# **123RFID Desktop**



**User Guide** 

#### 2025/04/11

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## **About This Guide**

## **Icon Conventions**

The documentation set is designed to give the reader more visual clues. The following visual indicators are used throughout the documentation set.



**NOTE:** The text here indicates information that is supplemental for the user to know and that is not required to complete a task.



**IMPORTANT:** The text here indicates information that is important for the user to know.

**CAUTION:** If the precaution is not heeded, the user could receive a minor or moderate injury.



WARNING: If danger is not avoided, the user CAN be seriously injured or killed.



DANGER: If danger is not avoided, the user WILL be seriously injured or killed.

## **Notational Conventions**

The following notational conventions make the content of this document easy to navigate.

- **Bold** text is used to highlight the following:
  - Dialog box, window, and screen names
  - Dropdown list and list box names
  - Checkbox and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen

- Bullets (•) indicate:
  - Action items
  - List of alternatives
  - Lists of required steps that are not necessarily sequential
- Sequential lists (for example, those that describe step-by-step procedures) appear as numbered lists.

### **Service Information**

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: <u>zebra.com/support</u>.

When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software/firmware type and version number

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

If your problem cannot be solved by Zebra Customer 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 Zebra business product from a Zebra business partner, contact that business partner for support.

## **Application Features**

123RFID Desktop is a software tool that simplifies reader setup. The application finds and connects to a reader with three simple clicks and optimizes Zebra passive RFID fixed and handheld readers. Supported models include FX7500, FX9600, FXR90, ATR7000, RFD40, RFD90, ET6xW and FXP20.

- Connect allows users to search for readers on the local subnet, USB port, or Bluetooth.
- **Read** allows users to start an inventory, view summary metrics on tag reads, and sort, filter, and export tag data. Select an antenna and set the power level to begin building an inventory.
- Configure allows users to configure reader and scanner settings. Settings can be saved to a file or as a printed report.
- Firmware allows users to update the firmware on up to 20 devices.



**NOTE:** The **Scan** tab is available only for connected sleds that have an imager.

## Connect

Locate readers on the local subnet or via a USB port by clicking **Find Readers** or by entering the IP, hostname, COM port, or by Bluetooth and clicking **Connect**.

魏. 12	23RFID Desktop
((©)) Connect )) (E) Read	Welcome Find Network and USB Readers Click to find reader(s) on local subnet or USB port. FIND READERS Connect a Reader by IP or Hostname or COM port
Configure Eirmware	Enter reader's IP address or hostname or COM port below.
	✓       10.233.46.156        10.233.46.156         ✓       USB Serial Device (COM39)        COM39         ✓       USB Serial Device (COM41)        COM41         ✓       RFD40P        COM18         ✓       RFD40_D0081        COM15



**NOTE:** For RFD40 and RFD90, the drop-down under **Connect a Reader by IP or Hostname or COM port** states the model types.

View the **Available Readers** section and click **Connect** on one of the associated rows to connect to the specified reader.



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Connect	Connecter	d Readers												
9)E		DISCONNECT ALL	Reader Name	Model	IP/COM Port	Reader ID	Firmware	Serial Number	Mig. Date	Antennas	Country Code			_
Read		DISCONNECT	RFD40-22055520100815.local.	RFD4031-G008700-US	10.45.203.77	212735201D0108	PAAFKS00-004-R04	212735201D0108	305ep21	•	USA			
		DISCONNECT	<ul> <li>IP 10.43.203.84/5086</li> <li>RFD40-211555201D0064.local.</li> </ul>	RFD4031-G108700-E8	10.45.203.84	211555201D0064	PAAFKS00-004-R04	211555201D0064	04Jun21	•	ETSI			
Scan														
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	Available	Readers (14)												
	-		Reader Name *	Model		IP/COM Port	Firmware	Serial	Number	Mfg. Date				
		PING	ONNECT FX7500EFE7B3 FX7500 KHD	Reader FX7500-4		10.45.203.94	3.21.21	17323	010501565	2017-11-19				
		PING	ONNECT SYS600EF828F FX9600 RFID FX9600EF828F	Reader FX9600-8		10.45.203.72	3.21.23	17299	010504038	2017-10-26				
		PING	ONNECT 2 10.45.203.57 FX9600F9924F	FX9600-8		10.45.203.93	3.21.21	19094	010506807	2019-04-04				
		PING	ONNECT ATR7000F30EFE ATR RFID Re ATR7000F30EFE	ader ATR7000-480		10.45.203.241	2.16.29	19027	010503649	2019-01-27				
		PING	ONNECT ATR7000F3F316 ATR RFID Re ATR7000F3F316	ader ATR7000-480		10.45.203.242	3.21.24							
		PING	ONNECT 🕺 FX9600FC867A	FX9600-8		10.45.203.34	3.21.23	20269	010554785	2020-09-25				
		PING	ONNECT FX7500809EE5 FX7500 RFID	Reader FX7500-4		10.45.203.62	3.21.21	17095	010502847	2017-04-05				
		PING	ONNECT - FX75007FF625 FX7500 RFID	Reader FX7500-4		10.45.203.85	3.21.23							
		PING	ONNECT P 10.45.203.41:5086 RFD40-212735201D0067.loc	al. RFD40-212735201D00	67.local.	10.45.203.41								
		PING	ONNECT P 10.45.203.44:5086 RFD90-212295201E0002.loc	RFD90-212295201E000	02.local.	10.45.203.44								
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About									Fixed rea	iders • Enter IP or h	ostname		FIND READER	s
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Me	READ	DISCONNECT ALL	Reader Name	Model	IP/COM Port	Reader ID	Firmware	Serial Number	Mfg. Date	Antennas	Country Code
Read	~	DISCONNECT	USB Serial Device (COM9)	FXP20	COM9	24215523070704	PAAFBS00-001-R07	24215523070704		•	Switzerland, Ne
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	Available I	Readers (0)									
			Reader Name	Model	IP/COI	M Port Fir	mware	Serial Number	Mf	. Date	
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					Intel	Pondor - Entor II	) or HostNamo	PIN			
About					10101	teauer Filer is	or nosuvdille				HIND READERS

