



Qualcomm Technologies International, Ltd.



ADK 4.3 Source Configuration Tool

User Guide

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1 ADK Configuration Tool – overview

NOTE This information should be read along with the specific *Configuration PS Key Bit Field* document for the relevant applications.

This document describes the ADKConfiguration Tool for QTIL Bluetooth ADK source Audio application.

TheSource Configuration Tool provides a GUI by which developers can configure QTIL Bluetooth ICs. This allows developers to produce tailored, specific products based around the Qualcomm® BlueCore™ device. Developers can easily:

The Source Configuration Tool provides a GUI by which developers can configure QTIL Bluetooth ICs. This allows developers to produce tailored, specific products based around the Qualcomm® BlueCore™ device. Developers can easily:

- Read and write the values of configurable items, from or to:
 - A connected QTIL BlueCore device (over a USB-SPI interface).
 - A PSR file on the PC.
 - A verbose text file.
- Configure system configurable items by function, for example:
 - Define PIO functionality to suit their hardware design.
- Configure audio input source type:
 - USB
 - Analog
 - SPDIF
 - I²S
- Configure bits per sample for digital inputs (I²S or SPDIF)
 - 16
 - 24
 - 32
- Configure battery and charger settings.
- Adjust connection management settings during; Pairing, Reconnection.

- Enable and disable Bluetooth profile specific features for:
 - ☐ AVRCP
 - ☐ A2DP
 - ☐ HFP
- Enable and disable the following A2DP codec support:
 - ☐ SBC
 - ☐ FastStream
 - ☐ Qualcomm® aptX™
 - ☐ aptX Low Latency
 - ☐ aptX HD
- Configure settings for each of the above listed codecs.
- Configure voice settings to use for HFP such as
 - ☐ EDR Packet Types
 - ☐ eSCO Packet Types
 - ☐ SCO Packet Types
- Configure USB Class of Device.
- Configure various timers for inquiry, connection, link loss reconnection, profile connect delay and so on.

2 ADK Source Configuration Tool workspace

Configuration Set

The ADK Source Configuration Tool enables developers to access and modify the Configuration Items of the source audio application. Any configurable setting stored in a User PS Key is a configuration item.

All the configuration items of the source audio application, considered as a group, form the Configuration Set. By making modifications to this Configuration Set, manufacturers can differentiate and distinguish their source audio application product in the marketplace.

GUI

The ADK Source Configuration Tool is designed to enable developers an easier way of navigating through the Configuration Set than was possible in previous ADK releases. It divides the GUI into two panes:

On the left-hand side, there is the **Configuration Set** Tree view.

In the right-hand pane, there is a display of the selected Configuration Items.

Tree view control

The Tree view shows a hierarchical breakdown of the Configuration Set by functional area. The root nodes collect all the Configuration Items that relate to that functional area. For example, all the Configuration Items relating to Bluetooth functionality of the application are collected under **Bluetooth**. This node is then subdivided into settings relating to **Connection Management**, **DualStream**, and **Profiles**.

2.1 ADK Source Configuration Tool Tree view configuration items

When a node in the Tree view is clicked, the Configuration Items it contains are displayed in the right-hand pane of the GUI. All the Configuration Items contained in this node are shown on the screen and their values can be edited using the controls in the right-hand pane. The selected Tree view node is underlined in the top left of the Selected Configuration Pane; in the example shown in [Figure 2-1](#) it is the **Input type** root node, which contains its Configuration Items.

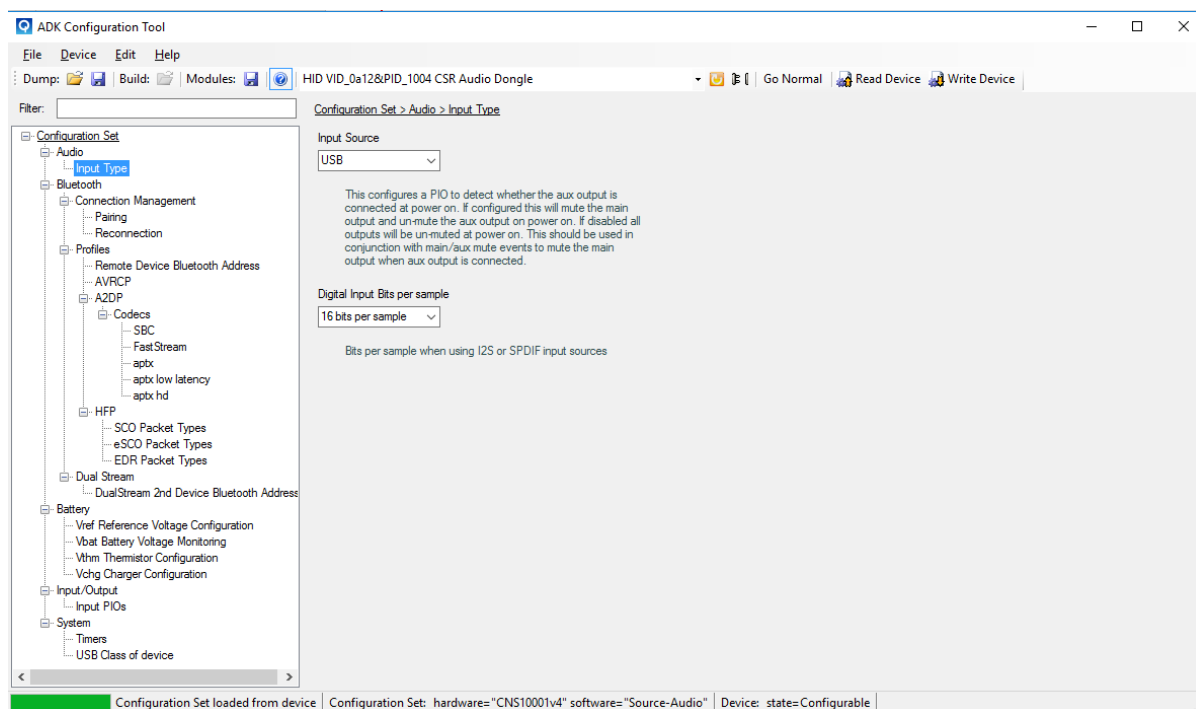


Figure 2-1 Source Configuration Tool GUI showing tree view and selected configuration pane

3 ADK Source Configuration Tool start-up

The ADK Configuration Tool appears on the Microsoft Windows **Start** menu in the **ADK, Tools** folder. The user can also use the shortcut icon to open the ADK Configuration Tool, if the option to create one was selected during installation.

To use the Configuration Tool GUI to modify the default Configuration Set and produce a specific, differentiated product, based on a standard Qualcomm® BlueCore™ device.

To modify a device Configuration Set:

1. Start the ADK Configuration Tool
2. Connect the selected device to a PC running the Configuration Tool
3. Command the device into the Configurable state
4. Read the Configuration Item values into the Configuration Tool
5. Use the Configuration Tool GUI to edit the Configuration Item values, as required
6. Save the Configuration Set back to the device
7. Command the device back into the Normal state

The modified Configuration Set can be saved to a Configuration Set Dump file, see Chapter .

Alternatively the Configuration Set can be modified on the file system of the Host PC, without the need to actually connect to a device.

3.1 USB HID transport

Before using the Configuration Tool, ensure all USB descriptors required to identify the device are correctly configured.

NOTE USB HID cannot connect to any device that contains an Application built for USB to SPI AHI transport.

