ALT1350)*

This chapter describes the layout options of each chip SW version. The layout options (burning options) vary depending on the selected chip's SW version, burning mode, chip type, product type, and selected secure boot type. The screenshots in this chapter show the Layout options for each SW version in Default Mode.

RK_03_XX… (ALT1250)
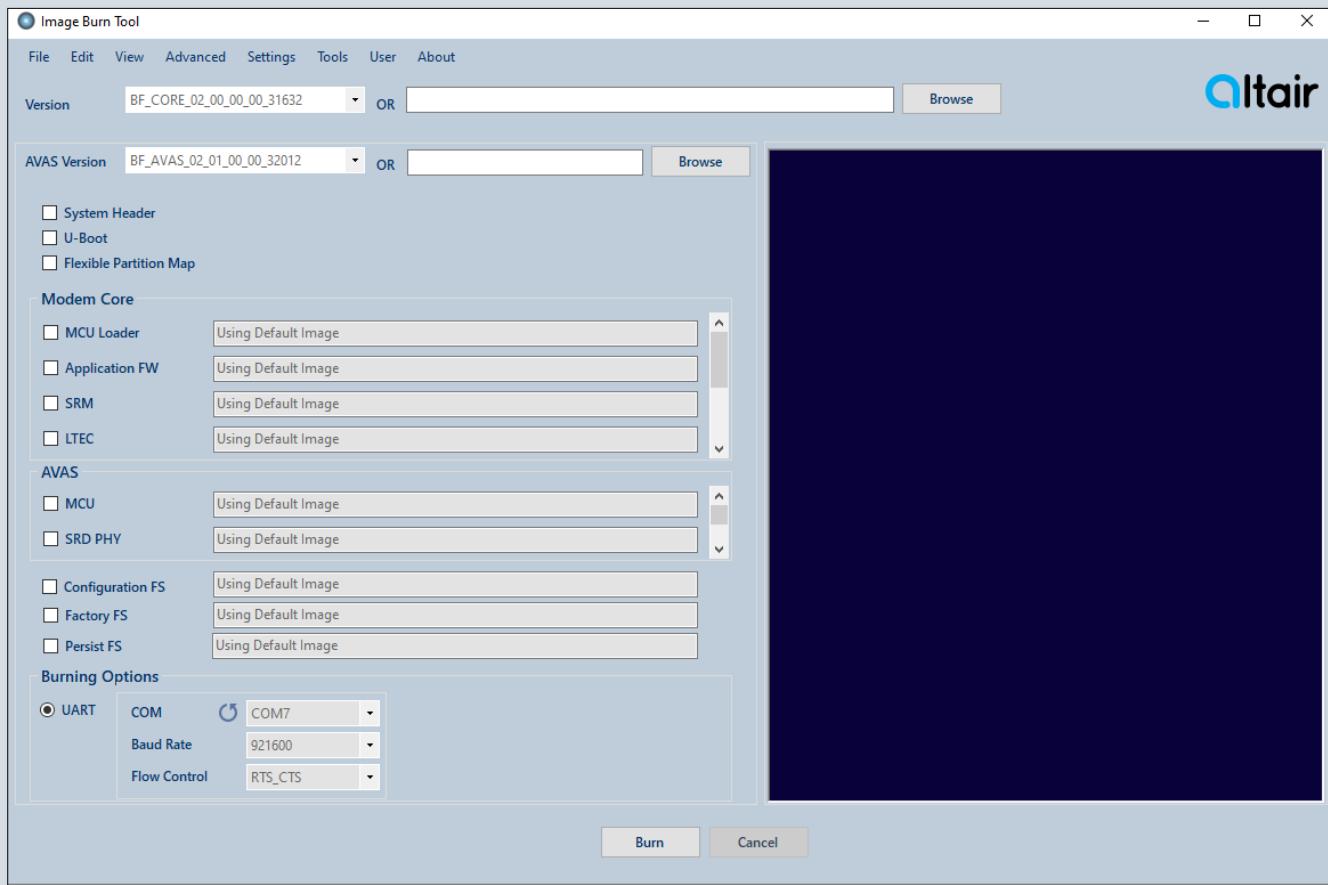
Option		Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
System Header		√	√	√	√	√
U-Boot -Env		√	√	√	√	√
Flexible Partition Map		√	√	√	√	√
Chip Type	D0		√	√	√	√
	E0		√	√	√	√

Option		Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
Product Type	TG		√	√	√	√
	BZ		√	√	√	√
	ST		√	√	√	√
	SB		√	√	√	√
Config Records		√	√	√	√	√
PMP		√	√	√	√	√
Application FW		√	√	√	√	√
Modem FW 1	CATM*	√	√	√	√	√
	CATM+2G*	√	√	√	√	√
Modem FM 2		√	√	√	√	√
IO Par		√	√	√	√	√
Modem System Header		√	√	√	√	√
Generic Partition				√	√	√
SFOTA Public Key		√	√	√	√	√
PUK1						√
PUK2						√
PUK3						√
Configurations FS		√	√	√	√	√
Burning Options	USB		√	√	√	√
	UART		√	√	√	√
Recovery	Recovery Port				√	√
	Recovery Baud Rate				√	√

*Appears only when the SW version contains the CATM+2G FW file.

