Release Notes – 123RFID Desktop v2.0.1.28

Introduction

123RFID Desktop is a unique no-cost Windows utility that simplifies the process of deploying Zebra fixed readers (FX9600, FX7500), Zebra ATR7000 Array Reader, RE40 RFID Module, RFD40, RFD90 handheld readers. It can be used to discover and connect to one or more readers and   allows full access to configure readers, update readers' firmware, read, write and report tag data. The intuitive wizard presents easy-to-understand options in drop-down menus, radio buttons and sliders.

Description

This package contains the installer required to install 123RFID Desktop version 2.0.1.28. It can be used on a 64-bit Windows system.

Supported Features over Version 2.0.1.22
- New feature additions for RFD40 and RFD90
    - ✓ Support for parameter Barcode configuration.
    - ✓ Support to show additional memory back (USER and TID) in read-Data view.
    - ✓ Issues fixes.

- New feature additions for FX models (FX9600, FX 7500) and ATR7000 readers
    - ✓ Support for connecting the FX reader's using FQDN, entered by the user.

Supported Features over Version 2.0.1.11
- New feature additions for RFD40 and RFD90
    - ✓ Support for Upper and Lower Trigger-Key remapping.
    - ✓ Support for configuring USB Batch mode.
    - ✓ Support for basic data formatting (prefix and suffix) of RFID and Scan data in BT/USB HID mode.
    - ✓ Support for configuring Virtual HID parameter on Apple iOS.
    - ✓ Support for Charge terminal enable configuration for EV proclip cable.
    - ✓ Support for configuring timeout for same tag reporting in HID mode.

- ✓ Support for viewing Max RSSI in Data view Under Read session UI.

- New feature additions for FX models (FX9600, FX 7500) and ATR7000 readers
  - ✓ Support for Reset GPO automatically before restarting a new read session.
  - ✓ Support for viewing Max RSSI in Data view Under Read session UI.
  - ✓ Exporting IOT Connector configuration is no longer supported.

Supported Features over Version 2.0.1.6
- New feature additions for RFD40 and RFD90
  - ✓ Support for United Kingdom_900M region for WR SKU
  - ✓ Support for Ukraine Licensed region for E8 SKU

- New feature additions for FX models (FX9600, FX 7500) and ATR7000 readers
  - ✓ Support for exporting IOT Connector configurations.
  - ✓ Removed FX Connect and Cloud connect configuration.

Supported Features over Version 2.0.1.2
- Support for RFD40 and RFD90 over Multi-Slot Communication Cradle
  - ✓ Discover and connect RFD40&90 over Multi-Slot Communication Cradle
  - ✓ Perform FW update via local file-based method
  - ✓ Support for RFID and Scanner configurations settings
  - ✓ Support battery status monitoring - query battery status periodically
  - ✓ Additional configuration support- BT discoverable timeout, Off mode timeout (also available to be configured over BT and USB connection)
  - ✓ Load a saved configuration.
  - ✓ Support for Offline configuration
    - • Configure offline settings
    - • Save configurations
      - • The configuration is stored in PC as local file .rfdcfg
      - • DAT is staging file used to push configuration and firmware files

- New features additions for FX models (FX9600, FX 7500) and ATR7000 readers

  - ✓ Support for reader level RSSI filter under Configuration->Advanced Settings

Supported Features over Version 2.0.1.0
- Support for RFD90
  - ✓ Discover and connect RFD90 over Bluetooth communication
  - ✓ Perform Inventory (read tags in the field of view) and Access operations
  - ✓ Perform single tag locate
  - ✓ Perform FW update via local file-based method on up to 20 readers at a time.
  - ✓ Scan Tab to scan and display scanned data
  - ✓ Scanner configuration UI-to configure scanner settings.

