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1 Introduction

This document provides the highlights of each AX-IDE software tool release (that include AX-RadioLab and AX-CodeBlocks) targeting the *ON Semiconductor Ultra Low Power Wireless SubGHz* transceivers (AX5043/AX5243/AX5045) and system-on-chip (AX8052F143, AXM0F243).

2 Version History

2.1 AX-IDE Release 1.27

2.1.1 Installer Content

- AX-RadioLab V2.11a.
- AXCodeBlocks V1.27 (17.12).
- AXDBG Debugger V1.27.
- LibMF Library V1.19.
- OpenOCD Debug Interface software.
- Template Firmware Example and Demonstration code.
- API Documentation and User Manuals.

2.1.2 Highlights

- This is a common SDK, now supporting also the AX5045.
- Documentation and User Manuals updated to reflect the addition of AX5045.
- Enhancements to AX-RadioLab GUI to address marketing requirements.
- Logging feature is enabled in RadioLab for printing status and error codes.
- IAR 8052 path updated to On Semiconductor Devices in line with latest IAR download available. It is now recommended to use latest (IAR Embedded Workbench 8.1 onwards) while using IAR compiler.

2.1.3 Limitations/Known Issues

- In some cases (observed on Windows 10) while flashing code on the AXM0F243, it may be required to click/hover with the mouse pointer over the AXCodeBlocks pop-up in order to finalize the flashing process.


2.2 AX-IDE Releases 1.26 / 1.25 / 1.24

2.2.1 Highlights

- Internal only releases

2.2.2 Limitations/Known Issues

- n/a

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2.3 AX-IDE Release 1.23

2.3.1 Installer Content

- AX-RadioLab V2.8a.
- AX-CodeBlocks V1.23 (17.12).
- AXDBG Debugger V1.23.
- LibMF Library V1.18.
- OpenOCD Debug Interface software.
- Template Firmware Example and Demonstration code.
- API Documentation and User Manuals.

2.3.2 Highlights

- This is a common SDK supporting the following devices:
 - AX5043/AX5243
 - AX8052F143
 - AXM0F243
- Added API interface implementation for the TCPWM Driver.
- Power modes optimization in LibMF targeting AXM0F243.
- Updated CodeBlocks with upstream merges.
- Various bug fixes.

2.3.3 Limitations/Known Issues

- Occasional “hang” issue with CodeBlocks has been observed. The occurrences are rare though and not reproducible.

2.4 AX-IDE Release 1.22

2.4.1 Highlights

- Internal release only


2.4.2 Limitations/Known Issues

- n/a

2.5 AX-IDE Release 1.21

2.5.1 Highlights

- Added API interface implementation for the SPI Driver.
- Added API interface implementation for the I2C Driver.
- Added API interface implementation for the ADC Driver.
- Fixed the WTIMER0 wake-up issue.
- Fixed the spurious power consumption issue with wtimer periodic wake-up.
- Added Flash Programming progress bar while code download to the AX::CB.

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- Added “No Device Connected” notification to the AX::CB.
- Added support for getting basic packet statistics on the VT100 terminal.
- Enabled the VCO Cal Configuration option in the RadioLab GUI.
- Added configuration option to change the STACKSIZE for the applications through the AX::CB project options.
- Implemented the improved code readability in RadioLab output by reducing the #ifdefs macros.

2.5.2 Limitations/Known Issues

- The current release has been targeted towards the GNU GCC V5.4 toolchain
- Driver API interfaces have been through limited testing

2.6 AX-IDE Release 1.20

2.6.1 Highlights

- The new Installer has additional capabilities to un-install the previous software for upgrading the installation of various AX-IDE components.
- Firmware library implements dynamic calibration of High Frequency (IMO) and Low Frequency (ILO) oscillators.
- Enhancements to the RadioLab Tool to address marketing requirements.
- Enhancements to the AX-CodeBlocks IDE to address marketing requirements.
- The documentation and user manuals have been revamped and updated with additional information as per the new IDE.


2.6.2 Limitations/Known Issues

- I2C Driver is not available in this firmware release

2.7 AX-IDE Release 1.19

2.7.1 Highlights

- Implemented a single all-in-one installer for AX-RadioLab and all other AX-IDE components.
- The IDE now supports Basic & Regulatory Tests for AXM0F243 product line.
- Name changes from Axsem to ON Semiconductor has been incorporated.
- RadioLab Tool has the ON Semi logo on main panel.
- The installation folder name is changed to ON Semiconductor.
- The user licenses has been changed from Axsem to ON Semiconductor license.
- Enhanced LibMF firmware library with Flash Driver and TCXO control features implemented.
- RadioLab Tool adds new feature for PWRAMP and ANTSEL Digital pin configuration.
- AX-CodeBlocks new project wizard modified to create projects with -Os optimization for ARM targets.
- AXM0F243 mini-DVK SMA and ANT EVK boards and AXDBG V2.5 Debug Adaptor boards.
- The documentation and user manuals have been revamped and updated for AXM0F243 content and format has been changed from Axsem to ON Semiconductor.

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2.7.2 Limitations/Known Issues

- Need to un-install the existing IDE before initiating the installation of new set-up.
- The current release has been targeted towards the GNU GCC V5.4 toolchain.
- The support for additional firmware components – oscillator calibration etc. will be part of upcoming development work.
- SDCC compiler version 3.6.0 is the supported version. An upgrade to the compiler could be considered for subsequent releases.