Figure 4 Connected and Available Readers - ET6xW

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(( <b>Q</b> )) Connect		ler Discov d Readers	ery								
))@	READ	DISCONNECT ALL	Reader Name	Model		IP/COM F	Port	Reader ID	Firmware	Serial Number	Mfg. Dat
Read	✓		USB Serial Device (COM6)	ET6xW		COM6		24154523071737	PAAHFS00-001-R09	24154523071737	
Configure											
<b>⊥</b>											
Firmware	•										•
	Available	Readers (0)									
			Reader Name		Model		IP/COM	Port Fir	mware	Serial Number	
				No read	iers found. Cilck FIND REA	DERS					
About				IoTCRe	eader   Enter IP or Hos	tName		PING	CONNECT	FIND REAL	DERS

## **Connecting to the Multi-Slot Cradle**

The 123RFID Desktop tool discovers, connects, and performs RFID and scanning operations for Zebra UHF RFID sleds using the multi-slot cradle. This section provides the steps necessary to discover and connect to the multi-slot cradle.

To discover and connect to the device:

- 1. Keep the device in the cradle and run 123RFID Desktop.
- 2. Click Find Readers to view available devices to connect to.
- 3. Click Connect next to the device to connect to it.

When connected, the device is listed under the Connected Readers section.

To connect to a device via IP address:

- 1. Keep the sled docked in the cradle for up to two minutes while the DHCP allocates the IP address.
- 2. Choose any of the devices from the available readers section and click Connect.

(徳。1)	23RFID Desktop							( <b>O</b> ) 0 Readers Connected.	How to Videos	Help with Discovery	
(( <b>Q</b> )) Connect	Reader Discovery Connected Readers										
n) 🖻	Reader N	Name Mode	4	IP/COM Port Reader ID	Firmware Serial Number	r Mfg. Date An	atennas Country Co	de			
Read											
\$											
Configure											
Firmware				No readers connected. 1. Click FIND READERS 2. Click CONNECT.	below to discover readers.						
	Available Readers (15)										
		Reader Name	Model	IP/COM Port	Firmware	Serial Number	Mfg. Date				h
	PING CONNECT	ATR7000F3F316 ATR RFID Reader ATR7000F3F316	ATR7000-480	10.45.203.242	3.21.24						
	PING CONNECT	FX75007FF625 FX7500 RFID Reader FX75007FF625	EX7500-4	10.45.203.85	3.21.23						
	PING CONNECT	FX7500809EE5 FX7500 RFID Reader FX7500809EE5	FX7500-4	10.45.203.62	3.21.21	17095010502847	2017-04-05				
	PING CONNECT	FX9600EF828F FX9600 RFID Reader FX9600EF828F	FX9600-8	10.45.203.72	3.21.23	17299010504038	2017-10-26				
	PING CONNECT	ATR7000F30EFE ATR RFID Reader ATR7000F30EFE	ATR7000-480	10.45.203.241	2.16.29	19027010503649	2019-01-27				
	PING CONNECT	FX7500EFE7B3 FX7500 RFID Reader FX7500EFE7B3	FX7500-4	10.45.203.94	3.21.21	17323010501565	2017-11-19				
	PING CONNECT	FX9600FCB67A	FX9600-8	10.45.203.34	3.21.23	20269010554785	2020-09-25				
	PING CONNECT	FX9600FCAC00 FX9600 RFID Reader FX9600FCAC00	FX9600-4	10.45.203.75	3.21.23	20044010562043	2020-02-13				
	PING CONNECT	FX9600F28C7F FX9600 RFID Reader FX9600F28C7F	FX9600-8	10.45.203.60	3.10.30	18170010503268	2018-06-19				
	PING CONNECT	FX7500EFDDFA FX7500 RFID Reader FX7500EFDDFA	FX7500-4	10.45.203.80	3.21.23	17319010503769	2017-11-15				
							Fixed rearies: • Fotor ® or he	stoame			
About							Come of the local section of the				

If the connection is successful, the reader is listed in the **Connected Readers** section.