- ✓ Support battery status monitoring - query battery status periodically
- ✓ Support for General settings configuration under Configuration wizard.
- ✓ Load a saved configuration.
- ✓ Switch Host mode (CDC, HID)
- ✓ Support for Offline configuration
    - Configure offline settings
    - Save configurations
        - The configuration is stored in PC as local file .rfdcfg
        - DAT is staging file used to push configuration and firmware files

Supported Features over Version 2.0.0.6
- Support for RFD40 Premium/Premium Plus model
    - ✓ Discover and connect RFD40 premium plus over USB CDC and Bluetooth communication
    - ✓ Perform Inventory (read tags in the field of view) and Access operations
    - ✓ Perform single tag locate
    - ✓ Perform FW update via local file-based method on up to 20 readers at a time.
    - ✓ Support battery status monitoring - query battery status periodically
    - ✓ Support for General settings configuration under Configuration wizard.
    - ✓ Load a saved configuration.
    - ✓ Switch Host mode (CDC, HID)
    - ✓ Support for Offline configuration
        - Configure offline settings
        - Save configurations
            - The configuration is stored in PC as local file .rfdcfg
            - DAT is staging file used to push configuration and firmware files

    The following features applicable only to Premium Plus Model
    - ✓ Scan Tab to scan and display scanned data
    - ✓ Scanner configuration UI-to configure scanner settings.

Supported Features over Version 2.0.0.0
- New features addition for RFD40 Standard
                    model
    - ✓ Switch Host mode (CDC, HID)
    - ✓ Firmware update support has been extended to up to 20 readers at a time.
    - ✓ Bug fixes and stability

- New features additions for FX models (FX9600, FX 7500) and ATR7000 readers
    - ✓ Firmware update support has been extended to up to 20 readers at a time.
    - ✓ SPR and bug fixes as mentioned below:
        - App should be able to run as a standard user
        - ATL sample folder shall be included as part of installation package
        - The tag ID field can only be sized when the reader is not reading tags. As soon as you start to read you can't read the tag ID because the field narrows so we can't see the entire tag ID.
        - User can discover USB connected FX reader but cannot connect to LLRP server.
        - "GPO Reset Duration" doesn't work if reader is discovered then connected in 123RFID tool

Supported Features over Version 1.3.0

- Support for RFD40 handheld reader
  - ✓ Discover and connect RFD40 module over COM port
  - ✓ Configure RFD40 via the Configuration wizard
  - ✓ Perform Inventory (read tags in the field of view) and Access operations
  - ✓ Perform single tag locate
  - ✓ Perform FW update via local file-based method
  - ✓ Support battery status monitoring - query battery status periodically
  - ✓ SupportforPre-FilterconfigurationunderConfiguration wizard
  - ✓ Support for General settings configuration under Configuration wizard
  - ✓ Load a saved configuration
  - ✓ Support for Offline configuration
    - Configure offline settings
    - Save configurations
      - The configuration is stored in PC as local file .rfdcfg
      - DAT is staging file used to push configuration and firmware files
- Support for ATR7000 reader
  - ✓ Discover and connect ATR reader
  - ✓ Configure ATR reader via the Configuration wizard
  - ✓ Perform Inventory (read tags in the field of view) and Access operations
  - ✓ Perform FW update via local file-based or FTP/FTPS/SCP server.

- New features additions for FXSeries readers

  - ✓ Support for Dwell time option of N_Millisecs_1_Rnd under Antenna Port settings.

  - ✓ **Network configuration:** Configure Ethernet, Bluetooth, and Wi-Fi settings.
    - **Ethernet:** This feature allows user to configure network settings and the IP of the reader automatically via DHCP or static IP configuration.
    - **Bluetooth:** This feature allows user to configure Bluetooth settings for connecting PC/Laptop via PAN profile to the reader.
    - **Wi-Fi:** This feature allows users to scan, connect and disconnect to Wi-Fi networks.

  - ✓ **Serial Port Configuration:** This feature enables user to configure serial port to modes below:
    - **Debug Port:** This is the default out of the box configuration enabled on FX9600 readers. In this configuration RS232 port is configured as Debug port to get kernel and system debug messages

    - **Push Data Port:** Once configured in this mode, it is enabled to run inventory operation and the Tag report will be pushed over the serial console.

    - **Free Port**: This option frees the serial port from internal usage and exposes the serial port for user application

✓ **License Manager:** This feature enables user to acquire, release and view the available licenses for various licensed features for FXSeries readers (i.e. FX Connect, Network Connect)

✓ **FX Connect:** FX Connect is a feature that allows the FXSeries readers to be configured to perform inventory and push tag data to the specified endpoint. This is a licensed feature and user must activate FX-connect license to use this feature.

✓ Network Connect: Network Connect feature supports industrial ethernet protocols like EtherNet/IP & Profinet.

✓ **Cloud Connect:** Cloud connect allows user to connect to Zebra Data Services and push inventory data to the connected Zebra Data Services.