HID Device Identifier (DI)

At boot-up, the Configuration Tool scans all USB HID devices enumerated on the host PC and reports all available devices using the HID Device Identifier (DI), which is a fixed-format string.

The HID DI is presented in the Configuration Tool Bar Device List drop-down menu, in the following format:

```
HID VID_<Vendor ID>&PID_<Product ID> <Product String> [<Serial Number String>
<Manufacturer String>]
```

Where:

- `HID` denotes a USB HID device
- The [square brackets] contain additional information used to differentiate similarly configured devices attached to the same host PC.

Customer-assigned USB Vendor IDs

QTIL recommends that Customer-specific USB Vendor IDs are assigned to each device. The Customer-specific USB Vendor IDs should include an appropriate Product ID and Product String. For example:

- `HID VID_0a12&PID_1243 CSR8675`
- `HID VID_0a12&PID_1243 CSRA681`

Table 3-1 HID DI USB descriptors

USB Descriptor	Shown in HID Device Identifier
Vendor ID (VID)	Always
Product ID (PID)	
Product String	
Manufacturer String	Only to differentiate devices with the same VID, PID and Product String
Serial Number String	

3.2 USB SPI transport

The USB to SPI AHI transport cannot connect any device that contains Applications built for the USB HID AHI transport.

The Device List identifies all USB to SPI converters attached to the host PC, even if they are not physically connected to a device. Any attempt to connect to a converter not associated with a device causes the AHI connection attempt to timeout and fail, leaving the Configuration Tool in the disconnected state.

USB to SPI converters are reported using the string format:

`USB SPI (<USB SPI Converter Serial Number>)`

Where:

- `USB SPI` denotes a USB SPI interfaced device
- The number in brackets is the USB to SPI converter serial number

3.3 Connect a device

After the device is connected to the host PC and selected in the Device List, see [Device List drop-down menu](#), the Configuration Tool connection process is automated.

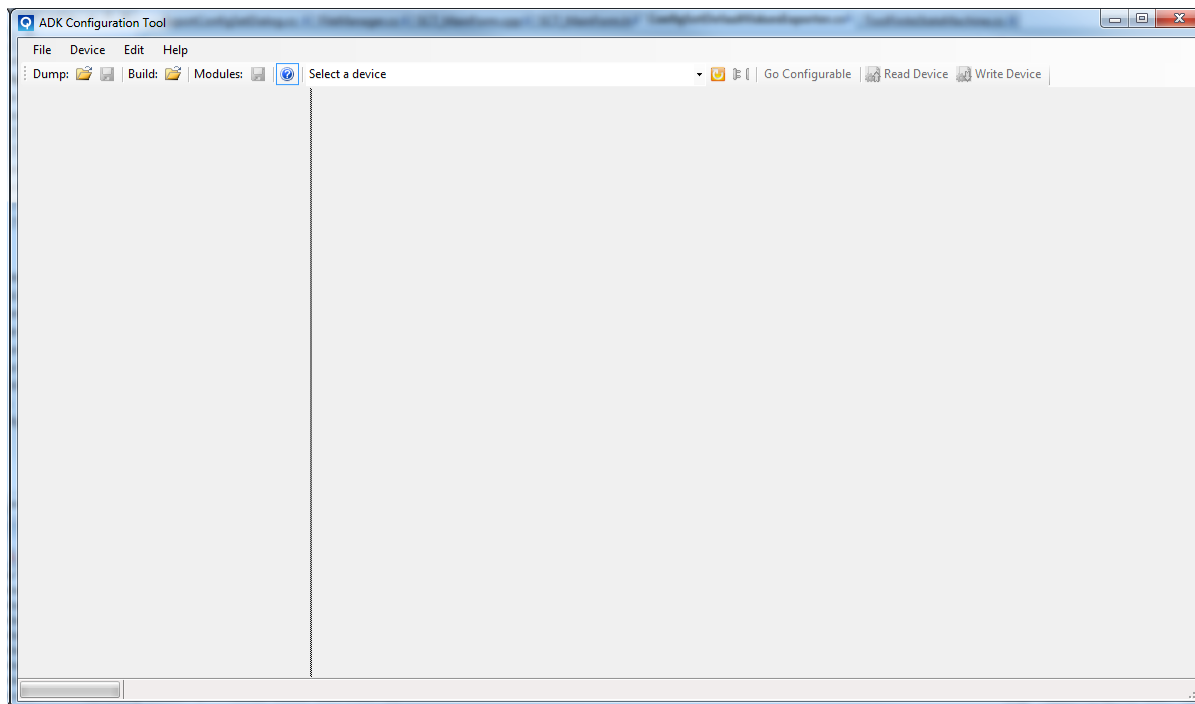


Figure 3-1 The Configuration Tool GUI with Device not connected

NOTE To prevent illegal Read or Write events and to maintain Configuration Set integrity, the Toolbar icons are grayed-out before a device is connected, see [Figure 3-1](#).

To connect a known device:

1. Connect the device to the PC, using either USB HID or a Qualcomm USB to SPI converter.
2. If the Configuration Tool is:
 - ☐ Running then Refresh the Device List.
 - ☐ Not already running then Start the Configuration Tool.
3. When the Device List is populated:
 - ☐ Select a device from the device drop-down list and Click on the selected device name.

NOTE When the connection process is complete:

- Configuration Set Definitions are loaded into the Configuration Tool and Placeholder Configuration Item values are displayed in the GUI
- Device Configuration Item values only become available when retrieved from the device or uploaded from a compatible Dump file.

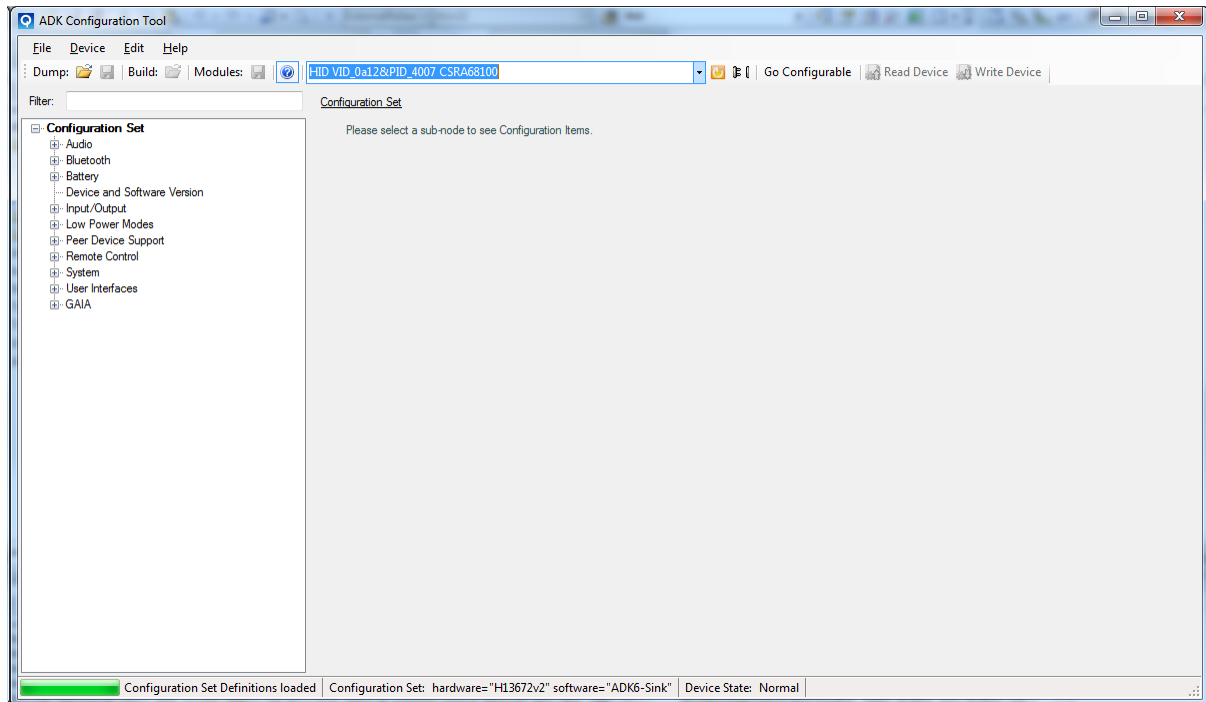


Figure 3-2 The Configuration Tool with Device connected

3.3.1 Device List drop-down menu

To select a device from the Device List drop-down list, Click on the selected device name.

