ARCAM Serial Number Burner- Manual

Version v1.0

Version

Version	Date	By	Description
1.0	28/08/2019	Chris Mann	First Version.

Overview

This document describes the key points of the ARCAM Serial Number Burner that can be used to burn the Serial Numbers into the device.

Serial Numbers are generated by ARCAM and are burnt into the Devices by the Manufacturers at the point of production. Because the Serial Number includes characters that identify when the Device was manufactured the complete number cannot be finalised until the production date. The software allows ranges of provisional numbers to be generated which are then finalised as they are burnt into the devices. The process uses a data file to keep track of the finalised Serial Number and the date it was burnt into the device.

Two software applications are used in the process:

ARCAM.SerialNumber.Manager	Used by ARCAM to generated and maintain a database of Serial Numbers and MAC Addresses
ARCAM.SerialNumberBurner	Used by the Manufacturers to burn the serial numbers into the devices.

Process

The Serial Number process takes the following steps:

- Using the ARCAM Serial Number Manager, a batch of Serial Numbers are allocated for a given Device. Each Serial Number is associated with a MAC Address, and a Manufacturer.
    - The batch is exported into a data file and sent to the Manufacturer.
- The Manufacturer uses the ARCAM Serial Number Burner to load the data file.
    - The ARCAM Serial Number Burner is used to create a csv file that can be used to print labels for a range of numbers from the data file.
    - It can then be used to burn the serial numbers on to the Devices, keeping a record of when it happened.
- The Manufacturer sends the data file back to ARCAM where it is re-imported into the ARACM Serial Number Manager updating the Serial Number indication that it has been used.
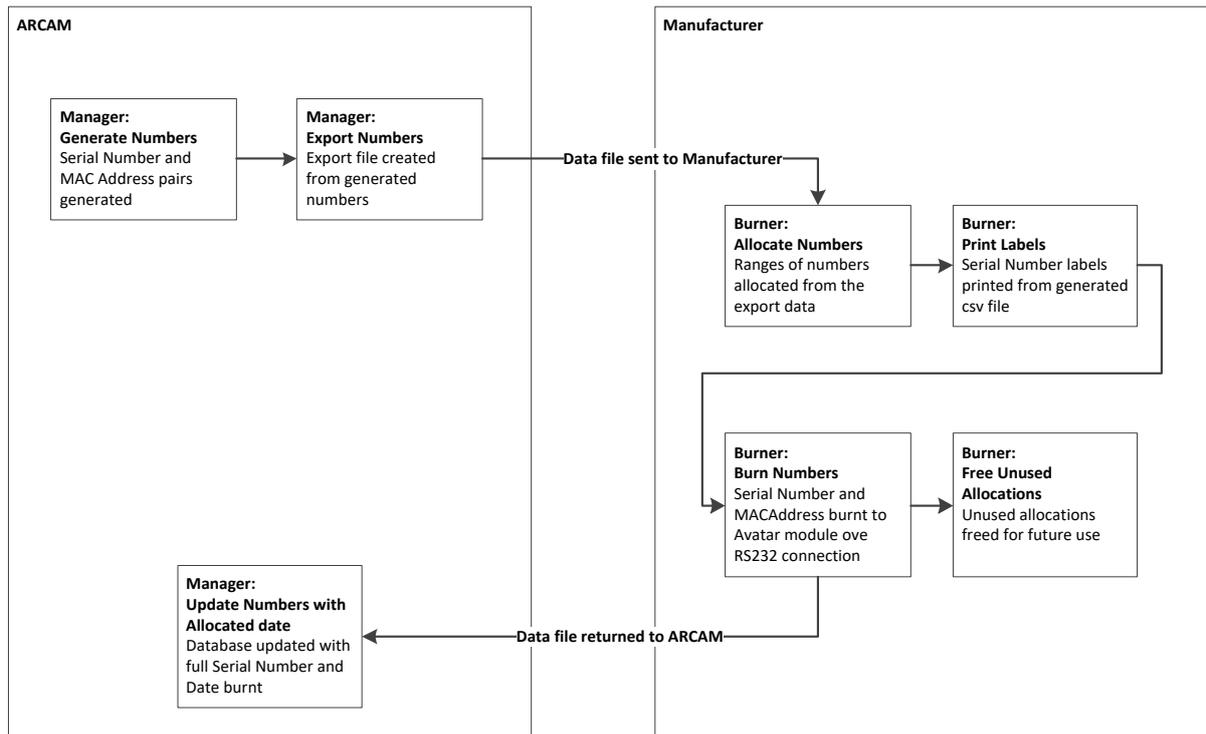
Serial Number Format

The format of a Serial number is as follows:

- 2 Character Manufacturer prefix (*mm*)
- A 4 digit Device Prefix (*dddd*)
- A hyphen
- A single character identifying the month the number was allocated. (*M*)
- A single character identifying the year the number was allocated. (*Y*)
- A 7-digit serial number. (*0000000*)

e.g.

mmdddd-MY0000000

Serial Number Burner

The Serial Number Burner is used by the Manufacturer to generate labels and burn the serial numbers into the devices as they are produced.

