MMWAVE MCUPLUS SDK Release Notes

Product Release 4.6.1.2

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Release Notes Version: 1.0

CONTENTS

1. Introduction

The mmWave mcuplus SDK enables the development of millimeter wave (mmWave) radar applications using TI mmWave sensors (see list of supported Platform/Devices). The SDK provides foundational components which will facilitate end users to focus on their applications. In addition, it provides few demo applications which will serve as a guide for integrating the SDK into end-user mmWave application. See what SDK components are supported by each device in the Device-Specific Support section.

Key mmWave SDK features:

- Building blocks
  - Layered approach to programming analog front end
- Demonstrations and examples
  - FreeRTOS based
  - Out of box demo with easy configurability via TI cloud based GUI
  - Representation of "point cloud" and benchmarking data from demo via GUI
  - Profiles tuned to common end user scenarios such as Range, Range resolution, Velocity, Velocity resolution.
- Documentation

mmWave SDK works along with the following external tools:

- Host tools including Pin Mux, Flashing utilities
- Code Composer Studio™ IDE for RTOS development

> ⚠️ **NOTICE** : This software product is used to configure TI's mmWave devices, including RF emissions parameters for such devices. Note that many countries or regions impose regulations governing RF emissions. Users are responsible for understanding local RF emission regulations and operating the product within those regulations.

2. Release overview

2.1. What is new

- Support for devices mentioned in the Platform and Device Support section
- See what SDK components are supported by each device in the Device-Specific Support section
- New features can be found in New Features section.
- Tools update

2.2. Platform and Device Support

The devices and platforms supported with this release include:

Supported Devices	Supported EVM
AM273X ES1.0	AM273X EVM
AWR2243 ES1.1	AWR2243BOOST
AWR294X ES2.0	AWR294X EVM
AWR2544 ES1.0	AWR2544 EVM
AWR2944LC	AWR294X EVM

> ⚠️ **Silicon versions other than the ones in the table above are not supported.**

> ⚠️ This release of mmWave mcuplus SDK supports the foundation components for the devices mentioned in the table above. At system level, the mmWave SOC/EVM may interface with other TI ecosystem SOCs/Launchpads/EVMs and software for these other devices will not be a part of the mmWave mcuplus SDK foundation components.

2.3. Component versions

Components inside mmwave_mcuplus_sdk that have their own versions are shown below.

Component	Version	Type	Comment
mmwave sdk	4.6.1.2	Source and Binary	Overall package release version

2.4. Tools dependency

For building and using mmwave sdk the following tool versions are needed.

Tool	Version	Download link
CCS	12.7	Download Link
MCU PLUS SDK (AM273X)[1]	09.02.00.52	Included in mmwave mcuplus sdk installer
MCU PLUS SDK (AWR294X / AWR2944LC)[1]	09.02.00.15	Included in mmwave mcuplus sdk installer
MCU PLUS SDK (AWR2544)[1, 2]	09.01.00.05	Included in mmwave mcuplus sdk installer
SYSCONFIG	1.20.0	Download Link (Need to be installed separately).
TI ARM CLANG	3.2.2.LTS	Installed with CCS12.7 installer
TI CGT compiler	8.3.12	Installed with CCS12.7 installer
XDC	3.62.01.16	Installed with CCS12.7 installer
C66x DSPLIB	3.4.0.0	Included in mmwave mcuplussdk installer
C66x MATHLIB (little-endian, elf/coff format)	3.1.2.1	Included in mmwave mcuplussdk installer
mmWave Device Firmware Package (DFP - AWR2243 ES1.1)	02.02.04.00	Included in mmwave mcuplus sdk installer (includes RSS firmware and mmwavelink library)
mmWave Device Firmware Package (DFP - AWR2544 / AWR294X / AWR2944LC)	02.04.14.00	Included in mmwave mcuplus sdk installer (includes RSS firmware and mmwavelink library) **RadarSS Firmware Patch md5sum:** xwr29xx_radarss_metarprc.bin 58e8248729d0465563c75e2fbc5c41ff xwr25xx_radarss_metarprc.bin 9139f88c9f8ee3eca7a71add370a241c
OpenSSL (optional)	1.1.1 or above	Needed for signing secondary bootloader image, required only if you want to build the SBL dependency images from scratch
TI Emulators package	Latest	Upgrade to the latest using CCS update process (Contact TI Representative for latest version)
Pinmux tool (optional)	Latest	Contact TI Representative for latest tool
Doxygen (optional)	1.8.11	Only needed if regenerating doxygen docs
Graphviz (optional)	2.36.0 (20140111.2315)	Only needed if regenerating doxygen docs