All devices known to the host PC are listed in the Toolbar Device List drop-down. To add a new device to the list or to update the Device List after a new device is connected, click the Toolbar **Refresh Device List**.

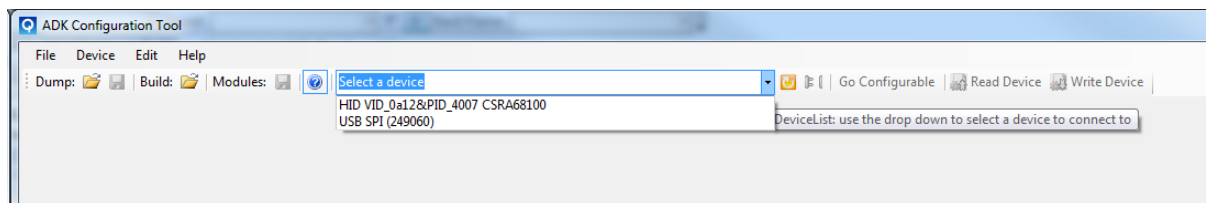


Figure 3-3 The Configuration Tool with Device selection

Figure 3-3 shows an example of two possible devices:

- One connected using USB HID

One connected using a USB SPI converter

3.3.2 Automatic device Configuration Set definition upload

The Configuration Tool initiates a connection to a device selected from the Device List and automatically uploads the device Configuration Set definitions to the Configuration Tool. The progress and status are indicated at the bottom of the GUI.

NOTE Device Configuration Item values are not uploaded until read from the device or loaded from a compatible Dump file.

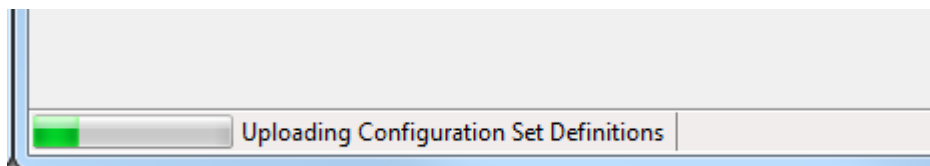


Figure 3-4 The Configuration Tool with Uploading Configuration Set Definitions

When the upload is complete:

1. The device is connected to the Configuration Tool with the device Application executing in the Normal AHI mode
2. The tree view displays a hierarchical representation of the device Configuration Set definitions, where each node represents an individual Configuration Group
3. Placeholder Configuration Item values are loaded and displayed in the GUI.

NOTE Placeholder Configuration Item values are set either to 0, or the initial `enum` symbol defined for that particular item. Real device Configuration Item values are available only when they are read from the device, or loaded from a Configuration Set dump file, see [Read a connected device](#) or [Restore a Configuration Set Dump file](#).

3.4 Read real Configuration Item values

Placeholder Configuration Item values are only replaced by real Configuration Item values when a compatible Configuration Set dump file is loaded from the host PC, or the Application is placed into Configurable AHI mode and read.

To load real Configuration Item values into the ADK Configuration Tool, either:

- Open a previously saved Configuration Set Dump file that is compatible with the Application.
or
- Command the connected device into the Configurable AHI mode and read the Configuration Item values from the device, see [Make the Application configurable](#).

3.4.1 Make the Application configurable

Click the Toolbar **Go Configurable** toggle button to set the device into the configurable state.

NOTE (1) Configuration Item values can only be read, modified or written when the device is operating in the Configurable AHI Mode.
(2) The button caption changes to **WORKING** during the transition. When the transition is

complete, in Configurable AHI mode the button caption changes to **Go Normal**, see [Figure 3-5](#).

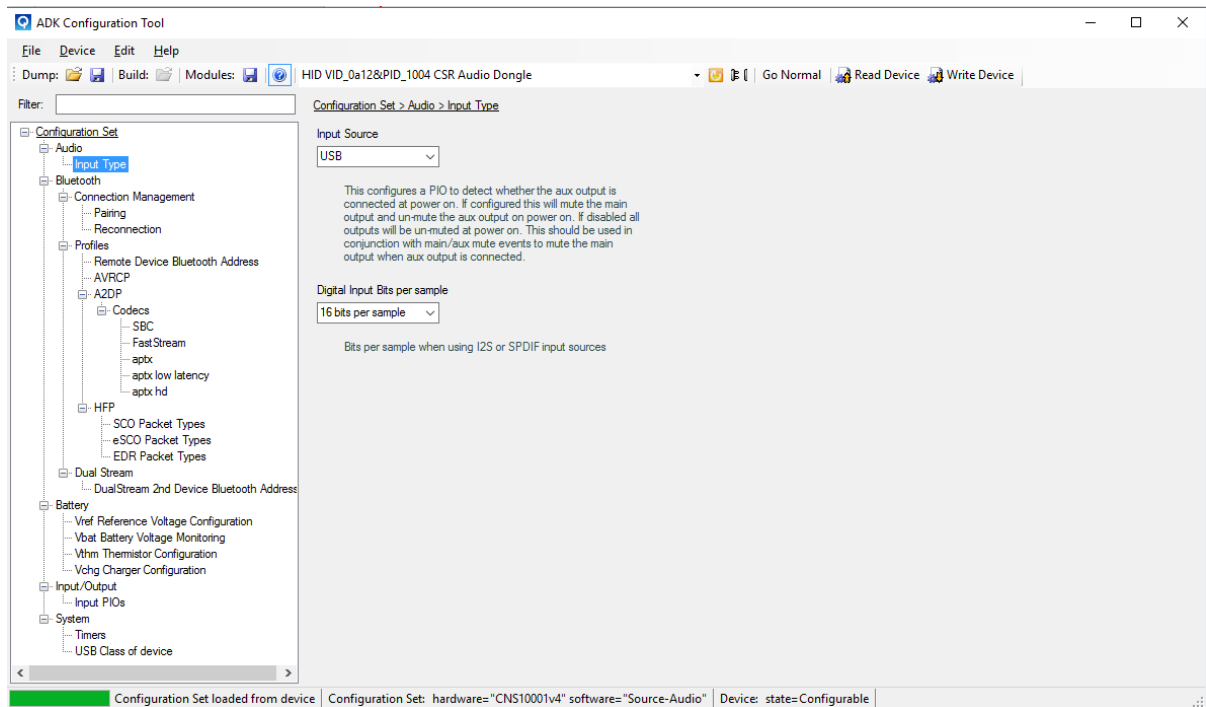


Figure 3-5 The Configuration Tool with AHI Configurable mode

NOTE The **Read Device** button becomes active when the device is in Configurable AHI mode.