Connecting to the AP72598_EVB_V03 board

The computer running the Serial Number burning software should be connected to the AP72598_EVB_V03 board via USB as shown below:

Opening a .dat file

Having loaded the application, the user opens the data file generated by the ARCAM Serial Number Manager using the Open button.

Choose a data file to open	Open	D:\Projects\ARCAM.SerialNumber.Manager\ARCAM.SerialNumber.Manager\bin\Debug\Exports\SA30_SerialNumbers_Hualu_0003001-0003100.dat
Device **SA30**		Range **HUARC-AMP022-MY0003001 - HUARC-AMP022-MY0003100**
Manufacturer **Hualu**		Count **100**
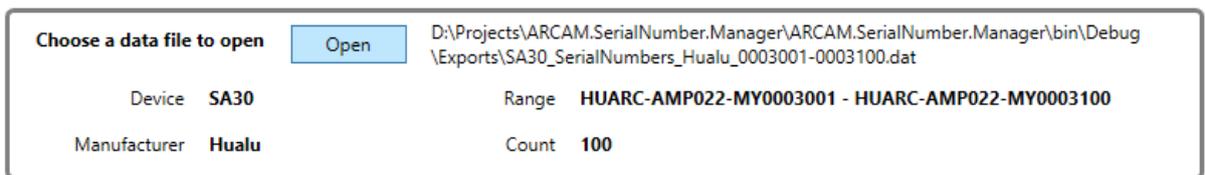
The details of the data file are displayed in the application header, showing the Device, Manufacturer and number of records available.

Allocate Numbers Tab

The Allocate Numbers tab is used to allocate numbers from the range defined in the data file.