BF_(ALT1350)

Option	Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
System Header	√	√	√	√	
U-Boot	√	√	√	√	
Flexible Partition Map	√	√	√	√	
Config Records	√	√	√	√	
IO Par	√	√	√	√	
MCU Loader	√	√	√	√	
Application FW	√	√	√	√	
SRM	√	√	√	√	
LTEC	√	√	√	√	
CATM PHY	√	√	√	√	
NBIOT PHY	√	√	√	√	
RF Manager	√	√	√	√	
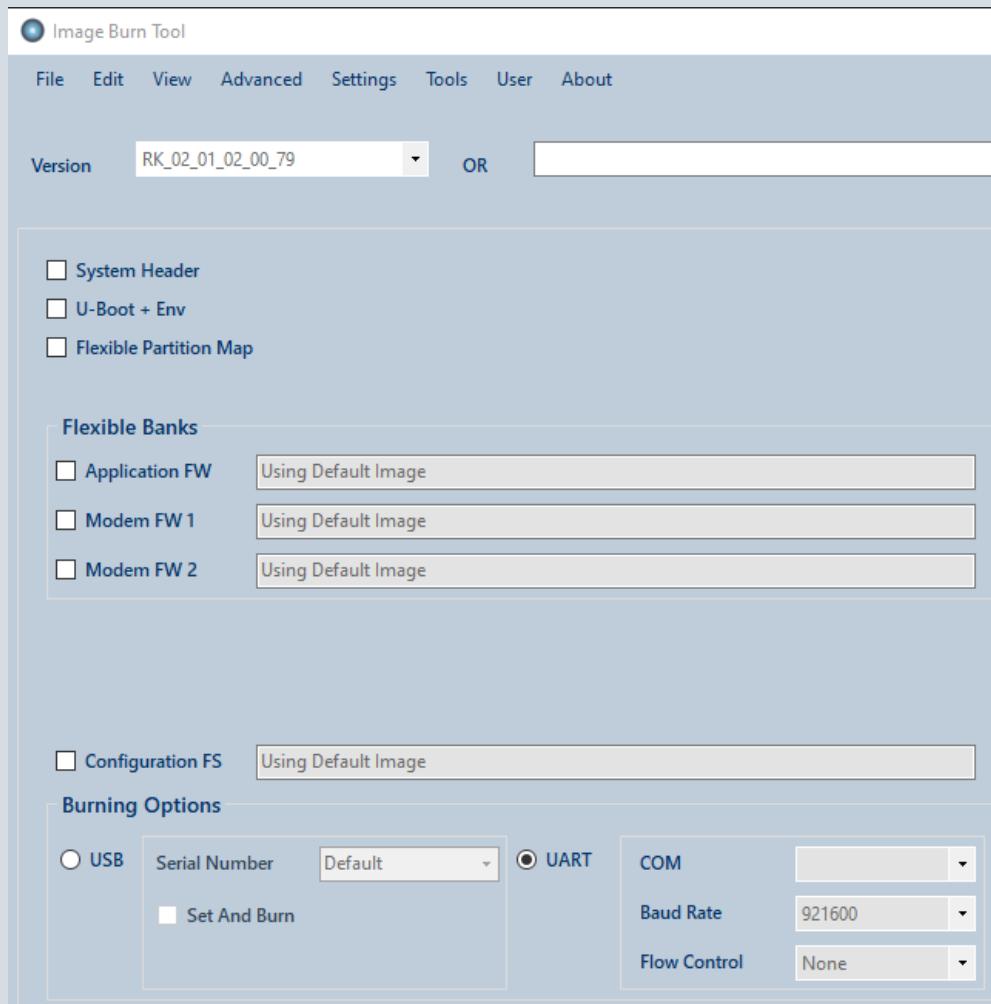
Option		Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
GNSS		√	√	√	√	
WiFi		√	√	√	√	
SRD PHY		√	√	√	√	
Radios System Header		√	√	√	√	
SFP PUK		√	√	√	√	
SHUB PUK4		√	√	√	√	
Generic Partition				√	√	
Configurations FS		√	√	√	√	
Factory FS		√	√	√	√	
Persist FS		√	√	√	√	
Burning Options	USB		√	√	√	
	UART		√	√	√	
Recovery	Recovery Port				√	
	Recovery Baud Rate				√	

BF_AVAS 01_XX… (ALT1350)

Option	Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
System Header	√	√	√	√	
U-Boot	√	√	√	√	
Flexible Partition Map	√	√	√	√	
Config Records	√	√	√	√	
IO Par	√	√	√	√	
MCU Loader	√	√	√	√	
Application FW	√	√	√	√	
SRM	√	√	√	√	
LTEC	√	√	√	√	
CATM PHY	√	√	√	√	
NBIOT PHY	√	√	√	√	

Option		Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
RF Manager		√	√	√	√	
GNSS		√	√	√	√	
WiFi		√	√	√	√	
SRD PHY		√	√	√	√	
Radios System Header		√	√	√	√	
SFP PUK		√	√	√	√	
SHUB PUK4		√	√	√	√	
Generic Partition				√	√	
Configurations FS		√	√	√	√	
Factory FS		√	√	√	√	
Persist FS		√	√	√	√	
Burning Options	USB		√	√	√	
	UART		√	√	√	
Recovery	Recovery Port				√	
	Recovery Baud Rate				√	
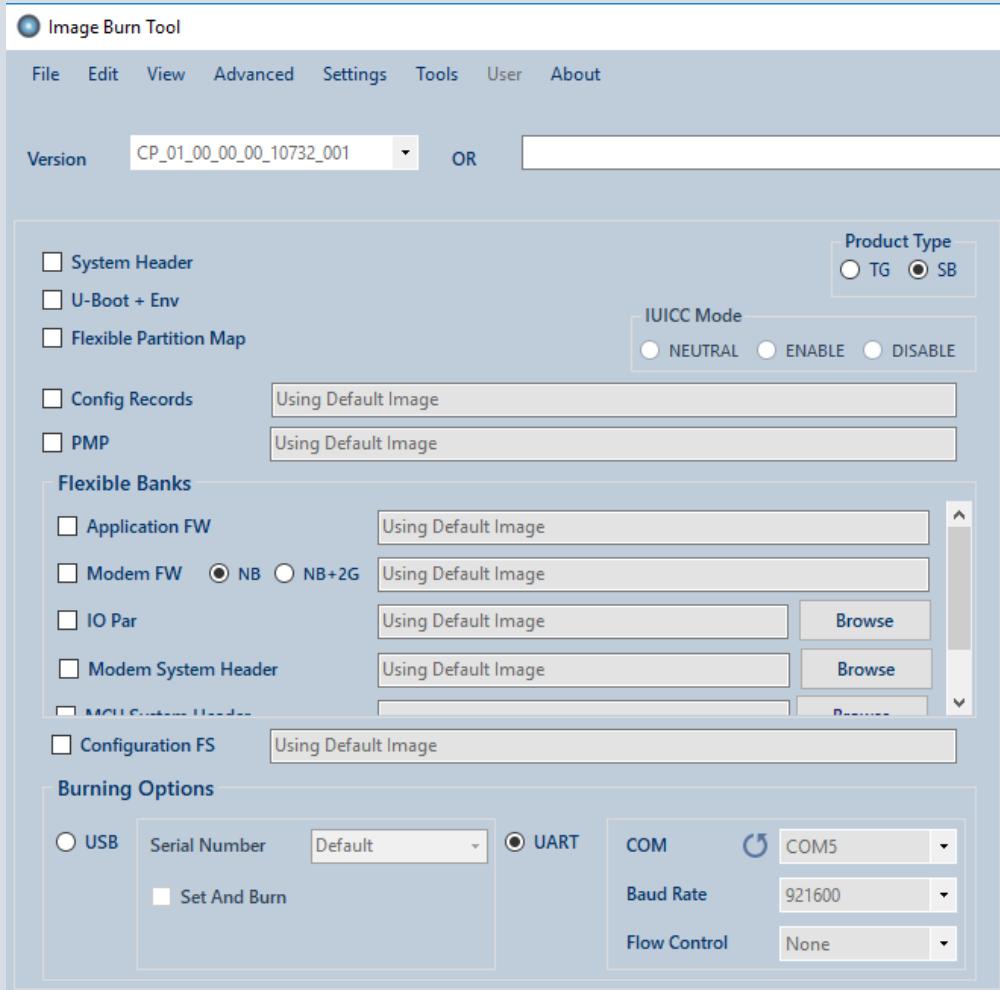
RK_02_01_02/1... (ALT1250)