[1] To re-build driver level example applications, SysConfig is expected to be installed at "C:\ti\" in Windows and at "\home\ti\" in Linux machine.

[2] To re-build libraries / examples of mcu_plus_sdk_awr2544_<ver>, use TI CLANG complier version 3.2.1.LTS.

> ⚠️ **AWR2944LC Support**
>
> - CCS Support:
>   - CCS 12.7 version does not detect AWR2944LC by default.
>   - Steps to follow:
>   - Download CSP from AWR2944LC CSP Link and unzip it.
>   - Copy common\targetdb\devices\awr2944LC.xml file into ccs_<version>\ccs_base\common\targetdb\devices.
>   - Update the timestamp (<yyyyy><mm><dd><hr><min><sec> format) present at ccs_<version>\ccs_base\common\targetdb\timestamp to successfully import the example CCS project of the new device
>   - CCS installed SysConfig does not support AWR2944LC device by default. Copy "devices.json" file and "AWR2944LC" folder available at: mmwave_mcuplus_sdk_<version>/mmwave_mcuplus_sdk_<version>/tools /sysconfig_awr2944LC/ to C:/ti/ccs1270/ccs/utils/sysconfig_<version>
>   - Restart the CCS.
> - Note that mcu_plus_sdk_awr294x_<version> is common for both AWR294x and AWR2944LC. For differences between AWR2944 and AWR2944LC, refer device datasheet or section 3.1.2.1 in SDK user guide (mmwave_mcuplus_sdk_<ver> /mmwave_mcuplus_sdk_<ver>/docs/mmwave_mcuplus_sdk_user_guide.pdf).
> - SysConfig Support
>   - Currently, latest released SysConfig tool does not support AWR2944LC device. For SysConfig tool to recognize AWR2944LC device and successfully build applications, follow below steps after mmwave_mcuplus_sdk installation is complete:
>   - Copy "devices.json" file and "AWR2944LC" folder available at: mmwave_mcuplus_sdk_<version> /mmwave_mcuplus_sdk_<version>/tools/sysconfig_awr2944LC/ to SYSCFG_PATH/sysconfig_<version>/dist /deviceData to build applications in mmwave_mcuplus_sdk_<version> and mcu_plus_sdk_awr294x_<version>.

The following tools are needed at runtime

Runtime tool	Version	Link
mmWave Demo Visualizer (AWR2544) Supported for AWR2544	Latest	Flashing, configuring mmWave sensors and visualizing the 1D FFT data generated by the mmWave SDK demo. https://www.ti.com/tool/download/MMWAVE-MCUPLUS-SDK User Guide: mmwave_mcuplus_sdk_<ver>/mmwave_mcuplus_sdk_<ver>/docs/ mmWave_Demo_Visualizer_UserGuide.pdf
mmWave Demo Visualizer Supported for AWR294X, AM273X, AWR2944LC.	Latest	TI Gallery APP for configuring mmWave sensors and visualizing the point cloud objects generated by the mmWave SDK demo. https://dev.ti.com/gallery/view/mmwave/mmWave_Demo_Visualizer/

2.5. Licensing

Please refer to the mmwave_mcuplus_sdk_software_manifest.html, which outlines the licensing status for mmwave_mcuplus_sdk package.

