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# Revision History

Changes to the original manual are listed below:

<table>
<thead>
<tr>
<th>Change</th>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>-01 Rev A</td>
<td>9/2019</td>
<td>Initial release</td>
</tr>
<tr>
<td>-02EN Rev A</td>
<td>4/2020</td>
<td>Updated the guide following the FX Series Licensing Management section in MN000026A11EN.</td>
</tr>
<tr>
<td>-03EN Rev A</td>
<td>4/2020</td>
<td>Updated the Procuring Licenses section.</td>
</tr>
</tbody>
</table>
Table of Contents

Copyright ........................................................................................................................................... 3
  For Australia Only ............................................................................................................................ 3
  Terms of Use .................................................................................................................................. 3
  Revision History ............................................................................................................................... 4

About This Guide
  Introduction ....................................................................................................................................... 7
  Notational Conventions .................................................................................................................. 7
  Related Documents and Software ................................................................................................. 7
  Service Information ......................................................................................................................... 8

FX Series Licensing Management
  Introduction ....................................................................................................................................... 9
  FX Series Licensing Model ............................................................................................................. 9
    Procuring Licenses ....................................................................................................................... 9
    Types of Licenses ......................................................................................................................... 10
      Evaluation License .................................................................................................................... 10
      Perpetual License ...................................................................................................................... 10
    Enabling a License ...................................................................................................................... 10
    Time Tampering .......................................................................................................................... 10
  FX Series Licensing Mechanism .................................................................................................... 11
    License Acquisition Modes ......................................................................................................... 11
    Acquiring License from Production Server (ON-Line Mode) ....................................................... 11
    Acquiring License from UAT Server (ON-Line) .......................................................................... 13
    Acquiring License from Local License Server (ON-Line) ........................................................... 14
    Acquiring License by Downloading Bin File (OFF-Line) ............................................................ 14
      Device ID ................................................................................................................................... 15
      Activation ID ............................................................................................................................ 15
    How to Return License ............................................................................................................... 16
    How to Setup and Manage the Local License Server ................................................................... 17
    How to Download Capability Response from The Cloud Server .............................................. 18

Troubleshooting
  Troubleshooting for Licensing Errors .......................................................................................... 24
Table of Contents

Index
Introduction

This guide provides information about the licensing model and the licensing mechanism used in FX Connect & Network Connect features.

NOTE Screens and windows pictured in this guide are samples and may differ from actual screens.

NOTE FX7500 does not support Network Connect. FX9600 supports both FX Connect and Network Connect.

Notational Conventions

The following conventions are used in this document:

- "RFID reader", "reader", or "FX Series" refers to the Zebra FX7500 and/or FX9600 RFID readers.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Related Documents and Software

The following documents provide more information about the reader.

• FX Series Reader Software Interface Control Guide, p/n 72E-131718-xx. Describes Low Level Reader Protocol (LLRP) and Reader Management (RM) extensions for the reader.

For the latest version of these guides and software, visit: www.zebra.com/support.

Service Information

If you have a problem using the equipment, contact your facility's technical or systems support. If there is a problem with the equipment, they will contact the Zebra Global Customer Support Center at: www.zebra.com/support.

When contacting Zebra support, please have the following information available:

• Serial number of the unit
• Model number or product name
• Software type and version number.

Zebra responds to calls by e-mail, telephone or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your business product from a Zebra business partner, contact that business partner for support.
Introduction

This chapter explains the licensing model and the licensing mechanism used in FX Series RFID Readers. FX Connect and Network Connect are the licensed features on FX Series Readers. The following areas are covered:

- License activation in the ON-Line and OFF-Line modes. See License Acquisition Modes on page 11.
- How to return licenses. See How to Return License on page 16.
- Setup and administration of the license server. See How to Setup and Manage the Local License Server on page 17.
- How to download capability response from the cloud server. See How to Download Capability Response from The Cloud Server on page 18.

See Troubleshooting for Licensing Errors on page 24 to troubleshoot errors related to licensing.

NOTE: FX7500 does not support Network Connect. FX9600 supports both FX Connect and Network Connect.

Procuring Licenses

Customers, partners, and distributors require a FX Series Product License (FX Connect/Network Connect), please request an evaluation/trial license through your Account Manager.

Account Manager/Sales Engineers can request Trial/Eval License for FX Connect/Network Connect for customers, partners, or distributors via SFDC Forms.