Option		Default Image	Default Mode	Advanced Mode	Recovery Mode
System Header		√	√	√	√
U-Boot + Env		√	√	√	√
Flexible Partition Map		√	√	√	√
Application FW		√	√	√	√
Modem FW 1		√	√	√	√
Modem FM 2		√	√	√	√
ISE 1				√	√
ISE 2				√	√
Generic Partition				√	√
Configurations FS		√		√	√
Burning Options	USB		√	√	√
	UART		√	√	√

Option		Default Image	Default Mode	Advanced Mode	Recovery Mode
Recovery	Recovery Port				√
	Recovery Baud Rate				√
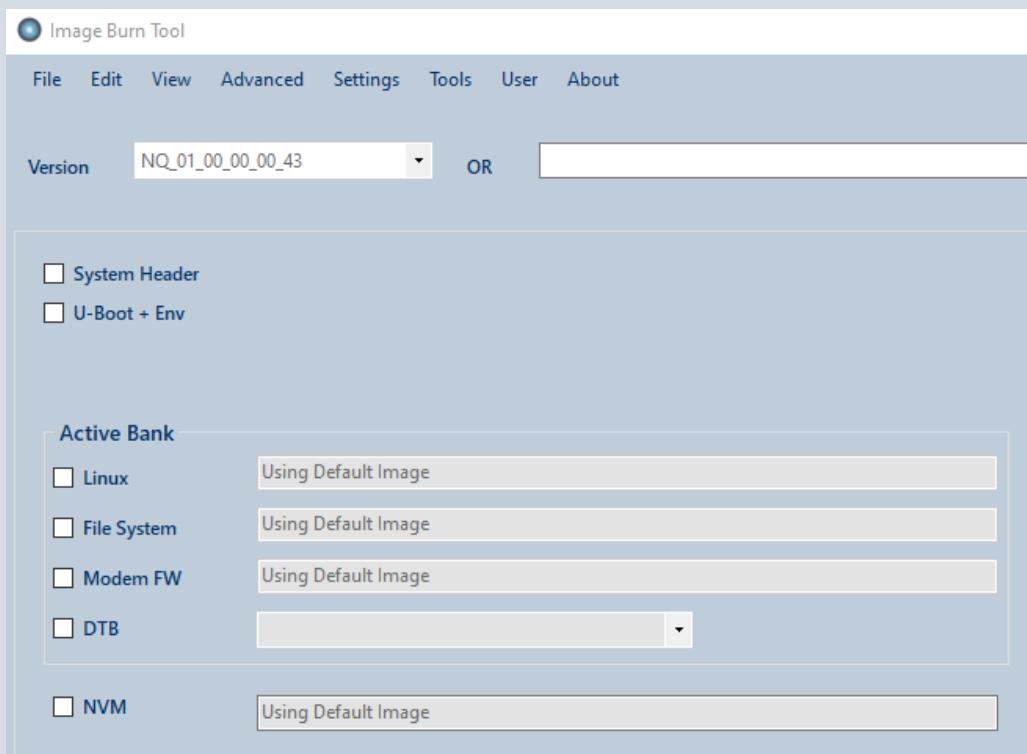
CP_01_XX… (ALT255)