The **Write Device** button only becomes active after actual Configuration Item values are loaded in the Configuration Tool GUI.

[Figure 3-5](#) shows an example of the **Write Device** button grayed-out, this is because the device Configuration Item values are not yet loaded.

3.5 Read a connected device

To Read device Configuration Item values from a connected device, set the device into Configurable AHI mode and Click the **Read Device** button. Real device Configuration Item values are uploaded into the Configuration Tool from the device and presented in the GUI.

NOTE [Figure 3-6](#) shows a set of User Events configured for the device Application. When a device is connected and Configuration Item values are loaded in the GUI, all device IO Toolbar options become active.

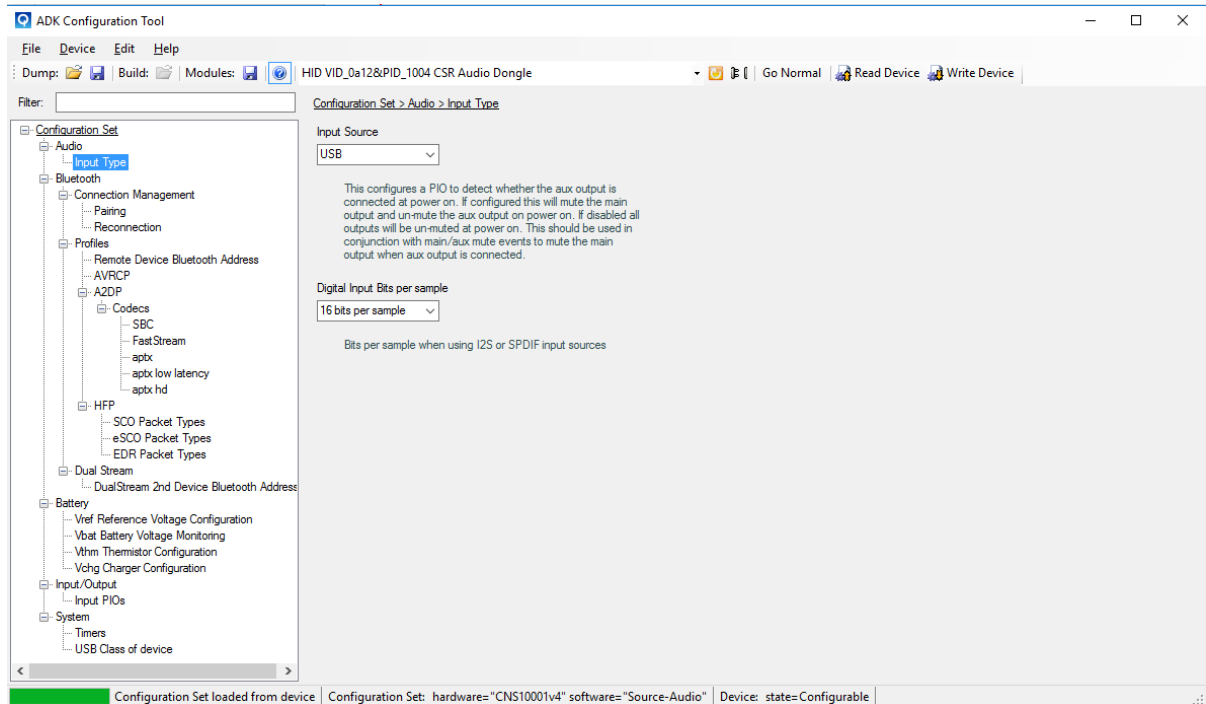


Figure 3-6 The Configuration Tool with Read Device values

3.6 Modify default Configuration Item values

When a device is connected in Configurable AHI mode use the GUI to:

- Inspect or modify actual device Configuration Item values
- Read from the connected device
- Load from a previously-saved dump file

When the Configuration Set is correctly configured, the updated values can be:

- Written directly back to the device, see , then immediately executed, by returning the connected device to Normal AHI Mode, see
- Saved as an updated Configuration Set Dump file, see

3.6.1 Write modified Configuration Item values back to the device

To write the modified Configuration Item values displayed in the GUI back to the connected device, click the Toolbar **Write Device** button.

3.6.2 Executing modified Configuration Item values

Modified Configuration Item values do not execute until the Application is returned to **Normal AHI Mode**.

After writing the Configuration Item values displayed in the Configuration Tool GUI back to the device, see [Write modified Configuration Item values back to the device](#), to return the device to Normal AHI mode either:

- Click the Toolbar **Go Normal** button
or
- Click the Toolbar **Disconnect Device** button

Go Normal

The Toolbar **Go Normal** toggle button causes the device to go from Configurable AHI mode back to Normal AHI mode and then the Application to execute. The Application executes with the Configuration Item values last written to the device.

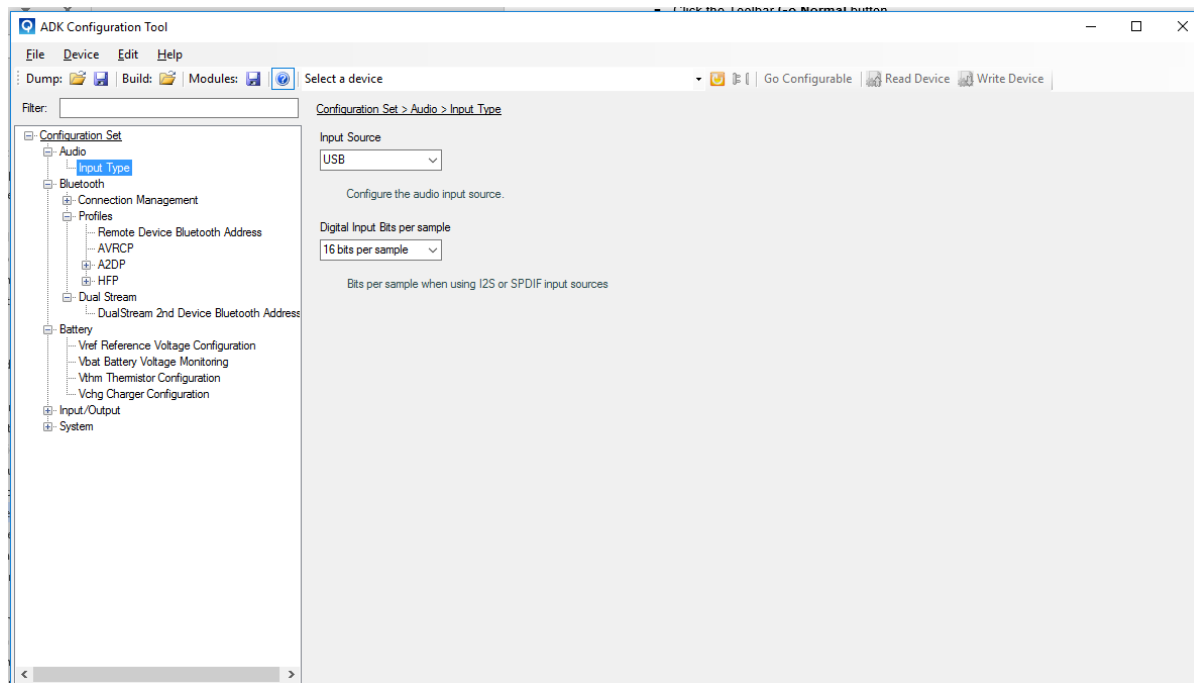
NOTE When transition is complete. Configuration Item values remain visible and available for further modification in the GUI, but the **Write Device** button is no longer active. Any further modifications made to these values in the GUI cannot be applied to, or executed by, the device until it is returned to the Configurable AHI mode, see [Figure 3-2](#).