## Application Features

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Rea	der Discov	ery										
Connecte	ed Readers											
	DISCONNECT ALL	Reader Na	me M	odel	IP/COM Port	Reader ID	Firmware	Serial Number	Mig. Date	Antennas	Country Code	
	DISCONNECT	RFD4	45.203.77:5086 RFI 0-22055520100815.local. RFI	D4031-G008700-US	10.45.203.77	212735201D010E	PAAFKS00-004-R04	212735201D0108	305ep21	•	USA	
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Available	Readers (14)		Reader Name *	Model		IP/COM Port	Firmware	Serial	Number	Mfg. Date		
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Available	PING C	CONNECT	Reader Name *           FX7500EFE783 FX7500 RFID Read           FX7500EF283 FX8000 RFID Read           FX960EF282 FX8000 RFID Read           FX960EF328F	Model Fr FX7500-4 Fr FX9600-8		IP/COM Port 10.45.203.94 10.45.203.72	Firmware 3.21.21 3.21.23	Serial 173230 172990	Number 210501565 210504038	Mfg. Date 2017-11-19 2017-10-26		
Available	PING C	CONNECT	Reader Name           FX7500EF1783 FX7500 RFID Reads           FX7500EF283 FXX500 RFID Reads           FX500EF285 FXX500 RFID Reads           FX500EF285 FXX500 RFID Reads           FX500EF285 FXX500 RFID Reads           FX500EF285 FXX500 RFID Reads	Model           tr         \$X7500-4           tr         \$X8600-8           \$X9600-8		IP/COM Port 10.45.203.94 10.45.203.72 10.45.203.93	Firmware 32121 32123 32121	Serial 17323 17299 19094	Number 210501565 210504038 210506807	Mfg. Date 2017-11-19 2017-10-26 2019-04-04		
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Available	PPNG     C	CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT	Reader Name ~           PX75000FF1783 Bx7500 RFID Reade FX55000F2828 FX5800 RFID Reade FX58000F828F           PX58000F828F           PX75000F828F           PX75000F828F           PX75000F828F           PX75000F828F           PX75000F828F           PX75000F828F           PX75000F828F           PX75000F825           PX75000F825           PX75000F825           PX75000F825           PX75000F825           PX75000F825           PX75000F825           PX75000F825           PX7500F825	Model           **         FX7500-4           **         FX9600-8           *         FX9600-8           ATR7000-480         ATR7000-480           *         FX9600-8           *         FX9600-480           *         FX7500-480           *         FX7500-48           **         FX7500-4		IP/COM Port 10.45.203.94 10.45.203.72 10.45.203.93 10.45.203.24 10.45.203.24 10.45.203.62 10.45.203.62	Firmware           32121           32123           32121           2.1629           32124           32123           32123           32123	Setal 17323 17299 19994 19927 - 20269 17095	Number 210501565 210504038 210506807 210503649 210554785 210554785	Mfg. Date 2017-11-19 2017-10-26 2019-04-04 2019-01-27 - 2020-09-25 2017-04-05		
Available	PPNG     C	CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT	Reader Name ▲	Model           FX7500-4           FX7500-8           FX9600-8           ATR7000-480           ATR7000-480           FX9600-8           FX7500-4           FX7500-4           FX7500-4	Jocal	P/XCOM Port 10.45.203.94 10.45.203.72 10.45.203.21 10.45.203.24 10.45.203.24 10.45.203.24 10.45.203.42 10.45.203.85 10.45.203.41	Firmware           32121           32123           32121           21629           32124           32123           32123           32123	Serial 17323 17299 19094 190270 - 20269 170959 -	Number 210501565 210504038 210506807 210506807 210554785 210554785	Mfg. Date 2017-11-19 2017-10-26 2019-04-04 2019-01-27 - 2020-09-25 2017-04-05 -		
Available	Readers (14)           PING         C           PING         C	CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT CONNECT	Reader Name ~           PX75000EFETRES PX7500 RFID Reade FX75000EFETRES FX75000EFETRES FX75000EFE28F FX75000F924F           ID4.5523.537 FX75000F924F           FX75000EFE28F FX7500 RFID Reader ATR7000F316FE FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F925F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX75000F924F           FX7500F924F           FX7500F924F           FX7500F924F           FX7500F924F           FX7500F92501F000F7100RF1D Reader FX7500F7425           FX7500F9245           FX7500F9245           FX7500F9245           FX7500F92501F0000F7100cal.           FX7500F92501F0000F7100cal.           FX7500F92501F0000F7100cal.           FX7500F92501F0000F7100cal.	Мodel     Кл7500-4     Кл7500-4     Кл7500-8     Кл7000-88     Алягло00-480     Алягло00-480     Кл7600-48     Кл7500-4     Кл7500-4     Кл7500-4     Кл7500-4     Кл7500-4     Кл7500-4     Кл7500-4     Кл7500-4	Jocal.	IP/COM Port           10.45.203.94           10.45.203.72           10.45.203.72           10.45.203.241           10.45.203.242           10.45.203.242           10.45.203.42           10.45.203.62           10.45.203.85           10.45.203.41	Firmware           32121           32123           32121           21629           32124           32123           32123           32123	Setal 17323 17299 19994 19927 - 20269 17095 17095	Number 210501565 210504038 210506807 210503649 210554785 210554785	Mfg. Date 2017-11-19 2017-10-26 2019-04-04 2019-01-27 - 2020-09-25 2017-04-05 -		

## Read

Use the Read feature to manage an inventory. View summary metrics on tag reads by reader or sort, filter, and export tag data to a file. Select the antenna and set the power level to start an inventory.