Option		Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
System Header		√	√	√	√	√
U-Boot + Env		√	√	√	√	√
Flexible Partition Map		√	√	√	√	√
Product Type	TG		√	√	√	√
	SB		√	√	√	√
Config Records		√	√	√	√	√
PMP		√	√	√	√	√
Application FW		√	√	√	√	√
Modem FW	NB	√	√	√	√	√
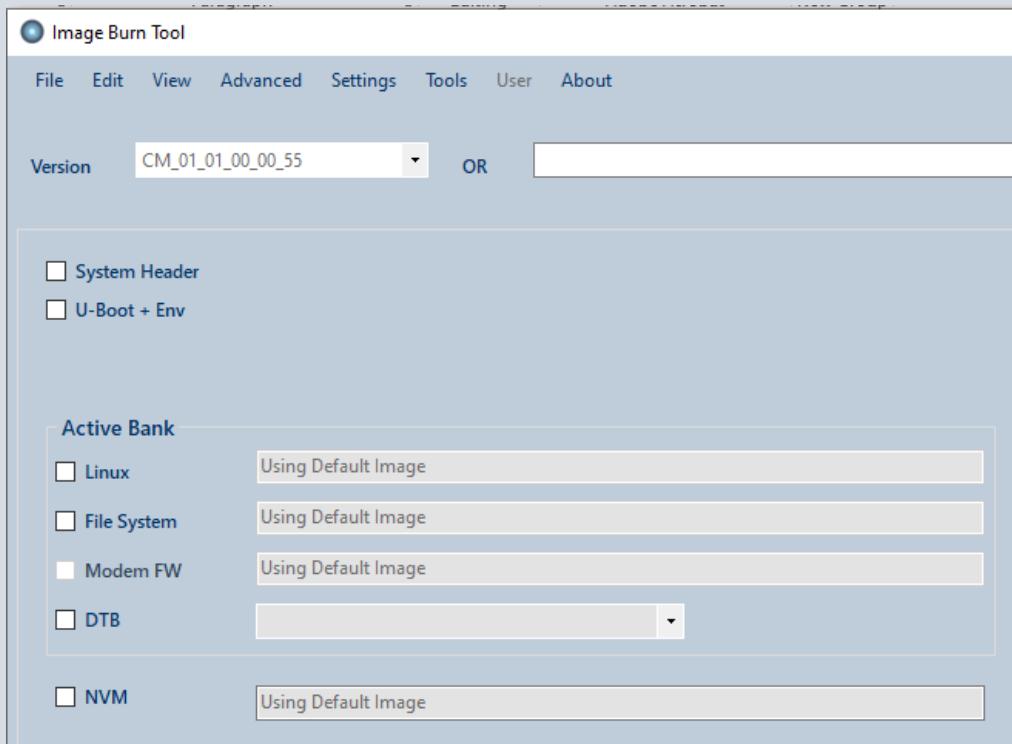
Option		Default Image	Default Mode	Advanced Mode	Recovery Mode	Secure Boot
	NB+2G	√	√	√	√	√
IO Par		√	√	√	√	√
Modem System Header		√	√	√	√	√
Generic Partition				√		√
PUK1 (when TG is selected)						√
PUK2						√
PUK3 (when SB is selected)						√
Configurations FS	NB	√	√	√	√	√
	NB+2G					
Configurations FS		√	√	√	√	√
Burning Options	USB		√	√	√	√
	UART		√	√	√	√
Recovery	Recovery Port				√	√
	Recovery Baud Rate				√	√

NQ_01_XX... (ALT1210)
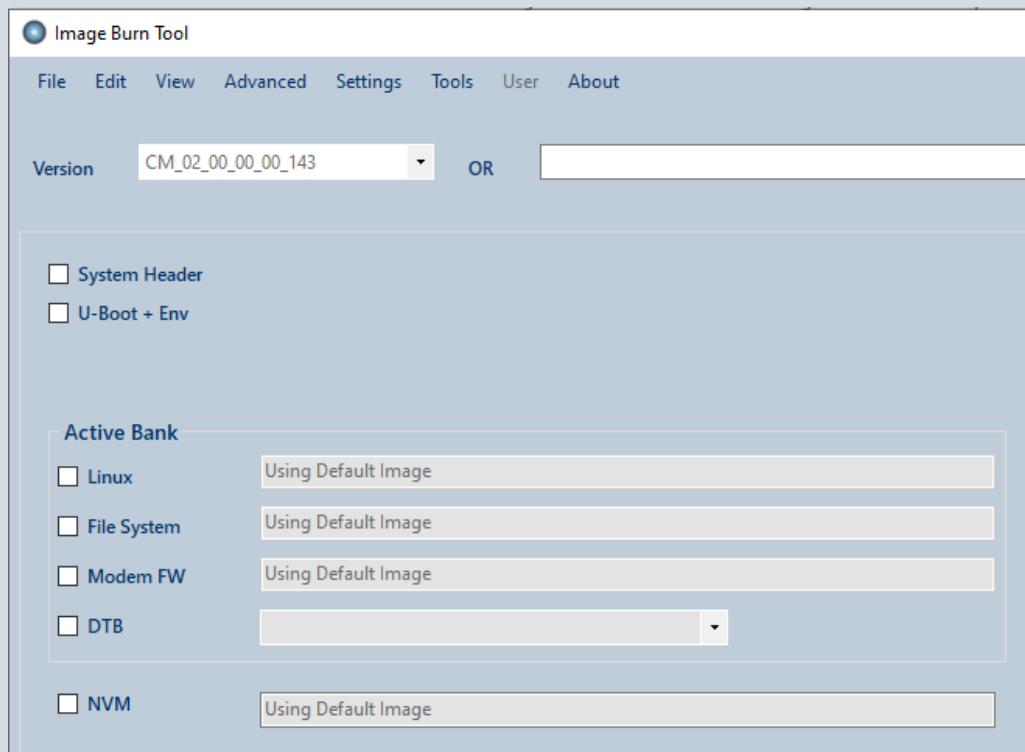
Option		Default Image	Default Mode	Advanced Mode	Recovery Mode
System Header		√	√	√	√
U-Boot + Env		√	√	√	√
Linux		√	√	√	√
File System		√	√	√	√
Modem FM		√	√	√	√
DTB			√	√	√
NVM		√	√	√	√
Burning Options	USB			√	√
	UART			√	√
Recovery	Board Info				√
	Recovery Port				√

CM_01_01_XX... (ALT1160)

Option		Default Image	Default Mode	Advanced Mode	Recovery Mode
System Header		√	√	√	√
U-Boot + Env		√	√	√	√
Linux		√	√	√	√
File System		√	√	√	√
DTB			√	√	√
NVM		√	√	√	√
Burning Options	USB			√	√
	UART			√	√
Recovery	Board Info				√
	Recovery Port				√

CM_01_02_XX... - CM_02_XX (ALT1160)

Option		Default Image	Default Mode	Advanced Mode	Recovery Mode
System Header		√	√	√	√
U-Boot + Env		√	√	√	√
Linux		√	√	√	√
File System		√	√	√	√
Modem FM		√	√	√	√
DTB			√	√	√
NVM		√	√	√	√
Burning Options	USB			√	√
	UART			√	√
Recovery	Board Info				√
	Recovery Port				√

Rollback Vector Use Cases

Description

Due to the latest security issues in uboot, the Rollback Vector (RBV) is now "1" (based on SB/ST chip types). For TG/BZ chip types, if the customer signs the uboot, the RBV will change to "1".