3. Release content

3.1. Change Summary

This table lists the new features and fixes done in this release.

Feature	Module	Device
Out of Box (OOB) demo executing on R5F and M4 core at 20 fps.	OOB Demo	AWR2944LC
DDMA Datapath Units (DPUs) and Datapath Chain (DPC) execution support for M4 core.	Datapath	AWR2944LC
Doppler DPU optimizations to meet the performance with DPC executing on M4 core. • Max sub-band computation on HWA. • DDMA demodulation on HWA with band-wise transpose using EDMA. • Merge two operations (abs-log and sumRx) to single (abs-log-sumRx) using HWA statistics block.	Datapath	AWR2944LC
Decompression optimization to group outer blocks together for less than 8 range bins per compressed block.	Datapath	AWR2944LC / AWR294x / AM273x
Faster range processing option to increase the maximum measurable velocity – configurable via CLI.	Datapath	AWR2944LC / AWR294x / AM273x

Elevation Angle Estimation (AoA) on R5F core.	Datapath	AWR2944LC
Different antenna geometry patterns support – configurable via CLI.	Datapath	AWR2944LC / AWR294x
Compile-time option to limit the detected objects per range bin to a set number - allowing detection at far range.	Datapath	AWR2944LC / AWR294x / AM273x
DPM layer replaced with simpler IPC layer for inter-core communication.	OOB Demo	AWR2944LC
LVDS streaming of raw ADC data.	OOB Demo	AWR2944LC
PMIC read-write example.	PMIC	AWR294X
NoRTOS support for M4 core.	DPL	AWR2944LC
HWA, EDMA and IPC drivers / examples to support execution on M4.	Driver	AWR2944LC
SBL example to boot, initialize and load the appimage.	SBL	AWR2944LC
Enabled TSN stack libraries.	Ethernet and Networking	AWR294x
Multi-time domain gPTP (IEEE 802.1AS) example.	Ethernet and Networking	AWR294x
SBL over CAN example.	SBL	AWR294x / AWR2944LC
LwIP stack is upgraded to 2.2.0 version.	Ethernet and Networking	AWR294x
EDMA example to transfer between different memories.	Driver	AWR294x
MCAN external read-write example.	Driver	AWR294x
Renamed Enet loopback example to enet_cpsw_loopback.	Ethernet and Networking	AWR294x
R5F interrupt profiling support and example.	DPL	AWR294X
DTHE AES CTR, CFB, Streaming examples.	Security	AWR294x
Default profile configurations updated to reflect recommended RF_GAIN_TARGET as per DFP ICD	OOB	AWR294x, AWR2944LC AWR2544, AM273x+AWR2243

3.2. Migration notes from Previous SDK versions

This section describes the changes that are relevant for users migrating to mmWave mcuplus SDK 4.6.1.x release from previous release.

Summary	Component(s)	Sub-component(s)	Affected SoC	Affected SDK Version	Behavior of impact
Enabling Host Receive Timestamp is supported in SysConfig generation, but this feature needs to be disabled for all the Enet examples due to CPSW IP limitation (Corruption with Host Timestamps enabled causes CPSW Port Lockup).	Enet	Enet Examples	AWR294X	4.6.0.1	Example syscfg update

To disable this feature, uncheck 'Enable Host Receive Timestamp' under CPTS Configuration in example syscfg-gui. |
SysConfig tool is not part of SDK package.	Tools	SysConfig	AWR294X / AM273X / AWR2544	4.6.0.1	Install SysConfig from TI.com at "C:/ti" location for Windows and "/home/ti" for Linux machine.
Pre-built examples are not part of the released package.	Pre-built binaries	Examples	AWR294X / AM273X / AWR2544	4.6.0.1	User need to build the respective examples by following instructions in user guide.
ddmPhaseShiftAntOrder CLI to configure DDM phase shifters.	Demo (DDM)	CLI	AWR294X	4.6.0.1	Mandatory CLI. For details, refer SDK User guide.
antGeometryCfg CLI to configure the antenna pattern.	Demo (DDM)	CLI	AWR294X	4.6.0.1	Mandatory CLI. For details, refer SDK User guide.
fastRangeProcCfg CLI to enable faster range processing.	Demo (DDM)	CLI	AWR294X / AM273X	4.6.0.1	Optional CLI. For details, refer SDK User guide.