12	3RFID Deskto	р										(( <b>o</b> )) 1 Reader Connected	📑 k How to	Videos 🕕 Holp w	with Reading
	Data View									۵ د	11 TAUSS 2 Charts Tag Focus	21 READS 7 READ Clear Export	•	START Running Time, 00	T .00.00.29
	✓ Filters														
_	EPC ID	Count	t RSSI	First Seen	Last Seen							I		1. 10.233.40.47	
	30304035A880C80000123442	20	-26	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM								Arti	Art2 Art3	Art.4
	30304035A880C80000123448	20	-26	9/1/2023 6:33:59 PM	0/1/2023 6:33:59 PM								((p))	) <b>((എ))</b> ((എ))	
8	30304035A880C8000012344A	24	-35	9/1/2023 6.33:59 PM	9/1/2023 6:33:59 PM								- 27	27 NACTIVE	INACTIVE
	30304035A880C80000123449	14	-65	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM										
	30304035A880C80000123441	21	-24	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM								Ares	Arto	
	AAAA5555AAAA5555AAAA55!	31	-71	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM								((p)	((p))	
	30304035A880C80000123443	21	-31	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM								27	27	
	30304035A880C80000123447	16	-69	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM										
	30304035A880C80000123445	15	-35	9/1/2023 6.33:59 PM	9/1/2023 6:33:59 PM								- 1 Antoneo	0.010	
	30304035A880C80000123444	24	-38	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM								Antennas	GHIO	
	30304035A880C80000123446	15	-55	9/1/2023 6:33:59 PM	9/1/2023 6:33:59 PM										
L															
	Reader	Tags	Reads	Read Fate	फ्रेल Ant 2   फ्रिल Ant 3	949 Anta 1	19 Ani 5 🕸	9 Ani 6 - 44	An17 (%)∮ An16						

#### Table 1Tag Read Options

Feature	Description
Start an Inventory	Click <b>Start</b> to start reading tags.
Highlight Tags	Click the Gear Icon 🔹 to highlight tags based on the last time seen.
Track Tags	Click <b>Tag Focus</b> to enable the tracking of applicable tags such as Monza4, 5, and R6.
	<b>NOTE:</b> Tag Focus prevents read redundancy by suppressing tags that have already been read. This capability prevents multiple reads of the same tags, allowing for more accurate reading of hard-to-read tags.
Export Tag Data	Click <b>Export</b> to download the inventory data for offline viewing.
	<ul> <li>Export Summary – download a snapshot of all the tag reads on the Read screen.</li> </ul>
	Export History – download the timeline data for tag reads.
View Tag Details	Click the spreadsheet icon. 🎹 to view tag details such as Tag ID and User Memory data.

#### Table 1 Tag Read Options (Continued)

Feature	Description
View Performance Data	Click <b>Charts</b> Charts to view tag performance data. Use Pie Charts to visualize a distribution of tag reads across enabled devices.

#### Figure 6 Data View - FXP20

颜. 12	23RFID Desktop										( <u>())</u>	1 Reader C	onnected	How to Videos	<ol> <li>Help with Reading</li> </ol>	⊐ X
((O)) Connect	Data View							[	4 ¢⊘¤	TAGS 6	37 REAL	os 14( ar Export	C READS/ SEC	Rur	START	
)e	✓ Filters															
Read	EPC ID	Coun	RSSI	First Seen	Last Seen									1. USB	Serial Device (COM9)	$\odot$
	E280111122223333444455555	143	-21	4/7/2025 7:07:10 PM	4/7/2025 7:07	20 PM							DRUD	Ant 1		
	BEDD11112222333378978888	244	-23	4/7/2025 7:07:16 PM	4/7/2025 7:07	20 PM								((p))		
Configure	E28069950000500F97D21234	127	-55	4/7/2025 7:07:16 PM	4/7/2025 7:07	20 PM										
	EEEEEEE2222279899665468	123	-21	4/7/2025 7:07:16 PM	4/7/2025 7:07	20 PM										
$\mathbf{v}$																
Firmware														Antennas		
	Reader	Tags Reads	Read Ra	te 🕼 Ant 1 🕼 Ant	2 (4) Ant 3	(4) Ant 4	(w) Ant 5	(w) Ant 6	(4) Ant 7	(4) Ant 8						
About	1. USB Serial Device (COM9)	4 637	154	637												



No. 12		<b>`</b>						- • X
12	Shrid Deskio	)				(( <b>Q</b> )) 1 F	Reader Connected	How to Videos (i) Help with Reading
<u>((Q))</u>	Data View				3	TAGS 229 READ	os 23 READS/	START
Connect					🗱 🥠 Char	ts Tag Focus Clear	Export -	Running Time: 00:00:00:09
<b>)</b> @	Filters							
Read	EPC ID		C	ount RSSI	First Seen	Last Seen		
-	EEEEEEE2222279899665468		8	-25	4/7/2025 6:36:43 F	PM 4/7/2025 6:37:05 PM	I	Ant 1 Read Profiles
- <b>4</b>	BEDD11112222333378978888		8	3 -30	4/7/2025 6:36:55 F	PM 4/7/2025 6:37:04 PM	1	((())
Configure	E280111122223333444455555		6	-47	4/7/2025 6:36:55 F	PM 4/7/2025 6:37:04 PM		20 Cycle Count User Defined
Firmware								Antennas
	Reader	Tags R	eads Read Rate	(%) Ant 1 (%	🖤 Ant 2 🛯 🖤 Ant 3	මා) Ant 4 (ඉා) Ant 5 (ඉා	) Ant 6 (4) Ant 7	
	1. USB Serial Device (COM6)	3 2	29 23	229				
About	•			"			•	
					_	_		∰ ∩\\ <b>∳</b> \\ 6:37 PM •