✓ **Application:** This feature allows user to install, remove and view installed applications on the readers.

Supported Features over Version 1.2.0

- Support for RE40 RFID Module
  - ✓ Discover and connect RFID module over COM port
  - ✓ Configure RFID module via the Configuration wizard
  - ✓ Perform inventory and access operations on RFID module and receive tag data
  - ✓ Perform FW update on RFID module via local file-based method
  - ✓ Support temperature monitoring - query RFID module temperature periodically if this feature is enabled
- Show user memory bank data from tags (if supported) on Read screen
- Change the tag data column name from TagID to "EPC ID"
- Support for customization of ATL image window
  - ✓ The ATL file can include columns to allow user to customize item image file, item friendly name, item title, custom item text, logo image, background & foreground color of the image window

- Specify time duration in seconds to reset GPO (General Purpose Output) pin if it was activated by a GPO programming rule. This will reset all GPO accessories, irrespective of their state
- Support for changing reader's region configuration within reader configuration settings
- Update the built-in help contents on the new features implemented in version 1.3.0

Supported Features over Version 1.1.0

- Save antenna settings on the reader and persist them across reader shutdown and reboot
- Reset antenna settings to factory defaults
- Support for reader reboot
- Support for "Tag Focus" feature for Impinj's Monza 4, Monza 5, and Monza R6tag chips
- Display a set of supported reader profiles from the reader and activate the selected one
  - ✓ This feature is supported by SW version 3.0.35 and above for FXSeries (FX7500 & FX9600) readers
- Display the "Edit Tag Detail" window by double clicking TagID of a tag item
- Support for accessing (read & write) multiple tags (up to 5 tags) without leaving the "Edit
  Tag Details" window
- Support for creating EPC filter in Hex and ASCII format
- Simplify the display format of RF Mode
- Support for firmware update (upgrade/downgrade) on a single or multiple FX7500/FX9600 devices at a time using the ftp-based method.

Supported Features over Version 1.0.0
- Change the utility name from "123RFID" to "123RFID Desktop"
- Support for region configuration in the event of connecting to a reader whose region hasn't been configured
- Update the help contents of Discovery, Region Setup, Reading, Reader Configuration, and Firmware Update
- Alert options for the tag items that have not been seen in a certain length of time
- Support for absolute and relative path to the image file for picture in ATL file
- Display of ATL image window
- Expose 4 simple RF Profiles on top of the list of all available RF Modes under the Antenna Port settings
- Read EPC, TID and User (if supported) memory banks on a select tag
- Write EPC and User (if supported) memory banks on a selected tag
- Support for displaying Tag manufacturer information (below TID memory)
- Show/Write EPC and User (if supported) memory banks in Hex and ASCII format (if the tag data is convertible to ASCII format)
- Support for multiple prefix, suffix matches on EPC filter settings (separated via comma)
- Added 2 new GPO programming rules:
    - ✓ Some tags are missing from ATL
    - ✓ Found tags do not include
- Support for reader's cable compensation setting (read & write)
    - ✓ Support for auto-save cable compensation setting when users edit cable compensation setting value without pressing Enter key to apply the changes and leave the Advanced configuration page
- Support for firmware update (upgrade/downgrade) on a single or multiple FX7500/FX9600 devices at a time using the local file-based method
    - ✓ By default, the Image folder selector will open to the
        C:\Users\Public\Documents\123RFID\Firmware
                Files\directory
    - ✓ Support for fail-safe mechanism – the tool is able to properly handle any firmware update failure with appropriate status update text

Supported Features in Version 1.0.0 (Initial Release Version)
- Built-in screen-by-screen help including how-to-videos link
- Discover readers on the same subnet or manually discover/connect reader by hostname/IP
- Discover reader directly connected to PC via either USB or Ethernet cable
- Display asset information on discovered/connected readers
- Run inventory and display tag data on a single reader or multiple readers at one time
- Customize Read Tags display fields
- Specify tag data filter – by reader(s), RSSI, EPC pattern, time last seen
- Analyze tag reading performance using Antenna and RSSI chartsview
- Export tag data in csv format
- Provision of asset tag items to read against – import asset tag list (ATL) file
- Access tag′s EPC and TID memory bank data
- Easily configure reader′s settings via the Configuration Wizard
- Easily program GPIO accessories via the GPIO Wizard
- Save configuration for connected readers to PC
- Load/Import saved settings from PC to a reader
- Support printing the summary of the configuration settings of a reader