3.3. Known Issues

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3.3.1. mmWave Suite/Demos Known Issues

The following issues are known at the time of this release.

Issue Type	Key	Summary	Platform	Comments
Bug	MMWSDK-3307	M4 Example Applications: Debug build does not work.	AWR2944LC	Workaround: Check release build applications for testing functionality.
Bug	MMWSDK-3312	In debug build, the debug log for floating point variable is not printed properly on Cortex M4 core.	AWR2944LC	The variable takes correct float value although it is not printed correctly on CCS console/debug log.
Bug	MMWSDK-3283	Enet scatter-gather phy loopback example is not working in release build.	AWR294x	Workaround: Use debug build for phy loopback.
Bug	MMWSDK-3169	BSS Logger enabled OOB not working when flashed	AWR2544	Workaround: 1. Flash CCS Debug image 2. Load BSS Logger enabled OOB executable through CCS
Bug	MMWSDK-3069	Run time calibration is disabled. This is done because bookkeeping registers (frame count, chirp count) get updated possibly due to calibration chirps.	AWR2544	This update in bookkeeping registers results in wrong Ethernet packet header value.
Bug	MMWSDK-2475	minmaxFlag in aoaproc test case is not enabled	AWR294x	The same functionality has been tested in the objectdetection test case
Bug	MMWSDK-2560	sensorStart does not work immediately after issuing sensorStop	AWR294x	Workaround: The profile can be loaded again from the "Load Config from PC and Send" button of the visualizer without having to restart the demo.
Bug	MMWSDK-2972	IPC communication between the MCAL CDD IPC (R5F) and MCU+SDK IPC (DSP) does not work due to the differences IPC messaging.	AWR294x	PDK uses mailbox driver which is compatible with MCAL CDD IPC. As part of the migration to MCU Plus SDK mailbox driver is merged to IPC driver which is not compatible with MCAL CDD IPC driver.

3.3.2. Limitations

3.3.2.1. mmWave Suite/Demos Limitations

Some of these limitations are captured in the "known issues" list shown in previous section.

Sl No	Limitation	Platform	Workaround
1	Uniflash GUI Tool cannot be used for flashing AWR2944LC and AWR2544 device.	AWR2944LC / AWR2544	Use the python script for flashing SBL and appimage.
2	No synchronization between HWA populated Radar cube and CPSW transferring 1D-FFT Data.	AWR2544	Triggering of first CPSW transfer is configurable via procChain CLI.
3	Simultaneous LVDS raw data transfer and 1d-FFT data on ethernet interface does not work for few profile configurations. This is because LVDS transfer needs longer chirp idle time while Ethernet transfers data at 1Gbps.	AWR2544	Configure Per-ADPLL to higher rate.
4	ADC data transfer rate is limited by HSI Clock configured in SDK (1000MHz which is 500 Mbps); ensure the generated data per chirp can be transferred within chirp idle time.	AWR2544	Ensure that Chirp idle time > ADC data per chirp / 500 Mbps where ADC data per chirp = Number of ADC samples * Number of Rx * 16 bits.
5	Ethernet data capture and validation is supported only on Linux PC.	AWR2544	No workaround.
6	Ethernet Streaming for DDM demo is not available.	AWR294x	No workaround.
7	CQ Data streaming for AWR294x is not tested as the OOB doesn't support continuous mode.	AWR294x / AWR2944LC	No workaround.
8	In DDM Chain, point cloud data of only limited number of objects can be exported due to UART baudrate constraints.	AWR294x / AWR2944LC	To transmit more objects, decrease the fps.