The following are the Read profile options for ET6xW:

- Fastest Read This profile prioritizes the rapid reading of tags within a shorter range, maximizing the
  number of tags processed in minimal time. It is ideal for scenarios where speed is more critical than
  range.
- **Optimal Battery** This profile prioritizes battery longevity, ensuring the device operates efficiently for extended periods. It is ideal for scenarios where battery conservation is crucial.
- Max Range This profile is designed to read tags from the longest possible distance, focusing on speed and range. It is perfect for applications where detecting tags over a wide area is necessary.
- Balanced Performance This profile compromises performance and battery life, providing a moderate level of both. It is suitable for general use where neither extreme performance nor maximum battery life is required.
- **Cycle Count** This profile focuses on identifying as many unique tags as possible, emphasizing diversity in tag detection. It is used when the goal is to ensure comprehensive tag coverage.
- User Defined This profile allows customization based on specific user requirements, offering flexibility to meet unique operational needs where predefined profiles do not fit.

The power management features for ET6xW:

- If the battery is at 6% or below, the device won't connect while charging, ensuring safety and preserving device health.
- The duty cycle is optimized across all profiles to manage power use efficiently, extending battery life.
- The device enters sleep mode if no radio operations are executed for 20 seconds, conserving power.

### **Filtering Tags**

Filter tags based on an Asset Tags List (ATL) or by reader in Data View. Use Data View to filter by EPC pattern, RSSI value, or Last Time Seen.

1. Click Filters to select the following filter options.

#### Figure 8 Data View

颜. 12	23RFID Desktop			((♥)) 2 Readers Connected	How to Videos i Help with Reading
<u>((Q))</u>	Data View		0	AGS <b>O</b> READS <b>O</b> READS/	START
Connect			Charts Tag Foo	us Clear Export 👻	Running Time: 00:00:00:00
)) Read	Filters     Apply Asset Tag List Select a fil	e 🔹 Show D	ata From All Readers 🔹	Ŷ	I. ATR7000F30F0B.008ASD.Z EBRALAN
Configure	EPC ID Count R	SSI First Seen	Last Seen	101	(( <b>()</b> )) <u>36</u>
Firmware					2. FX7500F1122C.008ASD.ZE     BRA.LAN     Ant 1     Ant 2     Ant 3     Ant 4
	ATP Reader	Tags Reads Re	ad Rate 400 401 402 403 404	405 406 407 408 409 410	
	ATR7000F30F0B.008ASD.ZEBRA.LAN	0 0 0			
	< [	· · · · · · · ·	Antennas GPIO		
	Reader	Tags Reads	Read Rate 🕼 Ant 1 🕼 Ant 2	2 (10)) Ant 3 (10)) Ant 4 (10)) A	
	1. FX7500F1122C.008ASD.ZEBRA.LAN	0 0	0 0 0		
About	< [			•	

- 2. Click Select a File to filter tags based on an ATL file.
- 3. Click All Readers to filter by reader.
- **4.** Click the cylinder icon  $\mathbb{T}$  to filter tag data at the application level by:
  - a) EPC Pattern specify whether the filtered EPC data will include/exclude the filter string.
  - b) RSSI Value filter tags that have RSSI value greater than the RSSI filter specified only.
  - c) Time Last Seen filter tags that were last seen in the time duration specified only.

## **Editing Tag Details**

Access and locate tags based on EPC ID.

**1.** Select the row and click the Tag Details icon  $\blacksquare$  to edit tag details.

<b>美</b> 。1:	23RFID Desktop	( <b>O</b> ) 1 Reader Connected	How to Videos   Help with Reading
(( <b>Q</b> )) Connect	Data View 7	TAGE 1,185 READS 308 READS	START Running Time: 00:00:00:03
I) Configure	Pilters           EPC ID         Count RSS         First Seen         Lait Seen           S00333200000000000000000000000000000000		1. IFCD40 CAM Device1       Image: Comparison of the compariso
About	1. USB Serial Device (COM20) 7 1185 308 1185		

2. Next, click the Tag Locate tab to start locating tags based on the EPC ID.

Edit Tag D	etails								X		
Access Op	perations	Tag Locate									
EPC:	00	00	00		303600C	C41	16B02AD9CE19439	•	WRITE		
	CRC	PC	PASSWO	RD	96 bits						
TID:	TID: E2 -00 -38 -11-60-00-64-11-01-C4-B1-B7-01-02-00-00-1										
468 bits											
HOED	0	00					~~ ~~ ~~ ~~ ~~ ~~		WRITE		
USER.	U	00		00-00-00-00-00-00-00-00-00-00-00-00-00					mare		
	WORD OFF	SET PASSW	VORD				Showing 188	bits			
	00		Kill	Kill Password Mer •			READ WRITE	•	LOCK		
	PASSWOR	D	MEN	MEMORY BANK LOCK PRIVILEG			LOCK PRIVILEGE				
	00								KILL		
	PASSWOR	D									
RE/	ND R	ead EPC wa	is successf	ful.				HEX	ASCII		

## **Online Reader Configuration**

Configure the reader using the 123RFID Desktop configuration wizard or load a saved configuration onto the reader.



**NOTE:** Reader configurations differ depending on the reader type. Depending on the selected reader types, only the supported configuration tabs will be shown.

