

# FX7500 1.3.13 Release Notes

## Release Notes for FX7500 V1.3.13

Released on 04/Mar/2016

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### Introduction

The FX7500 RFID reader is a powerful EPC Gen-2 compliant business class fixed reader. 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.

The features and the issues mentioned in this document are applicable for all FX7500 SKUs

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### Software Download

The version 1.3.13 software update package includes the files required to update FX7500 RFID Reader.

An FTP/SCP/FTPS server is required in order to upgrade the readers.

The software for fx7500 reader is available at Zebra support site.

### Contents of the release package:

IMAGE TYPE	VERSION	FILE NAME	DATE
RM Server	1.3.13	platform_1.3.13.0.tar.gz	3/3/2016
LLRP Server	1.3.13		
X-Loader	1.2.0	x-load_1.2.0.0.bin.ift	11/16/2015
U-Boot	1.2.2	u-boot_1.2.2.0.bin	11/16/2015
Operating System	1.2.3	ulmage_1.2.3.0	11/16/2015
Root FS	1.2.5	rootfs_1.2.5.0.jffs2	2/7/2016

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OsUpdate Utility	1.0.0	Osupdate.elf	3/3/2016
Response	N/A	response.txt	3/3/2016
RFID3 CAPI DLL	5.5.1.6	Rfidapi32.so	3/3/2016
RFID3 JNI DLL	1.4.0.27	librfidapi32jni	3/3/2016
RFID3 Java API	1.4.0.27	Symbol.RFID.API3.jar	3/3/2016
Linux Kernel	2.6.32		
NGE Firmware	1.4.55		
NGE Radio API	1.4.50		

### Host API release Version Info:

IMAGE TYPE	VERSION	FILE NAME	DATE
C API DLL	5.5.1.6	RFIDAPI32PC.DLL	3/3/2016
RFID3 .NET DLL	1.5.1.2	Symbol.RFID3.*.dll	3/3/2016
RFID3 Java JNI DLL	1.4.0.27	RFIDAPI3_JNI_HOST.dll	12/10/2015
RFID3 Java API	1.4.0.27	Symbol.RFID.API3.jar	12/10/2015

Native DLL available for both 32bit and 64bit

### Contents of the API release package:

IMAGE TYPE	FILE NAME	REMARKS
RFID_FX7500_EMDKForC	EMDKForC_CC.zip	Includes header files, lib, dll and sample apps for C
RFID_FX7500_EMDKForDotNet	EMDKForDotNet_CC.zip.zip	Includes header files, lib, dll and sample apps for .NET

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Packages also include documentation in \doc folder for C, .NET in respective folder. For Java, documentation is included as part of MSI package

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### Installation Requirements

- A Java enabled browser on a PC is required to initiate the upgrade process. A USB drive can also be used directly. The recommended browser is Mozilla FireFox

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### Installation Instructions

There are three supported ways to upgrade the FX7500 RFID reader

#### Method 1:

Unzip images and copy to a USB drive. Connect USB drive to FX7500reader. Upgrade will automatically start in 7-10 seconds.

#### Method 2:

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'

#### Method 3:

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.
- ✓ The latest version of PowerSession demo application (0.40.8 and higher) can also be used to upgrade multiple readers with a single operation. Please refer to the Integrator Guide document for detailed upgrade procedures.

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### Device Compatibility

This software release has been approved for use with the following RFID readers.

Device
FX7500-42320A50-US
FX7500-22320A50-US
FX7500-42325A50-WR
FX7500-22325A50-WR
FX7500-42320A50-JP
FX7500-22320A50-JP

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### New Features summary

This release includes the following new features (as compared to 1.2.11 release).