Disconnect the device

To disconnect the device from the Configuration Tool, click the Toolbar **Disconnect Device** button.

Regardless of the active mode, when the Application is disconnected:

- The device executes the modified Configuration Item values in Normal AHI mode
- The GUI returns to the offline Configuration Set Browsing mode



4 Configuration Set Dump files

Configuration Set Dump files are located on the host PC and used to store and distribute copies of saved Configuration Sets.

Configuration Set Dump files are useful for:

- Cloning and distributing a Configuration Set for a particular Application Build.
For example, a Configuration Set can be duplicated between two devices running the same version of the Application, when testing a baseline of developed Application source code between devices.
- Restoring a baseline version of the Configuration Set back to a device, on completion of testing a modified Configuration Set.
- Merging Configuration Set versions manually, using a third party text difference tool.

4.1 Create a Configuration Set Dump file

NOTE Any Configuration Set read from a connected device, Configuration Set Dump file or Application build folder can be saved as a new Dump File.

For example, to create a Configuration Set Dump File from a connected device:

1. Start the Configuration Tool, see **Error! Reference source not found.**
2. Connect the device, see
3. Make the device Configurable, see
4. Read the device Configuration Set, see
5. Click **Save As**, to write the GUI Configuration Item values to a Dump file.
The Configuration Tool prompts for an appropriate file path and filename on the host PC, see [Table 6-6](#).

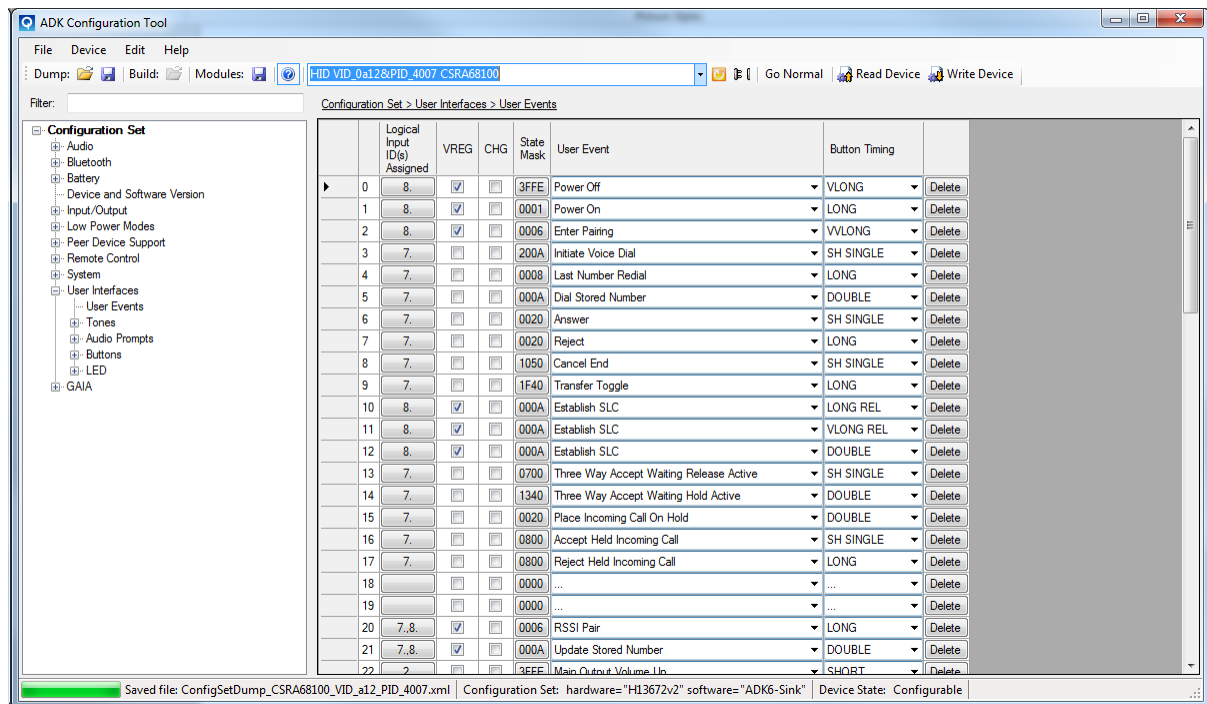


Figure 4-1 The Configuration Tool with Save to Dump File

4.2 Restore a Configuration Set Dump file

NOTE A Configuration Set Dump file is compatible when it is created from the same Application binary as that flashed on the connected device. Any attempt to restore an incompatible Configuration Set Dump file to a device will fail, causing the Configuration Tool to issue an **Incompatible Configuration Set** warning.

To restore a compatible Configuration Set back to a device:

1. Start the Configuration Tool, see [ADK Source Configuration Tool start-up](#)
2. Connect the device, see [Connect a device](#)
3. To load a compatible Configuration Set from a previously-saved Dump File into the Configuration Tool GUI:
 - a. Click **Open**
 - b. Select the appropriate Dump file
 - c. The Configuration Tool prompts for an appropriate host PC file system, file path and filename.
4. Make the Application configurable, see [Make the Application configurable](#)
5. Write the Configuration Set from the GUI, back to the device, see [Write modified Configuration Item values back to the device](#)

5 Editing a Configuration Set while offline

NOTE This section only applies for ADK users. For ROM-only users this functionality is not available.

In the ADK the Configuration Tool supports editing of the Configuration Set on the host PC without the need to flash and connect to a device. This is called Offline mode. Using Offline mode the user can import a Configuration Set from the ADK Application build folder, edit this Configuration Set as if it was read from a device or loaded from a Configuration Set Dump file, and finally export it back to the Configuration Module definition files in the Application source code. When the Application is next built and flashed to a device it contains the edited Configuration Set by default.

The ability to import and export a Configuration Set to the host PC file system is useful for:

- Finalizing product development. For example to create a production image that does not contain any dynamic Configuration Store records.
 - This means that all the Configuration Item values are stored in the devices const space and not in its persistent store.
- Working with development hardware or products that do not support USB SPI or USB HID interfaces.
- Creating new Configuration Set variants by branching from existing Configuration Sets.
 - For example, creating a Speaker product based on the ADK reference Speaker Application and its configuration defaults as a starting point.
- Updating the Configuration Module definition files during development.
 - For example when Application Project properties are modified and new functionality enabled in the Application source code.

5.1 Import a Configuration Set from an ADK Application build folder

NOTE When there is no device connected the Import from Build folder icon is enabled on the Toolbar, see [Figure 5-1](#). Click this icon to import the Configuration Set.

If you wish to import a Configuration Set but have a device connected, disconnecting the device enables the icon.

