

Arm® Control Tool v3.5.4 Release Note

Version r0p1-00eac0 / Revision r0p1

29 March 2019

Release Note – Arm® Control Tool v3.5.4 r0p1-00eac0

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LES-PRE-20348

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1 Product deliverables

1.1 Product release status

This is the Early Access (EAC) release of the Arm® Control Tool Software.

Early Access release status has a particular meaning to Arm of which the recipient must be aware. It should be noted that Support for the Early Access release of the deliverable will only be provided by Arm to a recipient who has a current support and maintenance contract for the deliverable. Significant additional verification has been completed on complex products as planned. However, there remain some elements of uncertainty, which cannot finally be validated until the deliverable has been successfully deployed by Partners. Accordingly, the recipient of a deliverable with Early Access (EAC) status may be directly contributing to the final stage of validation of that deliverable. Partners may enter at-risk production with IP at EAC status. In due course, the product deliverables will be released at Full Release (REL) status after final IP and silicon verification/validation is completed. There is still errata risk on complex products. Arm recommends volume production with IP at REL status.

1.2 About the Arm® Control Tool software

Arm ISP and ISP Driver have many settings that can be controlled, observed, and tuned before a final product is ready for production. It is very important to understand and monitor what is going on in the system and to have a way to change the state and save it for future reuse.

The Control Tool (ISP CT) is a standalone user-space application which provides a fast and reliable means for communication with Arm ISP and ISP Driver in real-time. The Control Tool is supported on the following platforms:

- Linux x86_64 (x86_64-linux-gnu)
- Windows (x86_64-win32)
- Windows (i686-win32)
- MIPS Linux (mips-linux)
- Linux on ARM

It is assumed that the reader of this document is familiar with the Arm ISP. If not please read the corresponding documentation prior to reading this document.

This document corresponds to Control Tool version 3.5.1.

1.3 About the Arm® Control Tool release note

This release note contains information about the usage, limitations and quality status of the accompanying deliverables. The tables in section 1.3.1 and 1.3.2 list the Arm part numbers for the individual deliverables included in the release of this Arm product. The deliverables, including this release note, are provided under their individual part numbers of the format IV009-xx-nnnnn-r0p1-00eac0. These deliverables are released together as a single deliverables bundle, IV009-BU-70041-r0p1-00eac0.

The files are delivered through Arm's IP delivery server (<http://connect.arm.com>). Most parts are grouped into a bundle for ease of unpacking into the working directory structure. Some parts are delivered individually for ease of maintenance and more frequent updates.

1.3.1 Technical Documentation

Part Number	Description	Format	Revision
IV009-DC-06003	Arm Control Tool Software Release Note (this document). Document number: ARM-EPM- 137800	PDF	r0p1-00eac0
IV009-DC-10002	Arm Control Tool User Guide. Document number: ARM-EPM-137445	PDF	r0p1-00eac0

1.3.2 Software

Part Number	Description	Version
IV009-SW-70041	Arm Control Tool	r0p1-00eac0

2 Installation

Intellectual Property (IP) deliverables are delivered as one or more .tgz files. The Control Tool 3.5.1 Software is made available as open source bundle in a .tgz file.

Installation involves:

- Unpacking the deliverables
- Copying all parts to your working area
- Building the Control Tool
- Running the Control Tool

Additional information may also be available in the release email notification from Arm.

2.1 Unpacking the deliverables

To unpack the deliverable:

Use the GNU `tar` utility to unpack it with the following Unix command:

```
% tar -xzf arm-download-<transaction_id>.tgz
```

For each download from the Arm Connect IP Delivery Server, the following two extra files are created:

- `ARM_DELIVERY_<transaction_id>.TXT`
- `ARM_MANIFEST_<transaction_id>.TXT`

where `<transaction_id>` is a unique delivery number. These files should be used to view the contents (parts or files) of the delivery or to investigate possible download corruption problems.

- **`ARM_DELIVERY_<transaction_id>.TXT`** lists the downloaded parts and the constituent parts of any downloaded bundle.
- **`ARM_MANIFEST_<transaction_id>.TXT`** contains a manifest of all the files included in the transaction, together with their checksums. The checksums provided are calculated using the RSA Data Security, Inc. MD5 Message-Digest Algorithm. The checksums can be used to verify the integrity of the data using the `md5sum` tool (and is part of the GNU `textutils` package) by running (in Unix):

```
% md5sum --check ARM_MANIFEST_<transaction_id>.TXT
```


2.1.1 Directory structure

Unpacking the deliverable creates the following directory structure on the target machine:

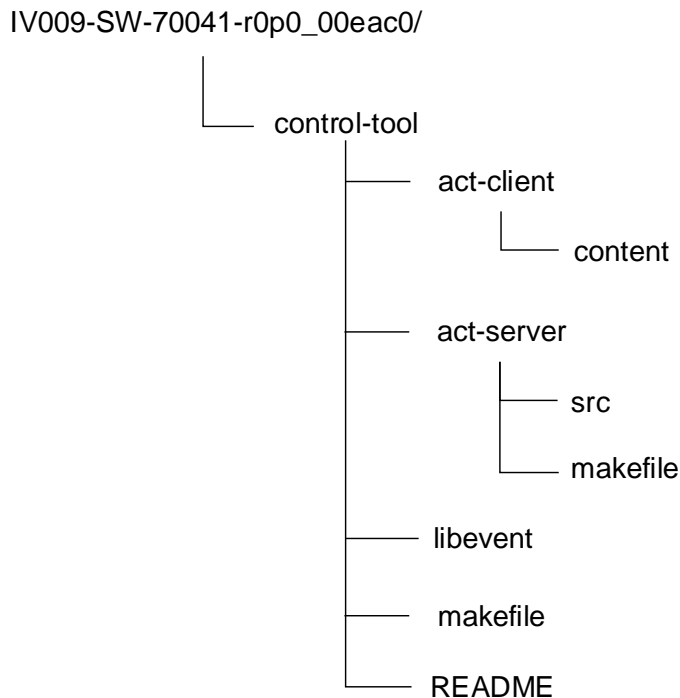


Figure 1. The Arm Control Tool source distribution directory structure

2.2 Copying all parts to your working area

After unpacking the deliverables using GNU gtar, each bundle or separate deliverable will be contained in its own directory for example:

```
IV009-BU-70041-r0p1-00eac0/
```

Copy the contents of each supplied deliverable into your working area so that it appears at the same directory level as shown in [Figure 1](#).

The following example assumes a working area top level directory called `Arm Control Tool Software_sw_r0p1-00eac0`:

```
% cp -R <download>/ IV009-SW-70041-r0p1-00eac0/* Arm Control Tool Software/
```

2.3 Building the Control Tool

The Control Tool can be built or compiled for the host system using native system compiler or for a target system using a compiler toolchain. Both the processes are described in this section.

2.3.1 Prerequisites

Before you build or compile the Control Tool, ensure that the following prerequisites are met:

- The build process requires a Linux system setup with C++ compiler or compiler tool chain for the target system.
- The Control Tool links statically to the standard C++ library (libstdc++). The build process requires that static standard C++ library (libstdc++.a) is installed on the build system for the compiler or compiler toolchain

2.3.2 Building/compiling using the native system compiler

To build the Control Tool software for the host system using native system compiler, navigate to the `IV009-SW-70041-r0p1-00eac0/control-tool` directory and execute the following command:

```
% make
```

The resulting software can be found in `IV009-SW-70041-r0p1-00eac0/control-tool/act-server/build` directory. The build directory structure is shown in [Figure 2](#).

2.3.3 Building/compiling using the compiler toolchain

To build the Control Tool software for a target system using a compiler toolchain, navigate to the `IV009-SW-70041-r0p1-00eac0/control-tool` directory and execute the following command:

```
% make TOOLCHAIN=</Path/To/Toolchain> TRIPLET=<Target-Triplet>
```

Where:

`Path/To/ToolChain` – is the path to the directory containing the bin directory of the target toolchain.

`Target-Triplet` – is the prefix of the target toolchain binaries.

The following optional parameters may be specified in the command line while running make:

- CFLAGS=<C_Compiler_Flags>
- CXXFLAGS=<C++_Compiler_Flags>
- LDFLAGS=<Linker_Flags>

The resulting binary and associated files can be found in the following directory:

IV009-SW-70041-r0p1-00eac0/control-tool/act-server/build

2.3.4 Build directory

The build process creates the following directory structure:

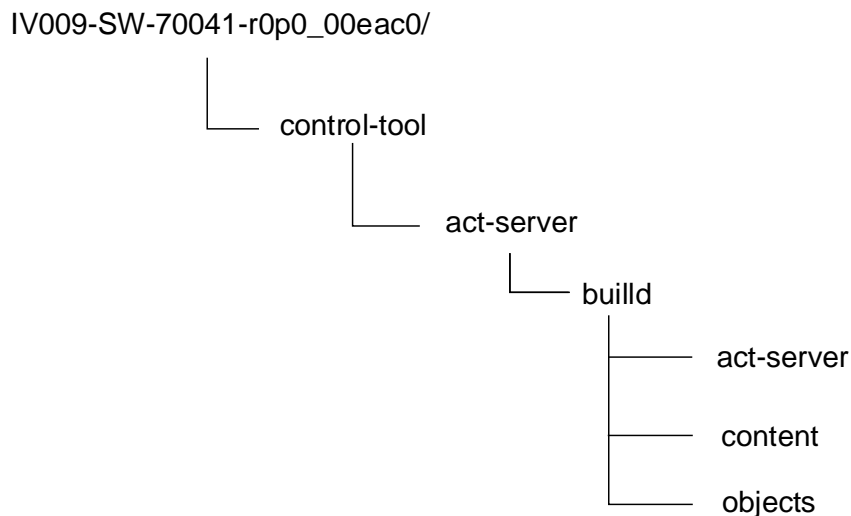


Figure 2. The Arm Control Tool build directory structure

Note: This is a simplified view of the directory structure. Some directories are not shown to aid clarity.

2.4 Running the Control Tool

The Control Tool can be run by executing the following command at the terminal:

```
% ./act-server { parameters }
```

Refer to the Control Tool User Guide for information on parameters and other configuration options supported by `./act-server`.

3 Known limitations of this release

The design includes all functionality in-line with the specification and has been assessed by Arm to be at EAC quality status.

4 Revision history

Date	Issue	Confidentiality	Change description
16/01/2018	LAC	Confidential	Initial Release
23/03/2018	EAC	Confidential	Final Release
29/03/2019	EAC	Confidential	YUV Conversion support