Click **Edit Configuration on Reader** to edit the reader's settings and use the configuration tool to do the following:

- Assign names to the reader and the connected antennas.
- Set reader settings or reset them to factory defaults.
- Change the reader's region configuration.
- Edit the antenna settings, including beam, power, RF modes, and dwell time.
- Configure when triggering starts and stops on the reader.
- Create rules for GPO accessories on when to trigger inventory and output results.
- Configure pre-filters for handheld readers.
- Configure advanced reader settings such as antenna singulation and state aware.
- Manage licenses on fixed readers.
- Edit communication settings based on Ethernet, Bluetooth, Wi-Fi, and Serial Port requirements.
- Configure reader applications for fixed readers.
- Export or import certificates for handheld readers.
- Modify prefix or suffix data for handheld readers.
- Configure symbology settings for handheld readers.
- Save or print configurations to a file.
- Deploy the configuration file to a new device.

Click **Load a Saved Config File to a Reader** to load a saved configuration file to another connected reader from the PC.

#### **Operating Mode Configuration**

Use Operating Mode to configure a tag's antenna, trigger, communication settings, and applications.



**NOTE:** This feature is available for the FXR90 and fixed IoTC readers only.



<b>(徳)</b> 1	23RFID Des	ktop
((O)) Connect ))) Read	← BACK	What do you want to do? Please select an action from below to continue. Load a "Saved Config" File to Reader
Configure	1	Edit Reader Specific Configuration
Firmware		Select a inventory mode, environment, other appropriate settings and click next Next   Mode: Simple Conveyor Inventory Portal Custom Environment: High Interference Low Interference Very High Interference (DRM) Auto Detect Demo Tag ID Filter Operation: Disable Match: prefx Value: Tag reporting Type: Periodic all antennas Seconds RSSI Filter Ourration: Oscillation all antennas Celtular band filter Pre-selection

The following settings are available to configure:

- Mode configure tag reporting protocol for different use cases. The options are
  - Simple report all unique read tags.
  - **Inventory** report all unique read tags in a given time interval, default 1 second.
  - **Portal** report all unique read tags after the GPI start trigger.
  - **Conveyer** report all unique read tags for each antenna.
  - **Custom** report tag reads as defined by the user.

- Environment specify the amount of RFID interference in a given environment.
  - High Interference (Default) operating in the presence of multi or dense readers.
  - Low Interference operating in the presence of another reader, causing interference for a short time.
  - **Very High Interface** the number of readers in the environment is greater than the number of available channels, or multiple readers operating in close proximity.
  - Auto Detect use the application to access the environment and adjust.
  - **Demo** demonstrate maximum reader performance in environments where there are no other readers.
- Tag ID Filter filter tag reporting by ID defined by the user.
  - **Operation** set the operation for the filter: include, exclude, or disable.
  - Match match tag ID using prefixes, suffixes, or regex.
- Tag Reporting set tag reporting to continuous, periodic (all antennas), or periodic (per antenna).
- Cellular Band Filter provide noise cancellation for external non-RFID interference.

#### **General Settings**

General settings include batch mode, host type, HID keyboard, tag reporting, charging through the terminal (RFID40 and RFID90 UHF RFID handheld readers only), and timeout.



**NOTE:** Configurable settings may differ depending on the type of handheld reader in use.

#### Figure 10 Handheld Reader General Settings

<b>徳</b> 1	23RFID Des	sktop	
(O) Connect )) Read	← BACK	General Set Bluetooth and other general setti General Setting RFID Beeper Volume	ogs. ● High beep ◯ Medium beep ◯ Low beep ◯ Quite beep
Scan	Name General	Uynamic Power Unique Tags	Enable     Disable     Report Unique Tags
\$	Region	Off mode timeout	1800 x1s
	Antenna	USB Host Type	SSI over CDC v Switch
Firmware	Pre-Filter	Bluetooth Host Type	SPP and Mfi Combo v Switch
	Advanced	Same Tag Reporting timeout In HID Mode	21 x1s
	Communication	Bluetooth Batch Mode	AUTO ~
	Modify Data	USB Batch mode	DISABLE +
	Scanner Config	eConnex Terminal Charge	ENABLE ~
	Save Config	Key Remapping	Upper Trigger Lower Trigger RFID  Sled Scanner
		iOS HID Virtual Keyboard	DISABLE ~
		NTP Server Setting	Primary server name       Secondary server name       Server Clock         time.google.com       time.apple.com       15.07.2024 is       09 : 00 : 56 PM \$         Set

- **Dynamic Power** enable or disable the optimization of RFID reader power consumption.
- **Unique Tag** enable or disable reporting unique tags.
- **Off-Mode Timeout** set the timeout duration.
- USB Host Mode Switch switch the USB host modes between HID keyboard mode and SSI over CDC mode.
- Bluetooth Host Mode Switch switch the Bluetooth Host Mode between HID Keyboard Mode and Mfi.
- Same Tag Reporting Timeout in HID Mode set the same Tag Reporting timeout in HID mode.
- Bluetooth Batch Mode set auto/enable/disable for Bluetooth Batch Mode.

- USB Batch Mode set enable/disable for USB Batch Mode.
- eConnex Terminal Charge set enable/disable for eConnex Terminal Charge.
- Key Remapping remap the upper and lower triggers to RFID, Sled Scanner, Terminal Scanner, Scan Notification, or No Action. Select the desired functionality under the upper and lower triggers separately.
- IOS HID Virtual Keyboard set enable/disable for IOS HID Virtual Keyboard.