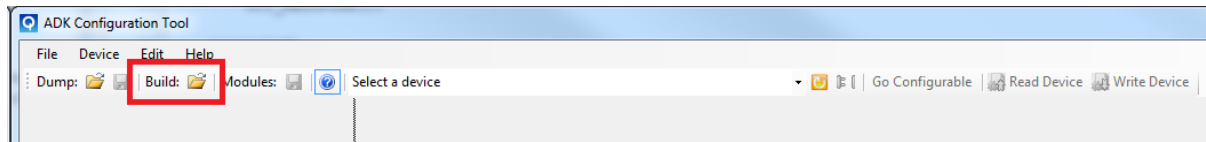


Figure 5-1 The Configuration Tool with Import from build folder

A Browse for Folder dialog appears, see [Figure 5-2](#). Use this dialog to navigate to the Host PC folder containing the ADK Application in development. See [Import a Configuration Set from an ADK Application build folder](#)

Figure 4-2 shows the example of the Source Application.

NOTE The folder selected by the developer must contain a Configuration Set Definitions XML file and a `Config_Definition.c` file for the Configuration Set import to be successful. Both of these files are auto generated during the ADK Application build process.

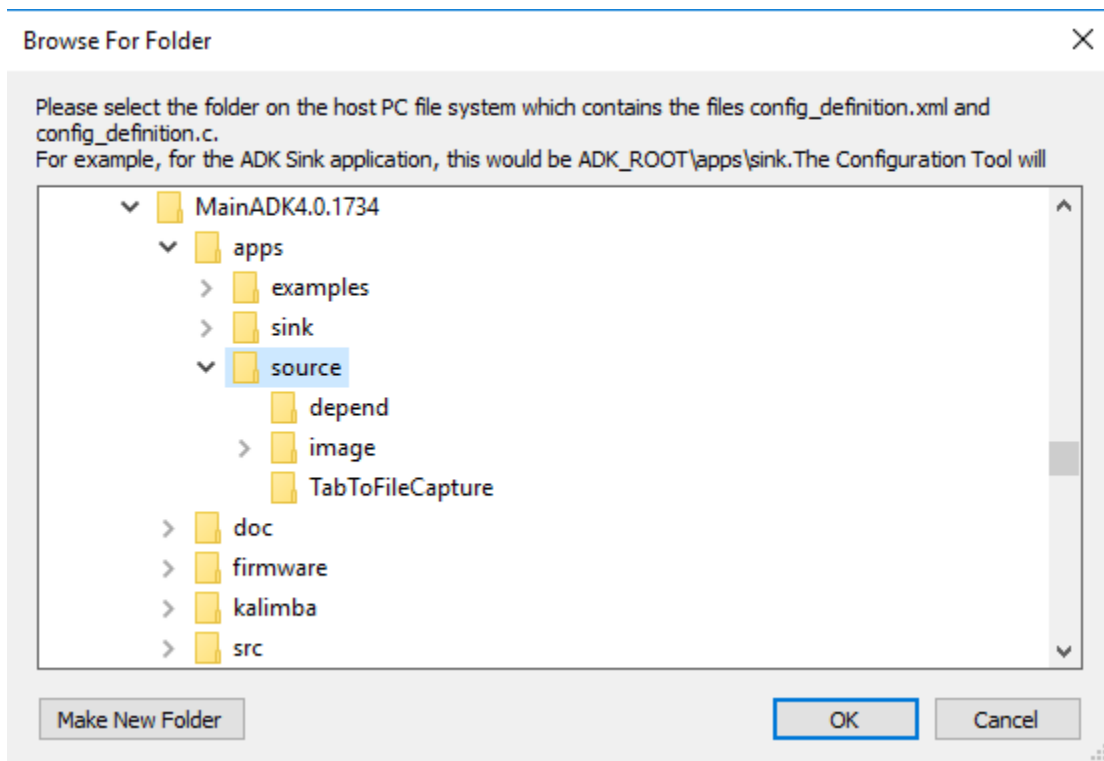


Figure 5-2 Import from build folder – browse for folder dialog

Clicking **OK** imports the Configuration Set from the Application build folder. The GUI is displayed in the same state as when a Configuration Set Dump file has been loaded, see [Figure 5-3](#).

NOTE The Status bar is updated to show the folder from which the Configuration Set was imported.

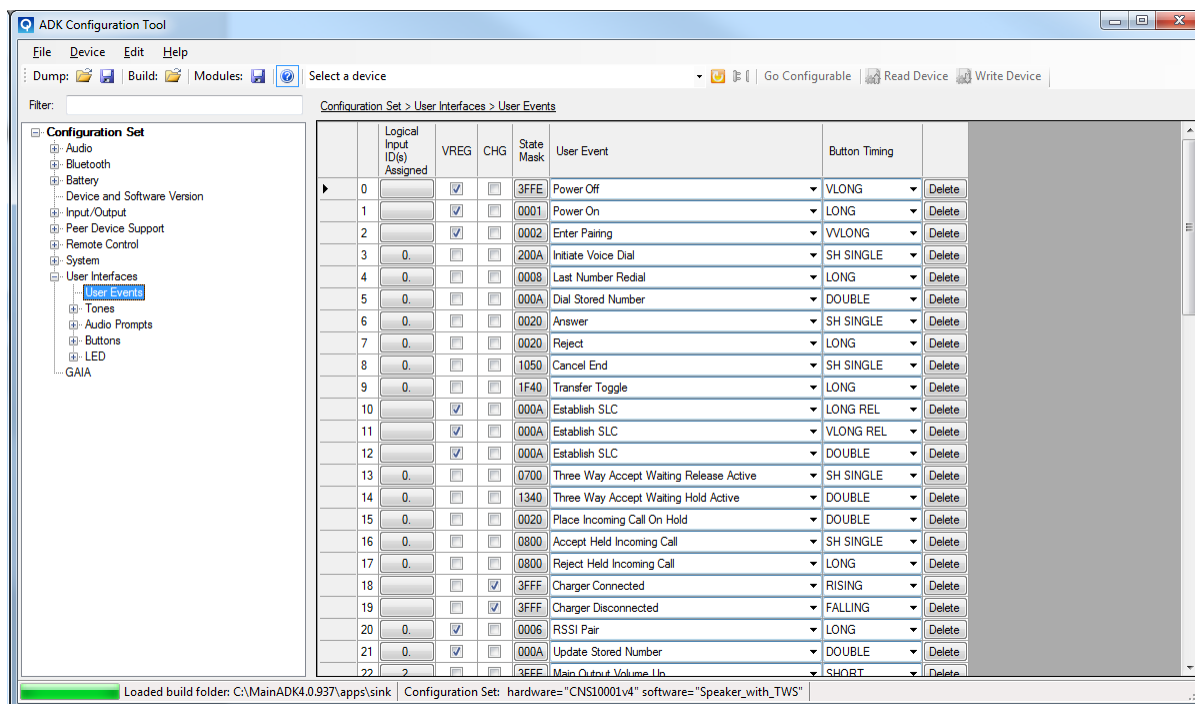


Figure 5-3 The Configuration Tool with Import from build folder completed

5.2 Export a Configuration Set to the Configuration Module definitions files

Any Configuration Set values contained in the Configuration Tool can be exported to a compatible set of Module Configurations in an ADK Applications source folder. This export is achieved by clicking on the **Export to Configuration Modules** icon on the Toolbar, see [Figure 5-4](#).

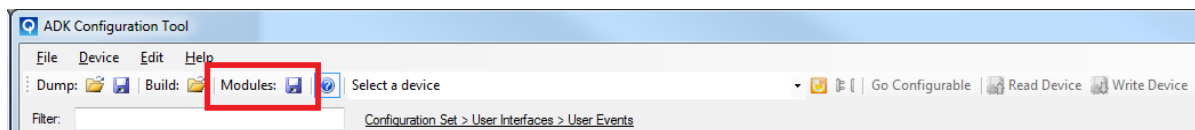


Figure 5-4 The Configuration Tool with Export to Configuration Modules

Clicking on this icon brings up the Export Configuration Set dialog, see [Figure 5-5](#). Exporting to the Configuration Module definition files requires a number of parameters to be provided by the developer,

this dialog is used to enter these parameters. The Configuration Tool stores them for future convenience.