As part of boot security improvements, you cannot downgrade to older versions. We advise all users against downgrading to older releases for all chip types due to potential file system error.
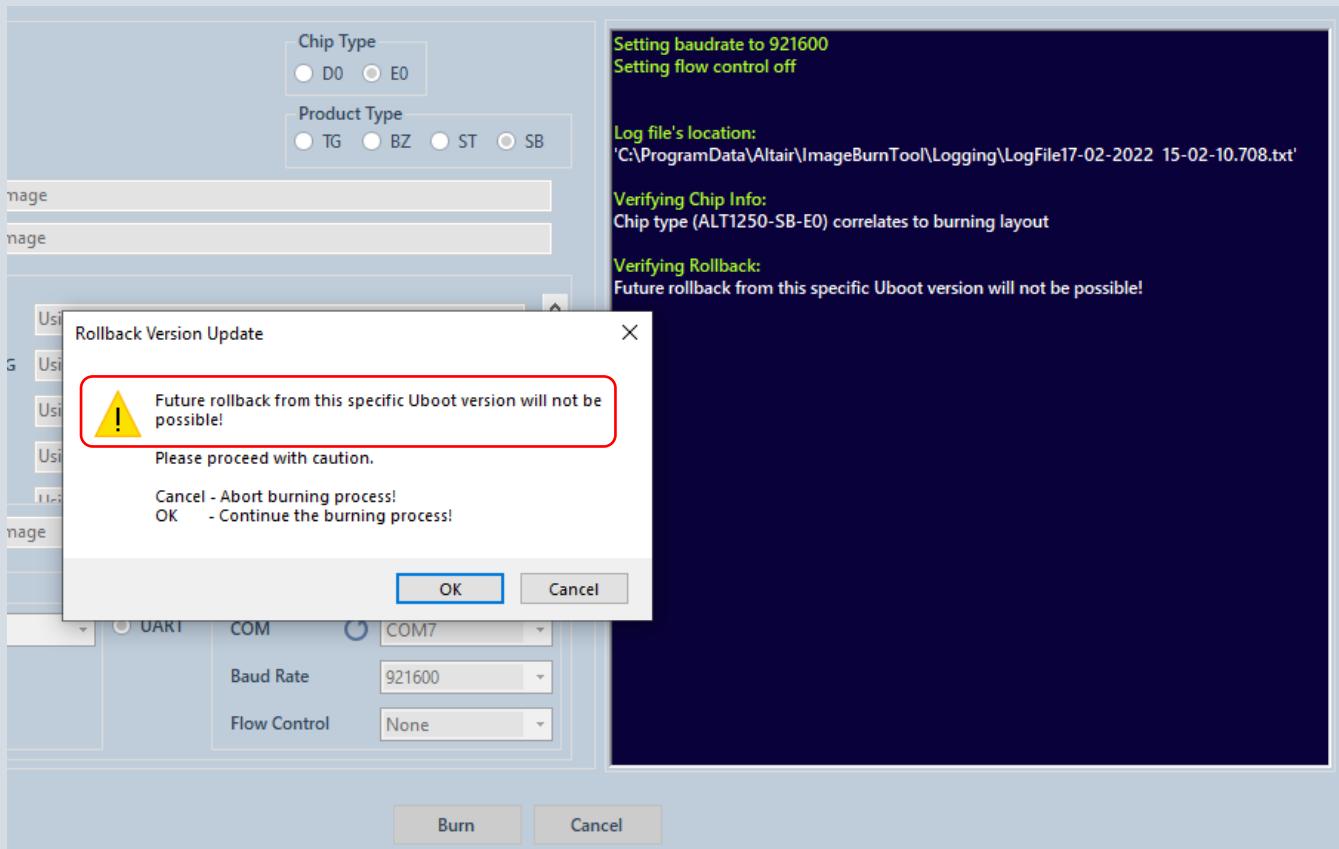
Note: Image Burn Tool cannot prevent all unsafe downgrades.