4. Test reports

Results of the unit tests can be found in the mmwave_mcuplus_sdk_<ver>/ti/docs/testlogs folder.

5. Installation instructions

mmwave_mcuplus_sdk installer is available as a Windows Installer and a Linux installer.

- **mmwave_mcuplus_sdk_<version>-Windows-x86-Install.exe: Windows installer verified on Windows 10 machines**
- **mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin: Linux installer verified on Ubuntu 18.04 64 bit machines.**

5.1. Installation in GUI mode

Depending on your development environment run the appropriate installer

- In Windows environment, double clicking the Windows installer from Windows explorer should start the installation process
- If in Linux environment,
  - On 64-bit machines: Since mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin is a 32-bit executable, install modules that allows Linux 32bit binaries to execute: "sudo dpkg --add-architecture i386"
  - Enable execute permission for the Linux installer by running "chmod +x mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin" command
  - Run the installer using "./mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin" command
  - On 64-bit machines if the GUI does not show up you may need to install additional packages: "sudo apt-get install libc6:i386 libgtk2. 0-0:i386 libxtst6:i386"

Installation steps:

- Choose Destination Location: Select the folder to install (default is c:\ti\mmwave_mcuplus_sdk_<version> on windows and ~/ti /mmwave_mcuplus_sdk_<version> on linux). The installation folder selected should not have spaces in its full path.
- Select Components: The installer includes all the tools needed for building the mmWave mcuplus SDK. You should see a screen like below (except that each component will also have version information appended). The only reason to deselect a tool is if the exact tool version is already installed in the destination folder.
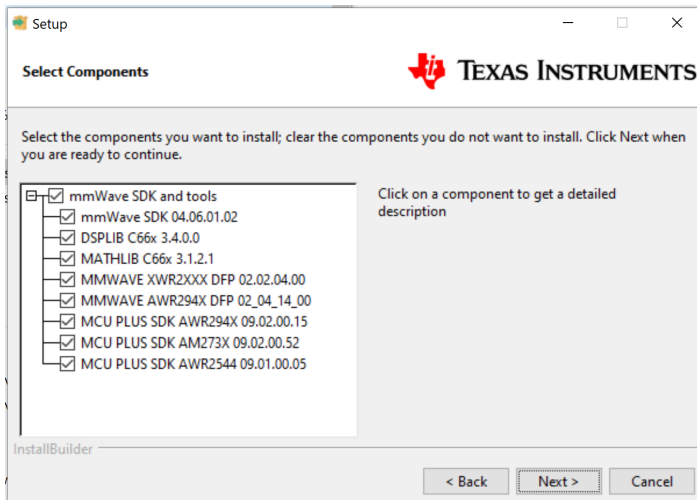
- Review installation decisions
- Ready to install
- Once installation starts all the selected components will be installed (if a component with the same version exists in the destination folder it will be overwritten)
- Installation complete

5.2. Installation in unattended command line mode

The installers can be run in command line mode without user intervention

- In Windows environment
  - Run the installer using "mmwave_mcuplus_sdk_<version>-Windows-x86-Install.exe --prefix <installation folder> --mode unattended" command. This will install all the components in the installer.
    - Please note that even though the command may finish immediately it takes sometime for all the folders to show up in the destination folder (double check if you have the folder structure in "Post Installation" section before proceeding)
    - For command line help including information about selective installation of components run the following command "mmwave_mcuplus_sdk_<version>-Windows-x86-Install.exe --help"
- In Linux environment:
  - On 64-bit machines: Since mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin is a 32-bit executable, install modules that allows Linux 32bit binaries to execute: "sudo dpkg --add-architecture i386"
  - Enable execute permission for the Linux installer by running "chmod +x mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin" command
  - Run the installer using "./mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin --prefix <installation folder> --mode unattended" command. This will install all the components in the installer.
    - For command line help including information about selective installation of components run the following command ". /mmwave_mcuplus_sdk_<version>-Linux-x86-Install.bin --help