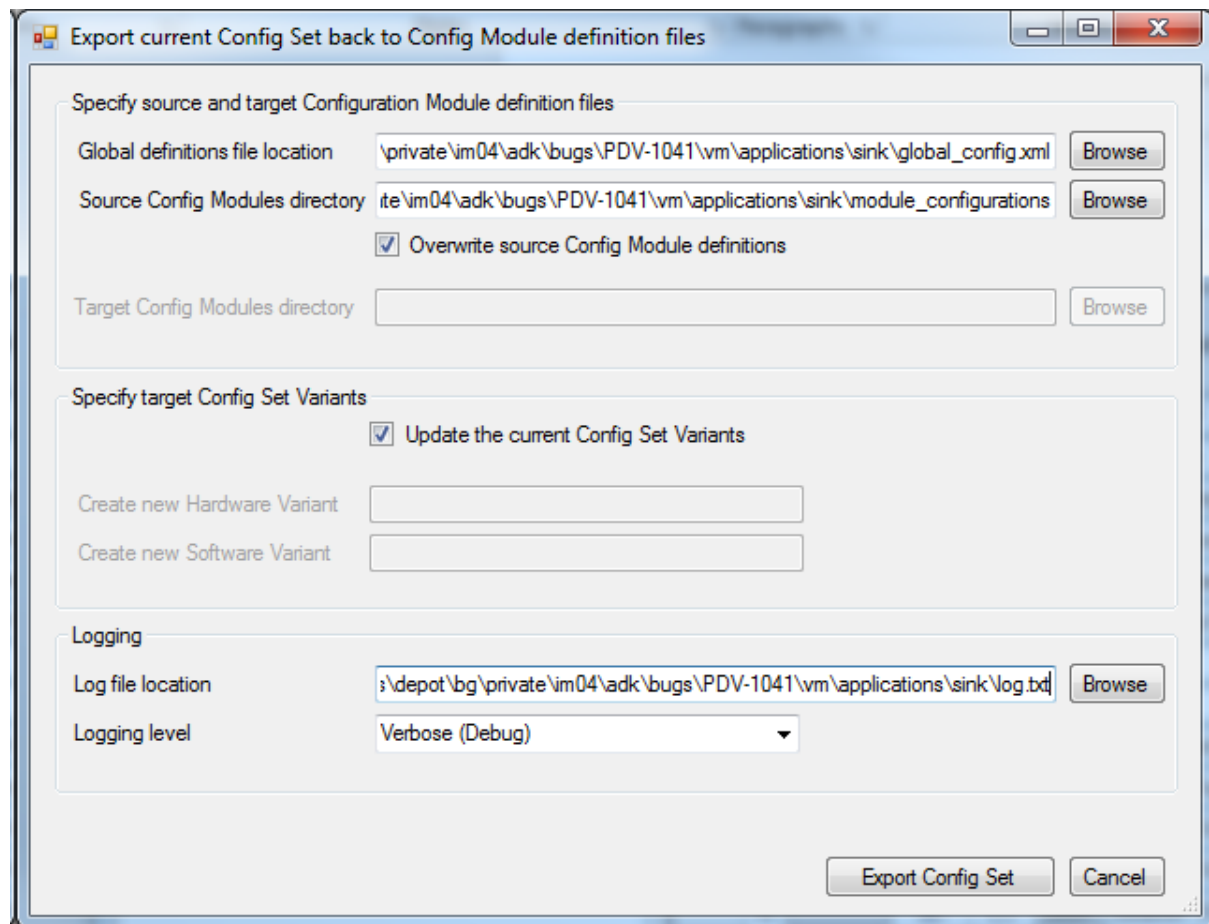


Figure 5-5 The Export Configuration Set Dialog

In the most use cases, where the developer wants to update the Configuration Modules for the same Configuration Set variants as the Configuration Set loaded in the Configuration Tool GUI, the default dialog settings can be populated and those elements of the dialog grayed out by default can be ignored.

To export the Configuration Set, provide the following in the relevant dialog fields:

1. The file path for the `global_config.xml` file for the Application. This is entered in the **Global definitions file location** field.
2. The directory path for the Configuration Module definition files. This is entered where **Source Config Modules directory** field.

NOTE By default the Configuration Tool overwrites the Configuration Module definition files entered. These are considered source code, and should be subject to version control. However, it is also possible to run the export and set the output Configuration Modules to be targeted at a different folder (for example, to enable a directory diff operation to be conducted,). If this is required, uncheck **Overwrite source Config Modules definitions** option and provide a target directory path in the **Target Config Modules directory** field:

3. The file path for the log file which is created by the Configuration Tool during the export process, is entered in the **Log file location** field.
4. The Logging level. Levels for which, are **Critical**, **Error/Warning**, **Information** and **Debug**.

NOTE It is possible to branch a new Configuration Set from an existing Configuration Set. This is done by unchecking **Update the current Config Set Variants** option and specifying the hardware and software variants required for the new Configuration Set metadata. This is not necessary to develop a product with an ADK, but may be useful for developers maintaining several similar Configuration Sets for slightly different hardware targets, for example:

When the dialog is completed, click **Export Config Set** to complete the export. This operation can take 10 seconds to complete. The host PC cursor changes to busy while this operation completes.

6 Configuration Tool controls

The Menu Bar and Toolbar at the top of the GUI window contain all Configuration Tool functionality, while the Status Bar at the bottom of the window is used to confirm the status of the Configuration Set.

6.1 Configuration Tool Menu bar

The Menu bar at the top of the GUI includes four control menus:

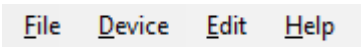


Figure 6-1 The Configuration Tool Menu bar

File menu

[Table 6-1](#) describes the Configuration Tool **File** menu options.

Table 6-1 File menu options

Option	Action
Open File	Loads the Configuration Item settings contained in a previously generated Configuration Set Dump file and displays them in the GUI.
Save File As	Prompts the user to specify a filename and generates a new Configuration Set Dump file using the given name and the Configuration Set values displayed in the GUI. This button is grayed out if the GUI contains the Placeholder Configuration Set definitions. The Save File As button is only available if the ADK Configuration Tool contains valid Configuration Item values in memory.
Exit	Closes the ADK Configuration Tool program. NOTE Exit does not automatically save changes made to values in the Configuration Tool but, before exit is confirmed the Configuration Tool prompts to save the modified Configuration Set, if changes have been made. Unsaved changes are permanently lost.

Device menu

The **Device** menu only permits read or write of configuration values to a device, when it is operating in Configurable AHI mode.

Table 6-2 Device menu options

Option	Action
Read	Loads the current Configuration Set into the Configuration Tool GUI from the connected device.
Write	Writes the [modified] Configuration Set displayed in the Configuration Tool GUI back to the connected device.

Edit menu

[Table 6-3](#) describes the **Edit** menu options.

Table 6-3 Edit menu options

Option	Action
Copy	Copies the selected string from a control onto the Clipboard.
Paste	Pastes the Copied string from the Clipboard into the selected control.