Customer Upgrade/Downgrade With ImageBurnTool

Customers can upgrade the ImageBurnTool when using a PcTools version older than PcTools_05_00_00_23 (inclusive). However, if the customer attempts to downgrade between these two specific versions, the device will enter a BOOT ROM state and will require a secure recovery procedure.
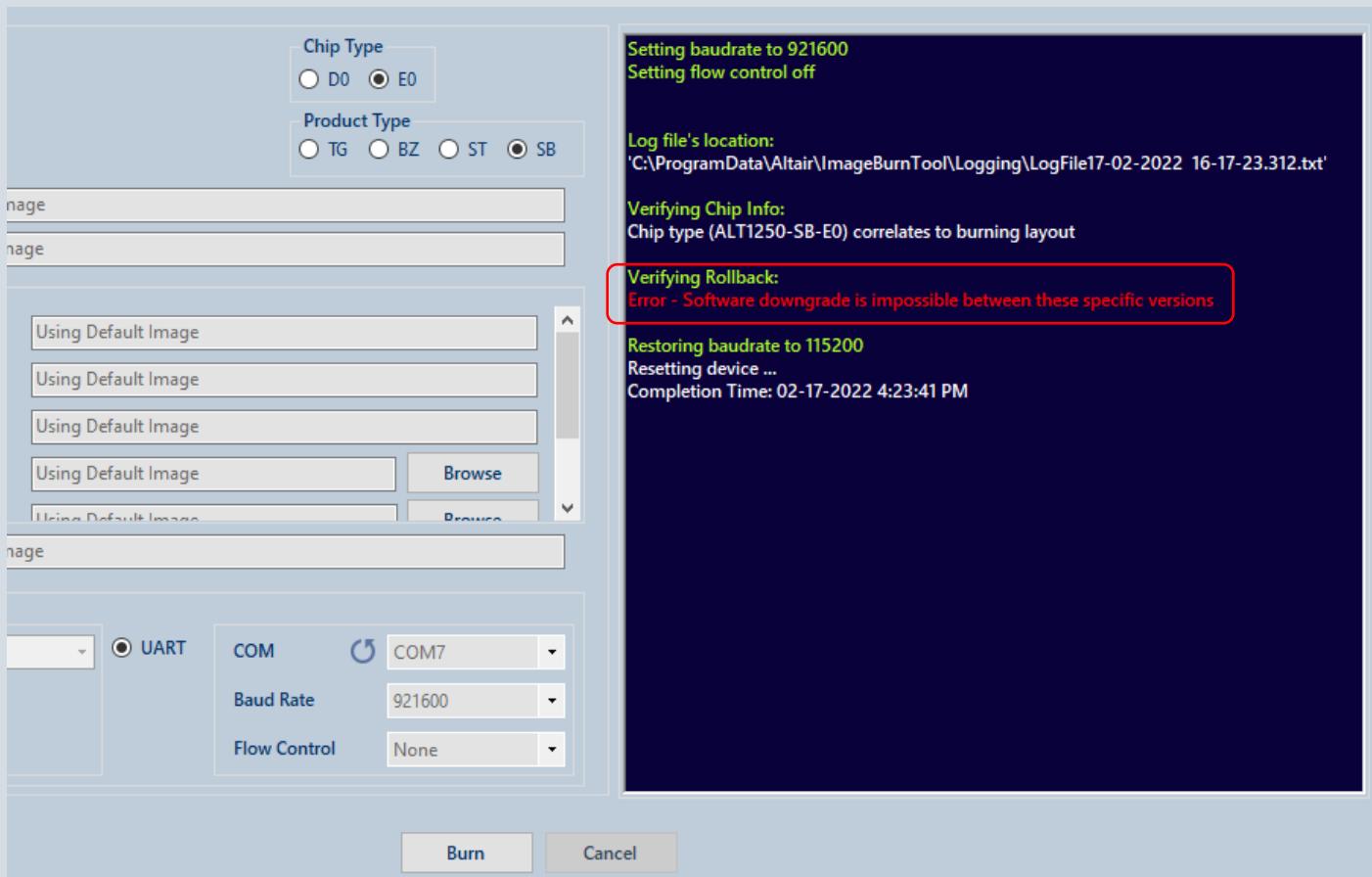
Starting from PcTools 5.0.0.24:

- Upgrade burning is possible. The following warning message will appear:

  "Future rollback from this specific Uboot version will not be possible"

- Downgrade burning is not allowed; the burning process will be aborted and the following warning message will appear:

"Error - Software downgrade is impossible between these specific versions"

We recommend customers to upgrade to PcTools 5.0.0.26 (not mandatory).

Burning from the Command Line (CLI Mode)

Image Burn Tool supports burning from the CLI.

To view supported commands (help), type **ImageBurnTool.exe –h** in the command line:

```
Administrator: C:\Windows\System32\cmd.exe
    ImageBurnTool.exe -h  Shows this usage message (help).


    OPTIONS:

    Honeynut/Fruitloop Versions (HN/FL):
    /0        burns SPL
    /1        burns U-Boot + Env
    /2        burns Linux (Burning both banks)
    /3        burns File System (Burning both banks)
    /4        burns Modem FW (Burning both banks)
    /5        burns DTB - need to specify DTB file's path after the flag
    /6        burns NVM
    /7        burns Linux Bank 1 Only
    /8        burns Linux Bank 2 Only
    /9        burns File System Bank 1 Only
    /10       burns File System Bank 2 Only
    /11       burns Modem FW Bank 1 Only
    /12       burns Modem FW Bank 2 Only
    /13       burns DTB - Bank 1 Only. Need to specify DTB file path right after the flag
    /14       burns DTB - Bank 2 Only. Need to specify DTB file path right after the flag

    (*) User can specify an image path right after the above flags in order to use it in the burning process


    Cinimini/Nesquik Versions (CM/NQ):
    /0        burns System Header
    /1        burns U-Boot
    /2        burns Linux
    /3        burns File System + Modem FW
    /4        burns Modem FW
    /5        burns DTB - need to specify DTB file's path after the flag
    /6        burns NVM

    (*) User can specify an image path right after the above flags in order to use it in the burning process
```

This chapter contains commands for burning SW versions for different chips, burning settings, and examples of image burning from the CLI.

Cinimini/Nesquik Versions (CM/NQ)

/0   burns System Header

/1   burns U-Boot + Env

/2   burns Linux

/3   burns File System

/4   burns Modem FW

/5   burns DTB - need to specify DTB file's path after the flag

/6   burns NVM

 (*) User can specify an image path right after the above flags in order to use it in the burning process

RiceKrispies Versions (RK_02)

/0   burns System Header

/1   burns U-Boot + Env

/2   burns Flexible Partition Map

/3   burns Application FW

/4   burns Modem FW

/6   burns Configuration FS

/7   burns Modem FW2

/8   burns ISE 1

/9	burns ISE 2
/10	burns Generic Partition (followed by partition's name and an image path. See examples)
/11	burns Config Records (followed by an image path. See examples) - Secure Mode
/12	burns PUK1 (followed by an image path. See examples) - Secure Mode
/13	burns Modem System Header (followed by an image path. See examples) - Secure Mode

 (*) User can specify an image path right after the above flags in order to use it in the burning process

RiceKrispies Versions (RK_03 with ChipType/ProductType)