5.3. Post Installation

After the installation is complete the following folder structure is expected in the installation folder (except that each component will have appropriate version number in place of the VERSION placeholder shown below)

dsplib_c66x_[ver]	6/14/2024 2:27 PM	File folder
mathlib_c66x_[ver]	6/14/2024 2:27 PM	File folder
mcu_plus_sdk_am273x_[ver]	6/14/2024 2:37 PM	File folder
mcu_plus_sdk_awr294x_[ver]	6/14/2024 2:37 PM	File folder
mcu_plus_sdk_awr2544_[ver]	6/14/2024 2:37 PM	File folder
mmwave_dfp_02_02_[ver]	6/14/2024 2:37 PM	File folder
mmwave_dfp_02_04_[ver]	6/14/2024 2:37 PM	File folder
mmwave_mcuplus_sdk_[ver]	6/14/2024 2:37 PM	File folder

Under the mmwave_mcuplus_sdk <ver> folder you should have the following directory structure.

```
∨  mmwave_mcuplus_sdk_[ver]
   >  .metadata
   >  docs
   ∨  scripts
         unix
         windows
   ∨  ti
      >  alg
         board
         common
      >  control
      >  datapath
      >  demo
      >  platform
      >  utils
      >  tools
```

6. Device-Specific Support

The current release of mmwave SDK contains support for the following components

Component		AM273X EVM + AWR2243BOOST	AWR294X EVM	AWR2544 EVM	AWR2944LC EVM
Control	Datapath Manager (dpm)	X	X		
	mmwave High Level API (mmwave)	X	X	X	X
Datapath	RangeProc DPU	X	X		
	RangeProc DDMA DPU	X (C66 Only)	X (C66 Only)		X (M4 Only)
	RangeprocReal2x DPU			X	
	Doppler DPU	X	X		
	Doppler DDMA DPU	X (C66 Only)	X (C66 Only)		X (M4 Only)
	CFAR DPU	X	X		
	RangecfarProc DDMA DPU	X (C66 Only)	X (C66 Only)		X (M4 Only)
	AoA DPU	X	X		

	Datapath EDMA	X	X	X	X
	Object Detection DPC	X	X		
	Object Detection DDMA DPC	X (C66 Only)	X (C66 Only)		X
Alg	mmwavelib	X	X	X	
	Group Tracking (gtrack)	X	X		
Utilities	Command Line Interface (CLI)	X	X	X	X
	CBUFF Streaming + HSI header		X	X	X
	Mailbox driver test		X	X	
	MSS VMON self-test		X	X	
	Math Utilities (mathutils)	X	X	X	X
	Test Logger (testlogger)	X	X	X	
	CCS Debug Utility (ccsdebug)	X	X	X	X
Tools	Binaries for appimage flashing	X	X	X	X
Demo	OOB Demo TDM	X	X	X	
	OOB Demo DDM	X	X	X	X
	Ethernet-based streaming DDM			X	
	Ethernet-based streaming TDM	X	X	X	
	LVDS streaming	X	X	X	X
	BSS Logging			X	

7. Package Contents

The mmwave mcuplus sdk release package contains the following major components/folders.

7.1. Control

Control modules can be found under mmwave_mcuplus_sdk_<ver>/ti/control folder. Content of each of the control module is shown below

Component	Source & Prebuilt Library	API Document (doxygen)	Unittest (source & prebuilt binary)
datapath manager (dpm)[1]	X	X	X
mmwave high level api	X	X	X

[1] Applicable for AWR294x and AM273x.