Bluetooth settings include:

- Bluetooth Discovery set enable/disable for Bluetooth discovery.
- **Discoverable Timeout** enable Bluetooth discovery above to set the Discoverable timeout value.
- Reconnect Attempts set Reconnect Attempts value.
- Beep on Reconnect set enable/disable Beep on Reconnect.
- **Reconnect to the Bluetooth Host** set the Bluetooth host to Never Attempt Reconnect, Attempt Reconnect on Data, and Attempt Reconnect Immediately.
- NTP Server Setting set the primary and secondary NTP server name clock settings.

#### **Region Configuration for Online Devices**

Configure the appropriate settings based on the region where the reader is used.

Due to differing frequency requirements, there are several versions of the hardware.

The software limits the list of choices presented to those compatible with the hardware in use. Note that if only one option is compatible with the hardware, that option is selected automatically.

The following are the definitions of different fields that can be set:

• **Region of Operation** - choose the region for the country of operation. Select from the drop-down list that presents the regions that have given regulatory approval to be used with the current board.



**NOTE:** Region of operation configuration is applicable to worldwide readers only.

- **Communication Standard** choose the communication standard from the list of standards supported by the chosen region. If a region supports only one standard the same is chosen automatically.
- **Frequency Hopping** turn on the frequency hopping option. This option is displayed only if the chosen region of operation supports this.
- **Selected Channels** select a subset of channels to operate upon (from the list of supported channels). This option is displayed only if the chosen region of operation supports this.

After applying region configurations, click **Set** to save the changes to the reader, and then select the **I understand** checkbox to confirm

#### **Antenna Configuration**

Configure Antenna Port settings for RFID sleds and fixed readers using 123RFID Desktop. The number of antennas is dependent upon reader type.



**NOTE:** Antenna configurations differ depending on the reader type. Depending on the selected reader types, only the supported configuration tabs will be shown.

Configurable antenna settings for RFD40 and RFD90 RFID sleds include:

- Name and Color
- Power (dBm)
- RF Mode

Figure 11 RFD90 Antenna Settings

<b>美</b> 。1:	23RFID Des	sktop	(O) 1 Reader Connected	How to Videos	Help with Configuration
Connect Connect Configure Firmware	23RFID Des C BACK Eriendly-Name General Region Antenna Trigger Pre-Filter Advanced Modify Data Scaner Config Save Config	Sktop Antenna Port Settings Power and RF modes take effect instant Color Power(dBin) RF Modes		How to Videos	Help with Configuration     Help with Antenna Settings
About		PREV NEXT			 

**NOTE:** Power and RF Mode changes are applied to the device instantly.

Configurable antenna settings for FX7500 fixed reader settings include:

- Name and Color
- Enable/Disable
- Power (dBm)
- RF Mode

M

• Dwell Time

#### Figure 12 FX75000 Antenna Settings

<b>淡</b> • 1:	23RFID Des	ktop		(() 1 Reader Con	inected [] How to Videos	Help with Configuration	
((O)) Connect	← BACK	Antenna P Power and RF m	Port Settings	ly.			) Help with Antenna Port Settings
Read	FX7500F1122C.0 08ASD.ZEBRA.LA N	Name and Color	Antenna 1	Antenna 2	Antenna 3	Antenna 4	Í
Configure	Name	Enable / Disable	Select for Reads	Select for Reads	Select for Reads	Select for Reads	
Firmware	Region	RF Modes	30 Maximum Da 👻	30 Maximum Da 👻	30 Maximum Da 👻	Maximum Da	
	GPO	Dwell Time	N_Millisecs	N_Millisecs	N_Millisecs	N_Millisecs	
	Communication		400	900	400	400 Supp	
About	Δnnlinatione	PREV	NEXT	Sync	Sync	Sync	•

Configurable antenna settings for FXR90 fixed reader settings include:

- Name and Color
- Enable/Disable
- Power (dBm)
- Dwell Time



<b>美</b> . 12	23RFID Des	sktop						
((O)) Connect	← BACK	Antenna P Power and RF m	ort Settings	tty.				
n) 🖭 Read	10.233.46.47	Name and Color	Antenna 1 🗸	Antenna 2	Antenna 3 🗸	Antenna 4 🔽	Antenna 5 🔽	Antenna 6
Configure	Antenna	Enable / Disable	Select for Reads	Select for Reads	Select for Reads	Select for Reads	V Select for Reads	Select for Reads
¥	Advanced	Power(dBm)	27	27	27	27	27	27
Firmware		Dwell Time	N_Millisecs V 100	N_Millisecs V	N_Millisecs V	N_Millisecs V	N_Millisecs V 100	N_Millisecs
			Sync	Sync	Sync	Sync	Sync	Sync

Configurable ATR7000 advanced array reader settings include:

- Beam Settings
- Power (dBm)
- RF Modes
- Dwell Time

#### Figure 14 ATR7000 Antenna Settings

. 12	23RFID Des	sktop		(( <b>O</b> )) 1 Reader Connected	How to Videos	Help with Configuration
(( <b>O</b> )) Connect	← BACK	Antenna S Power and RF m	ettings odes take effect instantly.			) Help with Antenna Port Settings
))@ Read	ATR7000F30F0B. 008ASD_ZEBRA_L AN	Beam Settings Power(dBm)	400-413			
Configure	Name Region	RF Modes	Default -Auto			E
Firmware	Antenna Trigger GPO	Dwell Time	N_Millisecs			
	Advanced Communication					
About	Applications Save Config	PREV	NEXT			•