-v	version is followed by the ChipType_ProductType string (D0_TG, D0_BZ, E0_TG, E0_BZ, E0_SB, E0_ST) - See example below
/0	burns System Header
/1	burns U-Boot + Env
/2	burns Flexible Partition Map
/3	burns Application FW
/4	burns Modem FW (followed by CATM/CATM2G)
/6	burns Configuration FS
/7	burns Modem FW2
/10	burns Generic Partition (followed by partition's name and an image path. See examples)
/11	burns Config Records
/12	burns PMP
/13	burns MCU System Header (followed by an image path. See examples)
/14	burns MCU (followed by an image path. See examples)
/15	burns PUK3 (followed by an image path. See examples)
/16	burns PUK1 (followed by an image path. See examples)
/17	burns PUK2 (followed by an image path. See examples)
/18	burns IO Par
/19	burns Modem System Header
/20	burns SFOTA Public Key
/21	burns ISE 1 (followed by product's directory path)
/22	burns ISE 2 (followed by an image path. See examples) (*) User can specify an image path right after the above flags in order to use it in the burning process

(*) User can specify an image path right after the above flags to use it in the burning process

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\RiceKrispies\RK_03_00_00_00_03931_001" E0_TG /4 CATM2G "C:\FW\ue_lte_2g.fw" /12 "C:\temp\pmp.bin" -uartparams 0 12 3000000 1 - *Burns /4 CATM2G (FW for CATM-2G with custom image) and /12 with custom image using version RK_03_00_00_00_03931_001 of E0_TG ChipType/ProductType*

CocoPops Versions

-v	version is followed by the ProductType string (TG, SB) - see example below.
/0	burns System Header
/1	burns U-Boot + Env
/2	burns Flexible Partition Map
/3	burns Application FW
/4	burns Modem FW (followed by NB/NB2G)
/5	burns Generic Partition (followed by partition's name and an image path. See examples)
/6	burns Configuration FS

/11	burns Config Records
/12	burns PMP
/13	burns MCU System Header (followed by an image path. See examples)
/14	burns MCU (followed by an image path. See examples)
/15	burns PUK3 (followed by an image path. See examples)
/16	burns PUK1 (followed by an image path. See examples)
/17	burns PUK2 (followed by an image path. See examples)
/18	burns IO Par
/19	burns Modem System Header
/21	burns ISE 1 (followed by product's directory path)

(*) User can specify an image path right after the above flags in order to use it in the burning process

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\CocoPops\
CP_01_00_00_00_10732_001" SB /0 /1 /2 /4 NB2G "C:\TempFW\ue_lte_2g.fw" /11 -c DISABLE -r 21 460800 -
uartparams 0 21 3000000 1 - *Burns /0 /1 /2 /4 (with customized image) and /11, after recovery with IUICC mode
DISABLE*

BranFlakes Versions

/0	burns System Header
/1	burns U-Boot + Env
/2	burns Flexible Partition Map
/3	burns Application FW
/4	burns LTEC
/5	burns Radios System Header
/6	burns Configuration FS
/9	burns PUK1 (ROM public key)
/10	burns burns Generic Partition (followed by partition's name and an image path. See examples)
/11	burns Config Records
/12	burns SRM
/13	burns MCU System Header
/14	burns MCU Loader
/15	burns MCU public key
/16	burns SHUB PUK4
/17	burns Radios Public Key
/18	burns IO Par
/19	burns CATM PHY
/20	burns NB PHY
/21	burns GNSS
/22	burns RF Manager
/23	burns Short Range Radio
/24	burns SFP PUK
/25	burns WiFi
/26	burns Factory FS
/27	burns Persist FS BranFlakes AVAS:

-va	AVAS version path - See example below

/a0   burns MCU

/a1   burns SRD PHY

/a2   burns WIFI

(*) User can specify an image path right after the above flags to use it in the burning process

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\BranFlakes\BF_01_00_00_00_11641_001" /0 /1 /2 /22 /24 -uartparams 0 6 921600 0 - *Burns /0 /1 /2 /22 and /24 using COM5 with baudrate 460800 and no flow control*

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\BranFlakes\BF_00_05_00_00_22751_001" /0 /1 /2

ImageBurnTool.exe -va "C:\Program Files (x86)\Altair Semiconductor\BranFlakes\BF_AVAS_01_00_00_93_22651" /a0 /a1 -uartparams 0 6 3000000 1 - *Burns /0 /1 /2 from core and /a0 /a1 form AVAS using COM6 with baudrate 3000000 with flow control*

BranFlakes Versions (BF_CORE_02):

/0   burns System Header

/1   burns U-Boot + Env

/2   burns Flexible Partition Map

/3   burns Application FW

/4   burns LTEC

/6   burns Configuration FS

/10   burns Generic Partition (followed by partition's name and an image path. See examples)

/12   burns SRM

/13   burns MCU System Header

/14   burns MCU Loader

/15   burns MCU public key

/18   burns SRM Configuration

/19   burns CATM PHY

/20   burns NB PHY

/22   burns RF Manager

/23   burns Short Range Radio

/26   burns Factory FS

/27   burns Persist FS

BranFlakes AVAS:

-va   AVAS version path - See example below

/a0   burns MCU

/a1   burns SRD PHY

/a3   burns GNSS

/a4   burns AISE (followed by an image path. See examples)

/a5   burns SHUB FW (followed by an image path. See examples)

(*) User can specify an image path right after the above flags to use it in the burning process

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\BranFlakes\BF_02_00_00_00_11641_001" /0 /1 /2 /22 -uartparams 0 5 921600 0 - *Burns /0 /1 /2 /22 and /24 using COM5 with baudrate 460800 and no flow control*

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\BranFlakes\BF_02_05_00_00_22751_001" /0 /1 /2

-va "C:\Program Files (x86)\Altair Semiconductor\BranFlakes\BF_AVAS_02_00_00_93_22651" /a0 /a1 -uartparams 0 6 3000000 1 - *Burns /0 /1 /2 from core and /a0 /a1 form AVAS using COM6 with baudrate 3000000 with flow control*

Golden Image Burning

-g   Allows user to burn a 'Golden' image (CM/NQ/RK versions)
        '-g' is followed by the 'Golden Image Path'
        in case of two golden images '-g' is followed by the 'Golden Image 1' Path and 'Golden Image 2' Path

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_01_00_00_20_43" -g "C:\Users\avikl\Desktop\full_img_1160.bin" - *Burns the specified image*.