7.2. Datapath

Datapath modules can be found under mmwave_mcuplus_sdk_<ver>/ti/datapath folder. Content of each of the datapath module is shown below

Component	Source & Prebuilt Library	API Document (doxygen)	Unittest (source & prebuilt binary)
RangeProc DPU	X	X	X

RangeProc DDMA DPU	X (C66 Only)	X	X (C66 Only)
Doppler DPU	X	X	X
Doppler DDMA DPU	X (C66 Only)	X	X (C66 Only)
CFAR DPU	X	X	X
RangecfarProc DDMA DPU	X (C66 Only)	X	X (C66 Only)
AoA DPU	X	X	X
Datapath EDMA	X	X	
Object Detection DPC	X	X	X
Object Detection DDMA DPC	X (C66 Only)	X	X (C66 Only)
RangeProcReal2x	X	X	X

Note:

1. No pre-built library for Object Detection DPC.
2. C66x core based libs and unit tests run on M4 core for AWR2944LC.
3. To run Object Detection DDMA DPC test on AWR2944LC, load two binaries that is, *.xer5f and *.xem4 on Cortex_R5_0 and Cortex_M4_1 respectively and then run both the cores.

7.3. Demos

Demos can be found under mmwave_mcuplus_sdk_<ver>/ti/demo/<platform>. The following demos are included in the mmwave sdk package. Details on running demos can be found in the mmwave_mcuplus_sdk_user_guide.

Component	Source & Prebuilt Binary	Demo document (doxygen)	Demo GUI
mmw	X	X	X
power optimization[1]	X	X	

[1]power optimization demo is only for AWR294X platform.

7.4. Misc folders

Following folders are also part of mmwave_mcuplus_sdk_<ver>/ti folder.

- common: Common header files needed across all components.
- platform: platform specific files.
- utility: Contains
  - cli which is the cli helper utility used by the demos.
  - mathutils is used to perform some common operations such as log2, rounding, saturation based on the core they need to run on (R5F, C66x)
  - testlogger which is the helper utility for driver unit tests
  - ccsdebug which is a utility that can be flashed on QSPI, and will loop forever. Meanwhile, CCS can be attached and developers can download the application which needs to be debugged
  - test contains below utilities :
    - cbuff_stream application streams raw ADC data over LVDS interface
    - mailbox driver test application issues version command to BSS
    - MSS VMON self-test application preforms voltage monitor self-tests and verifies the ESM interrupt
    - Cascade application communicates with two AWR2243 front ends (Application for only AM273x SOC and should only be tested on 2-chip Cascade EVM)
    - PMIC Read Write application for AWR2544 and AWR294x EVM.

7.5. Scripts

Build scripts can be found in mmwave_mcuplus_sdk_<ver>/scripts folder. Build instructions can be found in mmwave_mcuplus_sdk_user_guide.

7.6. Tools

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Dependencies needed for a successful flashing of binary images are located in mmwave_mcuplus_sdk_<ver>/tools. The User Guide details the steps for flashing the metaimages.

7.7. Docs

mmwave_mcuplus_sdk_<ver>/docs folder contains important documents related to the release such as

- mmwave_mcuplus_sdk_software_manifest.html: Software Manifest
- mmwave_mcuplus_sdk_release_notes.pdf: Release Notes (this document)
- mmwave_mcuplus_sdk_user_guide.pdf: User guide
- mmwave_sdk_module_documentation.html: Links to individual module's documentation
- testlogs: Unit test logs for mmWave SDK unit tests

mmwave_mcuplus_sdk_<ver>/docs/testlogs folder contains test results for each components in the package.

8. Related documentation/links

Other than the documents included in the mmwave_mcuplus_sdk package the following documents/links are important references.

- SoC links:
  - Automotive mmWave Sensors
  - Industrial mmWave Sensors
- Evaluation Modules (EVM) links:
  - Automotive Evaluation modules (Booster Pack, DEVPACK)
  - Industrial Evaluation modules (Booster Pack, ISK)