

ATR7000 2.14.32 Release Notes

This document summarizes the following firmware releases:

Firmware Release Number	Release Date	See page
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For support, please visit www.zebra.com/support

ATR7000 V2.14.32

RELEASE DATE: 04-Mar-2019

ATR7000 is a powerful EPC Gen-2 compliant overhead reader that can create electronically steerable beams. It is a Linux based device driven by a new and powerful RFID engine that enables users to integrate RFID into their business logic and applications with great ease and high efficiency.

Release Notes lists new features, any specific usage instructions, and any known issue.

Note: The version 2.14.32 software update package includes the files required to update the ATR7000 RFID Reader. An FTP/SCP/FTPS server is required to upgrade the readers.

The software for ATR7000 reader is available at ftp://10.17.218.55/AAR/AAR-2.0/AAR_2.14.32

Contents of the release package:

IMAGE TYPE	VERSION	FILE NAME	DATE
ATR7000 1205 Mfg Image	2.14.32.0	aar_2_14_31.bin	03/04/2019
ATR7000 1205 Part Table	2.14.32	partitionTable_universal_atr_2_14_32.mbn	03/04/2019
RM Server LLRP Server	2.14.32.0 2.14.32.0	platform_2.14.32.0.tar.gz	03/04/2019
X-Loader	2.0.4.0	x-load_2.0.4.bin.ift	06/09/2017
U-Boot	201.0.15.0	u-boot_201.0.15.0.bin	04/11/2018
Operating System	201.2.17.0	ulmage_201.2.17.0	03/04/2019
Root FS	201.0.7.0	rootfs_201.0.7.0.jffs2	03/04/2019
OsUpdate Utility	1.0.0	osupdate.elf	03/04/2019
Response	N/A	response.txt	03/04/2019
RFID3 CAPI DLL	5.5.2.8	rfidapi32.so	03/04/2019
RFID3 JNI DLL	1.4.0.33	librfidapi32jni	03/04/2019
RFID3 Java API	1.4.0.33	Symbol.RFID.API3.jar	03/04/2019

Linux Kernel	2.6.32		
Radio (1204) Mfg Image	2.2.17.0	aar2-rev2.2.17.0-with-recovery_607-rev0.0.7.0.ldr	03/04/2019
Radio Firmware	2.2.17.0	aar2-rev2.2.17.0.ldr	03/04/2019
Radio API	2.2.8.16		03/04/2019
FPGA	1.8.0.0		

Host API release Version Info:

IMAGE TYPE	VERSION	FILE NAME	DATE
C API DLL	5.5.2.10	RFIDAPI32PC.DLL	03/04/2019
RFID3 .NET DLL	1.5.1.11	Symbol.RFID3.*.dll	03/04/2019
RFID3 Java JNI DLL	1.4.0.35	RFIDAPI3_JNI_HOST.dll	03/04/2019
RFID3 Java API	1.4.0.35	Symbol.RFID.API3.jar	03/04/2019

Native DLL available for 64-bit. 32-bit RFID C Dll will be provided on request.

Host SDK and Dll's are the same as the latest FXSeries release for internal release. These can be picked up from <ftp://10.17.218.55/FXSeries-2.X.X/For-Kernel-4.9/Build-3.0.22/SDK/64bit/>

Contents of PowerSession folder:

IMAGE TYPE	FILE NAME	REMARKS
PowerSession v 0.53.5 Installer	PowerSessionSetup.exe	See note below

Note: PowerSession v 0.52 or above will be needed to correctly show up configuration for ATR7000 reader running reader software version 2.14.11 or above due to the model name change in reader software from AAR to ATR7000

Installation Requirements

- A Java enabled browser on a PC is required to initiate the upgrade process. The recommended browser is Mozilla FireFox and IE11
- Note: USB flash drive-based firmware update is not supported on ATR7000

Installation Instructions

There are multiple supported ways to upgrade the ATR7000RFID reader

Method 1:

Copy images to local drive of PC, log in to the reader, select 'File based upgrade' on reader upgrade webpage, Enter username and password of reader. Select image to upgrade from local PC. Click 'Start upgrade'

Note :- There is a separate package available to perform File based upgrade to the reader.

Method 2:

Copy images to FTP server. Navigate to the reader upgrade webpage and select 'FTP upgrade' page. Enter username and password of the FTP server. 'Start upgrade'.

- ✓ FTP/SCP/FTPS server can be used to upgrade the readers.
- ✓ PowerSession demo application since v0.51.0 can also be used to upgrade multiple ATR7000 readers with a single operation. Please refer to the Integrator Guide document for detailed upgrade procedures.

HARDWARE REQUIREMENTS

- ATR7000 US SKU

ENHANCEMENTS / CHANGES in 2.14.32 with respect to 2.14.31

1. V2.14.32 includes the Radio firmware build 2.2.17 that addresses the issue with using specific cli commands that were used for Manufacturing test.
2. Addresses the issue in the RAM Usage which did not consider the buffers that were marked free but not returned.
3. Upgrade the ZMQ to V4.3.0 and Kafka library to V0.11.6

ENHANCEMENTS / CHANGES in 2.14.31 with respect to 2.14.30

1. V2.14.31 includes the Radio firmware build 2.2.16 and Radio API release 2.2.8.16 which ensures that the SPI write bits are properly set before writing the firmware / calibration data to flash. This addressed the issue seen on field where few ATR7000 failed to update the Radio firmware. Additionally, if there are any failures, the Radio API will write error to the syslog.
2. Transmit Power updates to allow for 36 dbm EIRP across different beams and polarizations
3. Includes the changes for RFID3 API from the 2.7.19 release.

ENHANCEMENTS / CHANGES in 2.14.30 with respect to 2.14.29

1. V2.14.30 includes the Radio firmware build 2.2.14 which included enhancements to the accuracy of conducted and radiated power (EIRP) for Theta, Phi, and LH Circular polarized transmit beams

ENHANCEMENTS / CHANGES in 2.14.29 with respect to 2.14.27

1. V2.14.29 includes the Radio firmware build 2.2.11 which includes the following (since 2.2.9).
 - Access Commands are working
 - Improvements to Transmit Power Accuracy (Related improvement to power calibration)
 - Increased size of the error log.
2. Fix in LLRP Server to ensure tags are reported after LLRP Reset to factory defaults.

ISSUES CORRECTED

- None

ADDITIONAL NOTES

Summary of major issues and limitations are listed below.

1. Regular inventory operations fail after RFSurvey is performed. Reader needs to be restarted to restore regular operation.
2. Autonomous mode and RSSI filters fail in regression tests.
3. Performing changes in the reader and committing the same while LLRP is upgrading the Radio firmware can cause LLRP to shutdown and not start back.
4. When performing upgrade to the ATR7000 few readers did not complete the reboot after update. A manual reboot is needed in this case.

Differences with FXSERIES Readers

ATR7000 RM / Web console differences

ATR7000 web console does not support the following web pages (when compared to FX7500)

1. Read tags option is not exposed on web console
2. Wireless config is not supported

Number of Antenna's (beams) exposed in ATR7000

ATR7000 exposes 480 antenna's as part of the capability. However, with the current ATR7000 firmware only the following beams are supported

- Beams 1-97
- Beams 101-197
- Beams 201-297
- Beams 301-397

Beams other than the above do not result in Tag reads. These are left unused for future use and will provide appropriate error in a subsequent release.