Recovery mode

-r   '-r' is followed by the COM number and board info file name
        or RK versions: '-r' is followed by the COM number and recovery baud rate

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_01_00_00_00_63" /0 /1 -r 95 "FMD8C16LAL-30E1"

Using 'Location Path'

-l   '-l' is followed by the 'Location Path' string

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Honeynut\HN_02_01_08_01_06" -l "PCIROOT(0)#PCI(1D00)#USBROOT(0)#USB(1)#USB(1)" /0 /1 /3

Burning Via Uart

-uartparams   allows user to burn via UART ports. Require the following params in this order:

                 uart type   - 0 or 1 for the uart type (RK versions should use 0)

                 port number - number representing the COM port's number

                 baud rate   - number representing the required baud rate

                 flow control - 0 or 1 for the required flow control (0 - none , 1- RTS_CTS)

                 (*) Note that you will have to immediately reset your device after executing !!

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_01_00_00_00_59" /3 -uartparams 1 39 921600 0   - *Burns component 3 to COM 39 of type 1 with baud rate of 921600 and flow control off*.

Reset device upon completion

-s   '-s' is followed by 0 (false) or 1 (true)

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_02_00_00_00_25" /2 -s 1
       Burns component 2 and reset the device after completion.

Burning customize board info (XML file)

-b   '-b' is followed by an absolute path to the XML file (generated by 'BoardInfoCreator').

       Currently supports only CM/NQ versions.

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_01_00_00_00_89" /0 /1 -r 14 -b
"C:\Board Info XML Files\MyBdInfo.xml" - *Executes recovery on port 14, burning /0 /1 and the specified board info XML file*.

Customize log file

-f   '-f' is followed by an absolute path to the log file.

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Nesquik\NQ_01_01_00_00_11" /0 /1 -f
"C:\ImageBurnTool logs\burn_123.txt"" - *Burns /0 /1 and add logs to the specified file*.

Uboot's stop character

-p   '-p' is followed by a single character

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\RiceKrispies\RK_02_01_00_00_20" /2 /3 -p t" -
Burns /2 /3 and stops uboot countdown using "t" character.

Skip erase instructions (used on empty flash)

-e   '-e' is followed by 0 (false) or 1 (true)

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_02_01_00_00_114" /2 /3 /4 -e 1" -
Burns /2 /3 /4 and don't use any erase operations.

Avoid using the 'ENTER' key – when burning completes, the application won't return to prompt

-n   '-n' is followed by 0 (false) or 1 (true)

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_02_01_00_00_112" /3 -n 1" -
Burns /3 (application doesn't send ENTER at the end of the burning process).

Reset device automatically (device must be stopped in uboot state)

-t   '-t' is followed by 0 (false) or 1 (true) and port's 'Location Path' string.

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\Cinimini\CM_02_00_00_00_80" /0 /1 /4 -t 1
"PCIROOT(0)#PCI(1D00)#USBROOT(0)#USB(1)#USB(1)" - *Burns /0 /1 /4 and performs the reset device automatically
when application asks for one (device must be stuck in uboot state)*.

Customize default uboot baud rate (default is 115200)

-u   ('-u' is followed by uboot's default baud rate)

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\RiceKrispies\
RK_02_02_00_00_08" /3 -uartparams 0 12 3000000 1 -r 12 460800 -u 57600 - *Burns in recovery mode /0 /1 /2 /3 using uboot's default baud rate (customized to 57600).*

IUICC Mode (for supported products only)

-c   ('-c' is followed by NEUTARL/ENABLE/DISABLE (relevant only in 'Recovery Mode'))

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\CocoPops\CP_01_00_00_00_10451_002" SB /0 /1 /2 /3 /11 -c DISABLE -r 10 460800 -uartparams 0 10 3000000 1 -s 1 - Burns /0 /1 /2 /3 /11, after recovery with IUICC mode DISABLE and reset upon completion

Short Recovery mode:

-sr   special case for displaying chipID from device without FW (RK/CP/HB versions)

('-sr' is followed by the COM number)

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\RiceKrispies\RK_03_03_00_93_30271_001" D0_BZ -sr 7

Fast Burning mode:

-fb   Run the burning process without verifications (lead to faster burning), please use with caution

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\BranFlakes\BF_02_00_00_00_11641_001" /0 /1 /2 /22 -fb -uartparams 0 6 921600 0

IUICC Mode (for supported products only):

-c   ('-c' is followed by NEUTARL/ENABLE/DISABLE (relevant only in 'Recovery Mode'))

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\CocoPops\CP_01_00_00_00_10451_002" SB /0 /1 /2 /3 /11 -c DISABLE -r 10 460800 -uartparams 0 10 3000000 1 -s 1 - Burns /0 /1 /2 /3 /11, after recovery with IUICC mode DISABLE and reset upon completion

Kermit Protocol Selection

-kermit ('-kermit' is followed by default/spl (If not mentioned - default will be used in the burning process))

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\RiceKrispies\RK_03_03_00_00_11751_001" E0_SB /0 /1 /2 /3 -kermit spl -uartparams 0 10 3000000 1 -s 1 - Burns /0 /1 /2 /3 , using kermit spl and reset upon completion

Burning timeout (in seconds) per partition

-m   ('-m' is followed by number of seconds for burning timeout)

Example:

ImageBurnTool.exe -v "C:\Program Files (x86)\Altair Semiconductor\CocoPops\CP_01_00_00_00_11421_001" SB /0 /1 /2 /3 -uartparams 0 6 921600 0 -m 240 - Burns /0 /1 /2 /3 with timeout of 240 seconds (4 minutes)