Zebra Engineering can request for an evaluation/trial license for FX Connect/Network Connect via Service NOW.
Types of Licenses

There are four types of licenses for FX Readers:

- FX Connect Evaluation License
- FX Connect Perpetual License
- Network Connect (EtherNet/IP) Evaluation License
- Network Connect (EtherNet/IP) Perpetual License

**Evaluation License**

The evaluation license is a time-bound license. Based on the procurement type, it can be valid for 30, 60 or 90 days. When the trial period ends, the license is de-activated and the respective application is ceased from operations. Upon expiration of the trial term, the user is required to purchase a renewal license or switch to a permanent license.

**Perpetual License**

The perpetual license is a permanent license and is available for the life of the reader.

**Enabling a License**

To enable a license on FX Reader, procure the appropriate license (evaluation or perpetual), then log in to the reader web interface to configure and activate the license.

**Time Tampering**

License operations such as acquiring and returning license are time-dependent operations, so the FX Reader must be configured with current date and time. Failing to do so will result in errors in the acquiring license and releasing license processes.

The Reader time can be set automatically via the NTP server or configured manually in the **Date Time** windows (see Figure 1).

**NOTE** Clock Wind Back is enabled in the Firmware. Any back tracing of date or time will result in license error.
FX Series Licensing Mechanism

License Acquisition Modes

Users can acquire a license for the FX Readers in an on-line or off-line mode.

The three available servers when the reader is the on-line mode are as follows:

- Production Server (ON-Line Mode).

User can also acquire license in the off-line mode, see Acquiring License by Downloading Bin File (OFF-Line) on page 14 for more details.

Acquiring License from Production Server (ON-Line Mode)

This method is for the external customer. This is the default license acquisition mode and it has the minimal setup and configuration. The FX Reader must have the Internet connection to acquire a license form the Production server. The license server is hosted on the cloud and the FX reader contacts the cloud-based license server to acquire licenses.
Figure 2  Manage License - Production Server

To acquire licenses from the Production server:

1. Select the appropriate option for the fields as in Figure 2.
2. Enter the 32-byte Activation ID that is shared via e-mail when the license is procured.

**NOTE** The Install and Run application option allows you to install the EtherNet/IP package and starts the application. The EtherNet/IP package is built in the reader firmware. If the EtherNet/IP stack has already been installed, uncheck the Install and Run application box.

**NOTE** To circumvent a firewall while contacting the cloud-based license server, set up a proxy server. To do this, go to: https://supportcommunity.zebra.com/s/article/ZSL-Licensing-Server-Connectivity?language=en_US

3. Click Activate to acquire the license, and the license feature list is populated as shown in Figure 3:
   - **License Index**: Place holder for license number.
   - **License Name**: This is the feature name of license, such as fx-feature connect, nc-feature-ethernetip etc.
   - **License Version**: Place holder to list the license version number.
   - **Expiry Date**: An expiry date is displayed for the Evaluation license. For the Perpetual license, this field shows permanent.
   - **License Count**: Place holder to list the number of license allocated to the FX Reader.
   - **Host ID**: A unique number for the license server to identify the device. This number has both model & mac number of device. The example shown in Figure 3 is FX9600_84_24_8D_EE_57_34.

Figure 3  Available License - Production Server
4. The Application window shows the status and the progress of the package installation.

**Figure 4 User Application Page**

**Acquiring License from UAT Server (ON-Line)**

This method is for Internal Customer (Sales Engineer, Developers & Test Engineers). The FX Reader must be connected to the Internet. The license server is hosted on the cloud and the FX reader contacts the UAT license server to acquire licenses.

**Figure 5 Manage License - UAT Server**

To acquire licenses from the UAT server:

1. Select the appropriate option for the fields as in Figure 5.
2. Enter the 32-byte Activation ID that is shared via e-mail when the license is procured.

**NOTE** The Install and Run application option allows you to install the EtherNet/IP package and starts the application. The EtherNet/IP package is built in the reader firmware. If the EtherNet/IP stack has already been installed, uncheck the Install and Run application box.

   If you are installing the FC Connect License, the firmware ignore the input from the check box.