Contents

The zip file contains the following components:

- Zebra_123RFID_Desktop_(64bit)_v2.0.1.28.exe: Installer for 123RFID Desktop v2.0.1.28. This installer package also includes Zebra Core Scanner and Driver packages for WinUSB
- ATL_Sample Folder: Sample Asset Tag List (ATL) file folder

For more information on 123RFID, including how to videos, go to www.zebra.com/123RFID
For support, please visit www.zebra.com/support

Components

The components are installed and stored in the following folders:

Component	Location
Application	C:\Program Files\Zebra Technologies\123RFID Desktop
Configuration Files	C:\Users\Public\Documents\123RFID\Configuration Files
Data Files	C:\Users\Public\Documents\123RFID\Data Files
Firmware Files	C:\Users\Public\Documents\123RFID\Firmware Files

Device Compatibility

This software release has been approved for use with the following Zebra devices.

Device	Operating System
FX7500	Linux
FX9600	Linux
RE40 RFID Module	Not applicable
RFD40 & RFD90	ThreadX RTOS

Note:

- The minimum recommended SW version for FXSeries (FX7500 & FX9600) readers is ver 2.7.19. Also validated with firmware version 3.9.16 and 3.21.23.
- The minimum recommended SW version for RE40 RFID Module is ver R00
- The minimum recommended SW version for RFD40 readers is ver SAAFKS00-001-R03E0.DAT
- The minimum recommended SW version for ATR7000 reader is ver 2.16.29.0. Also validated with firmware version 3.21.24.

Installation Requirements

123RFID Desktop has been approved for use with the following OS:

- Windows 10 (64-bit)

- Windows 11

Note:

- 123RFID Desktop requires the .NET Framework 4.5.8 or higher to be installed. If not present in the system, the installer will install the .NET Framework 4.5.8 during the installation process.

- 123RFID requires Zebra CoreScanner driver version 3.07.0028 or higher to be installed. If not present in the system, the installer will install the Zebra CoreScanner driver_ 3.07.0028 during the installation process.

- During Zebra CoreScanner driver installation process, User must always select complete installation type.

- During Zebra CoreScanner driver installation process, If CoreScanner is already installed, User must always go with default selection- Modify the program. Selecting "Repair" or "Remove" may corrupt the CoreScanner.

Known Issues:

- RFD40 & RFD90

    - Sometimes the Scan tab does not appear, or the device doesn't show up in the Scan tab because of SSI connect failure. It is recommended to disconnect the reader and connect back. If the problem persists, restart the CoreScanner service (Services > CoreScanner) and run 123rfid Desktop again.

    - Sometime firmware tab shows message "Reconnect for firmware update" for reader(s), In this scenario, It is recommended to disconnect the reader and connect back. If the problem persists, restart the CoreScanner service (Services > CoreScanner) and run 123rfid Desktop again.

    - The installer installs additional dependent packages like Zebra Core Scanner and USB Driver package for USB. After uninstallation, these packages are not uninstalled automatically. For clean uninstall, it is recommended to manually uninstall these packages if not required.

    - Sometime read and write access operations failures are seen with longer memory bank data. Recommended to write few words and adjust writing with offset.

    - It is recommended to update firmware over USB CDC instead of Bluetooth communication because firmware update takes longer than expected time over Bluetooth communication.

    - It is recommended to reboot the device if any failure on scanning the data to recover the device to usable state.

- FX series and ATR readers:

    - Though LLRP is not connected, 123RFID application says LLRP is already connected. It is recommended to wait for few seconds and connect the reader. If it is not resolved, Power cycle the reader.

    - Although a maximum of 20 devices can be connected, it is strongly recommended to performthe inventory only on a maximum of 5 devices at the same time to achieve the best performance.

- RE40
    - After firmware upgrade, sometime the start read fails to read tags. The recommended work around is to restart the 123RFID Desktop.

    - In Antenna Port Settings, Dwell time option of N_Millisecs_1_Rnd is not supported

    - Tags are not reported in read data view after setting "Report after each tag being read for greater than 0 secs".

- While running inventory for longer time, It is recommended to clear Data view -Tag list grid by clicking on "Clear" button, In case system memory increase is observed.