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- C and .NET API support for Region Configuration
- Zebra rebranding for the web console
- Power Negotiation with Cisco Switch using LLDP / CDP
- Performance Optimization for improved tag read rate
- Support for Japan SKU
- Optimizations at higher Temperature
- Added new APIs for Power Negotiation
  - GetPowerNegotiationState: To get the power negotiation state (enabled or disabled)
  - SetPowerNegotiationState: To set the power negotiation state to enable or disable
  - GetPowerNegotiationStatus: To get the status of power negotiation like ongoing, succeeded, failed, disabled or not applicable.
  - ChangePassword: Change the password for the given login credentials
- Extended GetSystemInfo API to get the power source type (DC power supply, POE, POE+ )

### Security patches:

- ✓ HeartBleed vulnerability
- ✓ Poodle security issues
- ✓ Shellshock issue
- ✓ Applet updates based on the new code signing certificate

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## Enabling and using the power negotiation Feature:

Power Negotiation feature can be enabled from the Configure Reader page

The screenshot shows the Zebra FX7500 Configure Reader web interface. The main content area is titled "Reader Parameters" and "Configure Reader". The form includes fields for Name, Description, Location, Contact, Operation Status, Antenna Check, Idle Mode Timeout (secs), Radio Power State, and Power Negotiation. The Power Negotiation dropdown menu is highlighted with a blue box, showing "Disabled" selected, with "Enabled" and "Disabled" options visible below it. The interface also includes a navigation menu on the left and a help sidebar on the right.

Once the Power Negotiation option is set as Enabled and committed, the FX7500 reader starts power negotiation. Power negotiation will happen only if the Reader is powered from a Switch that support LLDP based power negotiation.

In case of the reader being powered with other source, you can still enable and disable the power negotiation, but at that point of time the reader saves this setting but does not bring it into effect.

The moment you switch the power source to LLDP enabled switch, power negotiation will happen at init time (if it was enabled from UI previously).

Also note that after the power negotiation is enabled and committed, it will take few minutes (2 to 5 minutes approximately) to reach the PoE+ level. This happens because of the communication that would happen through LLDP packet exchange between reader and the switch.

For finding the completion of the Power negotiation, can see the reader home page, with an entry called **“Power Negotiation Status:”**

The power negotiation Status can be as follows:

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1. Disabled: If the power negotiation is disabled.
2. Succeeded: If power negotiation is completed successfully.
3. In Progress: If the power negotiation is still in progress.
4. Failed: Up on unsuccessful power negotiation attempt.
5. Not Applicable: When reader is not connected to CDP/LLDP enabled switch

Also we can see the Power Source type in the same screen.

For reference see the below screen shot of the new home screen.

### Issues Fixed

1	RFID3 C API: Reader capabilities is not displayed correctly in multi-byte mode
2	RFID3 C API: RM API RFID_Login() does not support 'Force Login' in multi-byte mode
3	RFID3 C AP: RFID_ExportProfileToReader() doesn't function correctly in multi-byte mode
4	RFID3 C API: Have invalid handle exception issue when application tries to de-register the TEMPERATURE_ALARM_EVENT
5	Web Console/RM Server: FX7500 reader with SW ver1.1.68 only accepts IP

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	address for SNTP server setting.
6	Web Console/RM Server: FX7500 reader doesn't accept the IP address of a NTP server if the hostname resolution fails
7	Web Console/RM Server: FX7500 reader ntp time sync issue (ntp time drift issue)
8	Embedded User Application cannot create/write file and folders in /apps partition
9	LLRP XML Decoder creates memory leak
10	SNTP configuration of the reader with Host IP address fails with an error
11	If Region is NOT set, USB Device will not be detected on the FX7500 home page until region is set.
12	Reader crash due to Memory leak when application closed abruptly
13	Losing Static IP information when FX7500 is rebooted repeatedly.
14	Changes to support MAC address with FF in the last but one octet for Avahi IP
15	FX7500 Embedded application autostart (SPR 25832)
16	FX7500 nslookup does not work (SPR 26012)
17	Memory leak when using multiple AISpec's
18	Issue with NXPChange Config when used with Access Sequence
19	Embedded User Application cannot create/write file and folders in /apps partition
20	Factory Reset using button press not clearing everything

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### Known Issues

1. ReadTags and web pages that need Java Applets are not supported in Chrome browser.
2. Beast vulnerability is not addressed.
3. The Power Negotiation status on the Home page will not get refreshed automatically