It is intended that that data file can contain sufficient for a number of production runs and because the serial number generated include characters identifying the month and year of production it is only necessary to allocate the number required for the current run.
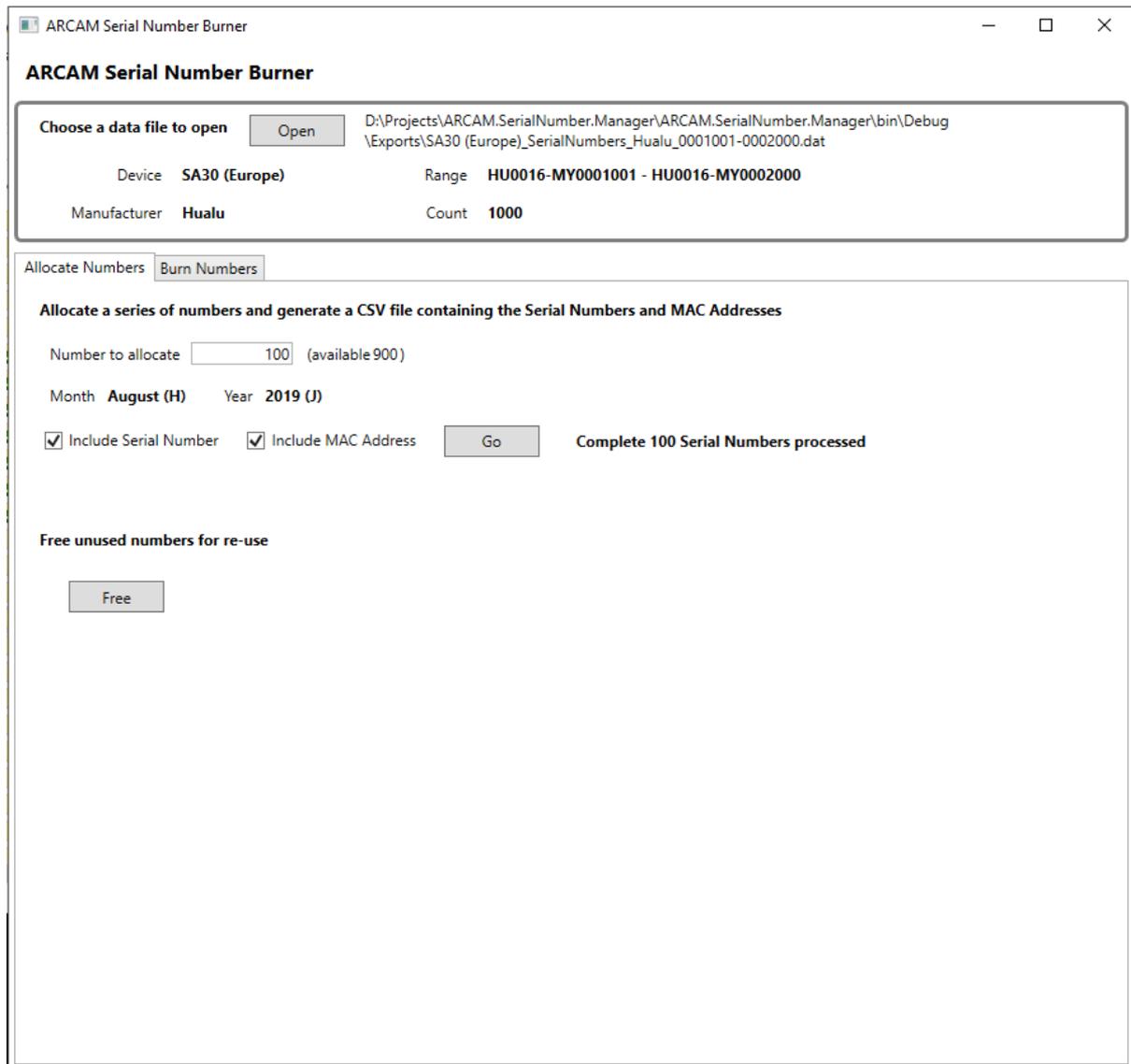
Pressing the Go button will associate the production Month and Year with a range of numbers for the data file. It will also prompt for the location of a csv file that can be used to generate the Serial Number labels to be applied to the Devices. There is an option to include Serial Number, MAC Address or both.
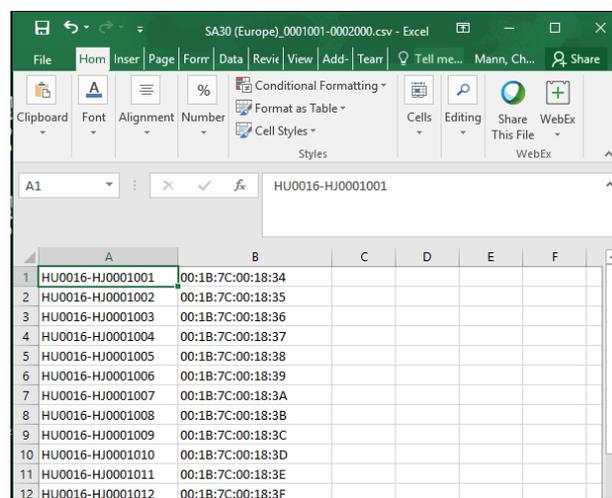
If any previously allocated number are not used in the current production run, they can be freed-up for re-allocation later by pressing the **Free** button.

Burn Numbers Tab

The Burn Numbers tab is used to burn the Serial Number and MAC Address into a Device using the AP72598_EVB_V03 board.

Before burning, the board should be connected to over RS232. COM Port, Baud Rate options are provided and the Connect button connects to the device. The Baud rate defaults to 115200.

COM Port	Baud Rate	
COM3 - Intel(R) Active Management Technology - S ⌄	115200 ⌄	Connect

Once connected the **Connect** button is hidden, and the Port/Baud Rate defined are used for the duration of the burning session.

The steps performed in a burning session are as follows:

First time:

- Start the application
- Load the appropriate DAT file, select the Burn Numbers Tab
    - The first available Serial Number/MAC Address is displayed on the screen
- Load the AP72598_EVB_V03 board with a new Avatar board.
- Switch on the AP72598_EVB_V03 board.
- Connect the software to the AP72598_EVB_V03 board using the COM Port/Baud Rate and **Connect** button.
- The software attempts to logon to the Avatar board, and program the Serial Number and MAC Address.
- When successful, switch off the AP72598_EVB_V03 board.

Subsequent times

- Load the AP72598_EVB_V03 board with a new Avatar board.
- Switch on the AP72598_EVB_V03 board.
- The software connects to the AP72598_EVB_V03 board using the initial connection details.
    - The next available Serial Number/MAC Address is displayed on the screen
- The software attempts to logon to the Avatar board, and program the Serial Number and MAC Address.
- When successful, switch off the AP72598_EVB_V03 board.
- Repeat for each Avatar board to be programmed.

As each Serial Number is processed, the data file is updated. Once a run is complete the data file can be sent back to ARCAM to be imported into their database.