3. Click Activate to acquire the license, and the license feature list is populated as shown in Figure 6.

**Figure 6 Available Page - UAT server**
Acquiring License from Local License Server (ON-Line)

This license acquisition method is available for both External & Internal Customers. Prior to acquiring the license from the Local License Server (LLS), users must setup their own LLS within their LAN network (see How to Setup and Manage the Local License Server on page 17 for the detailed procedures). Then, the FX Reader contacts the Local License Server to acquire licenses.

**Figure 7** Manage License - Local License Server

To acquire licenses from the Local License Server:

1. The Local License Server is ready in the local LAN Network. See How to Setup and Manage the Local License Server on page 17 if the LSS is not set up yet.
2. Select the appropriate option for the fields as in Figure 7.
3. In the **Server URL** field, enter the LLS link with the format `http://<Server_ip or host_name>:port_number/request`
4. Enter the 32-byte **Activation ID** that is shared via e-mail when license is procured.
5. Click **Activate** to acquire the license, and the license feature list is populated as shown in Figure 6.

**Figure 8** Available License - Local License Server

**Acquiring License by Downloading Bin File (OFF-Line)**

This method of acquiring license is also called the OFF-Line method. Use this method when the Internet connection is not available. However, the user must download the Capability Response from the server prior to acquiring license with this method. See the How to Download Capability Response from The Cloud Server on page 18 for more details.
Users must have the **Device ID** and the **Activation ID** before downloading the capability response.

**Device ID**

Device ID is the unique identification number of the FX device in Zebra Licensing Server. The FX License Features Device ID must be in the format `<Model Name>_<Mac_Address>` (for example, FX9600_84_24D_EF_B2_BB), where

- The Model Name is FX7500 or FX9600.
- The MAC/IEE address is a 12-digit number.

Look for the Model Name and the MAC/IEE address at the bottom of device.

**Activation ID**

Activation ID is the unique 32-bit alpha-numeric number shared to the user when the license is procured. This number acts as the key to enable the FX Reader to activate the license. An example of the **Activation ID** is 8c88-d0e7-9f3c-435b-968b-69a8-7f8e-a302.

**NOTE** For External Customers, refer to the link shared via e-mail when the license is procured. The link is with credentials. For Internal Customer such as Sales Engineer/Developer/Test Engineer, go to [https://zebra-licensing-uat.flexnetoperations.com/](https://zebra-licensing-uat.flexnetoperations.com/) with credentials provided.

To acquire license in the off-line mode:

1. See the [How to Download Capability Response from The Cloud Server on page 18](#) to download the Capability Response.
2. In the **Manage License** window, select the appropriate option for the fields as shown in Figure 4.

**Figure 10** Manage License - OFF-line mode
3. At **Upload License**, select the **Choose File** button to locate the bin file downloaded in Step 1.

4. Click **Activate** button to activate the license.

![Available License(s)](image)

**NOTE** The **Install and Run application** option allows you to install the EtherNet/IP package and starts the application. The EtherNet/IP package is built in the reader firmware. If the EtherNet/IP stack has already been installed, uncheck the **Install and Run application** box.

For FX Connect, the check box input is ignored.

### How to Return License

**NOTE** The FX reader must be connected to Internet to return license.

Users can return the acquired license and it is to the cloud server only regardless of whether the license is acquired OFF-Line or ON-Line.

1. Select the appropriate option for the fields as in **Figure 11**.

**Figure 11** Manage License - Return License

![Manage License](image)

2. In the **Server Type** field, select from which server type the license is acquired.

**NOTE** For licenses acquired from the Local License Server, in **Server URL**, enter the LLS link with the format `http://<Server_ip or host_name>:port_number/request`.

3. Select **Release**.

4. Upon successful release and none of the license is available, the message window below is displayed.
How to Setup and Manage the Local License Server

Figure 12 illustrates the process of license acquisition from a local license server.

Figure 12  Local License Server Acquisition

Steps to setup the LLS within the LAN network are as follows:

1. Install the local license server.
2. Configure the local license server.
3. Register the local license server.
4. Acquire licenses in the local license server.
5. Input activation ID to the reader.
6. Reader acquires the license from LLS.

Once the local license server is set up, set up FX Reader to acquire licenses from the local license server. This can be done by changing the license_server_url field in HTML page file to the URL with format http://<license_server_ip_or_hostname>:7070. The local license server by default listens on port 7070 which can be changed in the license server configuration. If a non-default port is configured in local license server, then ensure to update the license_server_url field in the HTML page file to the same value. The license_activation_id field must be updated to the appropriate value provided by Zebra.