Help menu

The **Help** menu displays the Version and Build Date/Time for the ADK Configuration Tool program.

6.2 Toolbar

The Configuration Toolbar includes five controls:

- Dump File data input/output
- Import/Export Configuration Set from host PC file system
- Help Access
- Device Access
- Device State and input/output functionality for the connected device

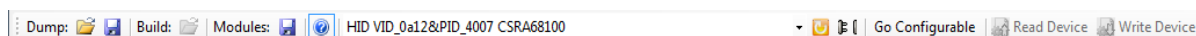




Figure 6-2 The Configuration Toolbar

File Input Output buttons



The **File IO** buttons are active only when a device is connected and the Configuration Set is initialized. This prevents the accidental creation of invalid Configuration Set values, see [Read real Configuration Item values](#).

Table 6-4 Configuration Tool File IO

Button	Action
	Open Configuration Set Dump file Loads the Configuration Item values contained within the selected Configuration Set Dump file into memory and displays them in the GUI.
	Save As Configuration Set Dump Only available if the ADK Configuration Tool contains actual Configuration Item values in memory, otherwise the button is grayed-out. The Configuration Tool prompts for a filename and generates a Configuration Set Dump file, using the chosen name. If the name exists, the Configuration Tool prompts before over-writing existing file data with the new Configuration Item values, displayed in the GUI.

Import/export Configuration Set


Table 6-5 Configuration Tool import/export

Button	Action
Build: 	Import Configuration Set from ADK Application build folder Loads the Configuration Set from the specified ADK build folder on the host PC file system and displays them in the GUI. This item is grayed-out if a device is connected to the Configuration Tool.
Modules: 	Export Configuration Set to Configuration Module definition files Only available if the ADK Configuration Tool contains actual Configuration Item values in memory, otherwise the button is grayed-out. The Configuration Tool presents the Export Config Set dialog. When this is completed the Configuration Tool shall save the Configuration Set contained in the GUI to the Host PC file system as directed by the user.

Help button

Click the **Help** button to toggle Help text on and off. When displayed, Help text is presented in the **Selected Configuration Items** pane, on the right-hand side of the GUI window.

Table 6-6 The Configuration Tool Help button

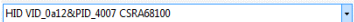


Button	Action
	Help Alternately displays or hides Help information on the GUI screen. Help text is displayed in: <ul style="list-style-type: none"> ■ Basic View: Alongside each individual Configuration Item control ■ As Tool Tip: With Configuration Items displayed in a table (Array View)

Device connection controls

The Device connection controls include:

- **Device List** drop-down menu
- **Refresh Device List** button
- **Disconnect Device** button.

Table 6-7 The Configuration Tool device connection controls

Control	Action
	<p>Device List</p> <p>Displays a list of all connections recognized by the host PC.</p> <p>Click a device name to connect. The selected device name remains in the Device List drop-down control.</p> <p>NOTE The Device List includes all USB to SPI converters attached to the host PC, even if not connected to a device. Any attempt to connect to a converter not connected to a device causes the AHI connection to fail and the Configuration Tool to remain in the disconnected state.</p>
	<p>Refresh Device List</p> <p>Provokes the ADK Configuration Tool to re-scan the host PC, to identify all attached AHI compatible devices.</p> <p>NOTE The ADK Configuration Tool only performs an automatic Device List scan at initial boot-up. Always refresh the Device List immediately after devices are attached or detached from the host PC.</p>
	<p>Disconnect Device</p> <p>Disconnects the attached device from the ADK Configuration Tool.</p> <p>All Configuration Item values are removed and the GUI, which reverts to its initial blank, 'Device Disconnected' screen.</p>

Device AHI mode connected state

Use the **AHI Mode State** button to toggle the selected device between Normal AHI mode and Configurable AHI mode, to modify Configuration Item values.

The **AHI Mode State** button is only active when a device is connected. The button caption changes, depending on the current device mode.

Caption	Action
Go Configurable	Default: Grayed-out when no device is attached
Go Configurable	<p>The Device is connected and working in Normal AHI Mode with the current default Configuration Item values loaded.</p> <p>Able to modify any Configuration Item values loaded in the GUI, locally within the Configuration Tool, but not possible to Read or Write device data.</p> <p>NOTE: A Configuration Set loaded in the Configuration Tool can still be modified, but any changes cannot be written either to a Configuration Set Dump File or a connected Application, until the connected Application is operating in Configurable AHI Mode, see Section 3.5.2.</p>
Working	<p>The device is transitioning between modes.</p> <p>No input is possible, the Spinning Wheel (busy) cursor is displayed until transition is complete</p>
Go Normal	<p>The Device is connected and working in Configurable AHI Mode with the current default Configuration Item values loaded.</p> <p>It is possible to Read, modify or Write actual device Configuration Item values directly back to the device, see Section 3.5.1, or to an appropriate Dump file, see Chapter 4.</p>



Connected Device IO buttons

The connected device **Read** or **Write** IO buttons operate on real device configuration values.

It is only possible to read or write real Configuration Item values when the device is operating in Configurable AHI Mode, the buttons are grayed-out and unavailable if:

- No device is connected
- The connected device is operating in Normal AHI Mode

Table 6-8 The Configuration Tool Connected Device I/O buttons

Control	Action
 Read Device	<p>Read Device</p> <p>Loads the current Configuration Item values from the connected device into the Configuration Tool memory and displays the values in the GUI.</p>
 Write Device	<p>Write Device</p> <p>Writes the current (modified) Configuration Item values held in the Configuration Tool memory and GUI directly back to the connected device.</p> <p>NOTE This button is only available if the ADK Configuration Tool contains valid Configuration Item values in memory and is initialized.</p>

Document references

Document	Reference
<i>Assigned Numbers</i>	Documented on www.bluetooth.org website
<i>Bluetooth Specification v2.1 + EDR</i>	Core Package, 26 July 2007
<i>ADK Source Configuration PS Key Bit Fields</i>	80-CT424-1/CS-00236873-AN
<i>PSTool User Guide</i>	80-CT424-1/CS-00101505-UG
<i>RSSI Inquiry</i>	CS-00127323-AN
<i>USB Configuration</i>	CS-00217572-AN

Terms and definitions

Term	Definition
A2DP	Advanced Audio Distribution Profile
AAC	Advanced Audio Coding
ADK	Audio or Application Development Kit
ADPCM	Adaptive Differential Pulse Code Modulation
AVRCP	Audio/Video Remote Control Profile
BlueCore	Group term for the range of QTIL Bluetooth wireless technology ICs
Bluetooth SIG	Bluetooth Special Interest Group
Bluetooth	Set of technologies providing audio and data transfer over short-range radio connections
CSR	Cambridge Silicon Radio
DSP	Digital Signal Processor
EDR	Enhanced Data Rate
GUI	Graphical User Interface
HFP	Hands Free Profile
I ² S	Inter- Integrated Circuit Sound
IC	Integrated Circuit
ID	Identifier
LATM	Low-overhead MPEG-4 Audio Transport Multiplex
LED	Light Emitting Diode
PBAP	Phonebook Access Profile
PC	Personal Computer
PIO	Programmable Input/Output
PS	Persistent Store
QTIL	Qualcomm Technologies International, Ltd.
SPI	Serial Peripheral Interface
UI	User Interface
USB	Universal Serial Bus
xIDE	The QTIL Integrated Development Environment
XML	Extensible Markup Language, a general-purpose specification for creating custom markup