NOTE  The following steps are described in detail in the Local License Server Administration Guide (part number, MN-003302-xx). Please refer to the Local License Server Administration Guide for installation and registration instructions.
How to Download Capability Response from The Cloud Server

The user must log in before entering the Zebra Licensing Server. Click the following link: https://zebra-licensing-uat.flexnetoperations.com/ (This could be different if you are a external customer)

1. Enter the Username & Password.

2. A Home screen appears as follow:
3. Select the **Device** tab and create a **New Device** in the window. Fill **ID** according the format `<Model Name>_`<Mac_Address>` (See Device ID on page 15).

4. Fill **Name** to be same as **ID**. Do not select the **Runs license server** option and leave **Site Name** as empty.

   **NOTE** FX9600_84_24_8D_EF_B2_BB in **Figure 13** is an example.

**Figure 13**  
Create New Device

5. Click **Save**. The page shows **Device created successfully** when the device is successfully registered.
6. Select **Action** to expand the drop-down list. Select **Map By Activation ID**.

7. Key-in the Activation ID. If you have multiple IDs, make sure to key in one in a new line.

8. Click **Validate**.

9. Edit the **Qty** to add tab. Otherwise all the license will be mapped to a single device. For a standalone license, the value is 1. For LLS it may require a quantity.
10. Click **Save**.

11. The page shows **Entitlement successfully mapped**.
12. Click Action to expand the drop-down list. Select Download Capability Response. The bin file will be available in the Download folder.

13. Select the Device Type and provide the ID accordingly. The entitled devices will be listed.
14. To log out, select **ZSL System Test > Logout.**
Troubleshooting

# Troubleshooting for Licensing Errors

Refer to the troubleshooting information related to licensing in Table 1 before contacting the Zebra Customer Care executives for help.

<table>
<thead>
<tr>
<th>Problem/Error</th>
<th>Possible Causes</th>
<th>Possible Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No license is displayed although the license activation is completed.</td>
<td>The reader does not have the current date and time.</td>
<td>Configure the reader date &amp; time, refresh the Manage License page. See Time Tampering on page 10.</td>
</tr>
<tr>
<td>Message Please Input Activation ID</td>
<td>Activation ID is not provided.</td>
<td>Enter the Activation ID which is shared when license is procured. See Activation ID on page 15.</td>
</tr>
<tr>
<td>Message Please Input Server URL</td>
<td>When Local License Server is selected as the Server Type to acquire licenses, the Server URL is not provided.</td>
<td>Enter a valid LLS link with the format http://&lt;Server_ip or host_name&gt;:port_number/request See Figure 7 on page 14.</td>
</tr>
<tr>
<td>Message Error: Application is running, cannot be installed again</td>
<td>Users activate new license(s) when the EtherNet/IP application is running on the reader.</td>
<td>Activate new license(s) when EtherNet/IP application is not running.</td>
</tr>
<tr>
<td>Message Error: Application Install &amp; Run Disabled</td>
<td>The license is activated without selecting the Install and Run application option</td>
<td>License will be activated but the EtherNet/IP application will not be installed. Manually install the EtherNet/IP via application web page if you have a debain package. Return the license and re-install the license again. Select the Install and Run application option before activating the license.</td>
</tr>
<tr>
<td>Message Error: Invalid Activation ID, Please provide valid activation ID for License Return</td>
<td>Different product license Activation ID is provided when users returning the license(s).</td>
<td>Make sure the Activation ID provided is the one which is shared when license is procured.</td>
</tr>
</tbody>
</table>
Index

C
conventions
  notational ......................................... 7

F
FX Connect
  license type
    evaluation license ............................ 10
    perpetual license ............................ 10
  licensing
    acquisition modes ............................ 11
    activation id .................................. 9, 12, 15
    device id ..................................... 15
    download from bin file ......................... 14
    local license server ......................... 14
    offline ...................................... 14, 15
    production server ............................ 11
    UATserver .................................... 13
  licensing evaluation
    enabling license ................................ 10
    licensing model ................................ 9

I
information, service .............................. 8

S
service information ................................ 8

T
troubleshooting
  licensing ......................................... 24

V
vice ................................................. 15