#### Figure 15 FXP20 Antenna Settings

- 👯 1	23RFID Des	sktop			(( <b>Q</b> )) 1 Reader Connected	How to Videos	Help with Configuration
((Q)) Connect )) @ Read Configure	← BACK	Antenna R Power and RF n Name and Color Power(dBm) RF Modes	Port Settings modes take effect instantly.				Help with Antenna Port Settings
About		PREV	NEXT				



. ● 12	23RFID Des	ktop			(() 1 Reader Connected	How to Videos	Help with Configuration
(O) Connect ))@ Read Configure Firmware	← BACK USB Serial Device USB Serial Device Name Region Antenna Trigger Pre-Filter Advanced Save Config	Antenna P Power and RF m Name and Color Power(dBm) RF Modes	ort Settings Dedes take effect instantly. Antenna 1 2 20 Mode 0: M4/( v				Help with Antenna Port Settings
About		PREV	NEXT				
5 items				 			

## **Trigger Configuration**

Configure start and stopping conditions for reading tags and identify tag reporting parameters.



**NOTE:** Trigger configurations differ depending on the reader type. Depending on the selected reader types, only the supported configuration tabs will be shown.

#### Figure 17 Fixed Reader Trigger Settings

<b>美</b> 。1:	23RFID Desl	ktop (() 1 Reader Connected How to Videos	Help with Configuration
(( <b>Q</b> )) Connect	← BACK	Trigger Settings Set what starts and stops a read session.	Help with Trigger Settings
)) Read	FX7500F1122C.0 08ASD.ZEBRA.LA N	Start reading options - Pressing of Start button, change of general purpose input (GPI) state from LO to HI or HI to LO.         Start Reading	
Configure	Name	Stop reading options - Pressing Stop button, change of general purpose input (GPI) state from LO to HI or HI to LO. Stop Reading  When STOP is pressed	
Firmware	Antenna	<ul> <li>After tag reads</li> <li>After ms</li> <li>After inventory rounds</li> </ul>	E
	GPO Advanced	Other trigger options:	
	Communication	Report Tag Data     Report after     1     tags       Report after each tag being read for     0     sec	
About	Δnnlications	Autonomous Active PREV NEXT	×

Specify the start condition for a read:

- When Start is clicked from the Read panel.
- When **Start** is clicked, and then the GPI trigger of the device is pressed or released.
- When **Start** is clicked, and the input duration has passed.
- When the GPI trigger of the handheld device is pressed or released.

Specify a stopping condition for a read:

- When **Stop** is clicked from the **Read** panel.
- After a specified number of total tag reads.
- After a specified time (ms) has elapsed after tag reading was initiated.
- After a specified number of inventory rounds. An inventory round consists of reading a tag on each selected antenna port.
- After the GPI trigger of the device is released.

Configure Report Tag Data to occur after a specified number of tag reads or after each tag is read for a specified number of seconds.

When in Autonomous Mode, reports are sent only when a tag is seen for the first time. This setting is helpful in reducing the tag data network traffic by not reporting duplicated tag data. Configurable settings include:

• Never - reports no tag data.

- Immediate reports data for a new tag immediately.
- Moderated reports data for a new tag only after the specified moderation time (ms) and that tag was seen for the moderation duration.



**NOTE:** Report tag data and Autonomous Mode are only available for FX7500 fixed readers.

#### Figure 18 FXP20 Trigger Settings

<b>美</b> 市。12	23RFID Des	ktop	(()) 1 Reader Connected	How to Videos	Help with Configuration
Connect Configure Configure Firmware	← BACK	Justic Strate   Justic Strate			Help with Trigger Settings
About		PREV NEXT			



<b>美</b> . 1:	23RFID Des	ktop		(( <b>()</b> ) 1 Reader Connected	How to Videos	Help with Configuration
(O) Connect )) Read Configure Firmware	← BACK USB Serial Device (COM6) Name Region Antenna Trigger Pre-Filter Advanced Save Config	Trigger Setti Set what starts and Start reading optio Start Reading Stop reading optio Stop Reading	hgs stops a read session. ■ Pressing of Start button and handheld button. ■ When START is pressed ■ When Handheld Trigger Pressed ▼ ■ After tag reads ■ After ms ■ After ms ■ After inventory rounds ■ When Handheld Trigger Released ▼			Help with Trigger Settings
About		PREV	NEXT			
5 items				-		ـــــــــــــــــــــــــــــــــــــ

## **GPO Programming**

Select events to start and stop triggering the GPO accessory connected to the reader.



**NOTE:** This feature is available for fixed readers only.

#### Figure 20 Fixed Reader GPO Programming

<b>()</b> , 1	23RFID Des	ktop (() 1 Reader Connected How to Videos	Help with Configuration
Configure Configure	← BACK	Best events that trigger (start/stop) the GPO accessory connected to the reader.     Reset   CPO   CPO   CPO Reset Duration   Cutput   Events   When select action occurs, trigger GPO pot of or an off state concutor. No event actions currently configured.	Help with Programming GPO
About	Δnnlicatione	PREV NEXT	

#### **Configuring Pre-Filters**

Use pre-filters to identify tags to compare for tag filtering and determine where tag data is stored.



**NOTE:** This feature is available for handheld readers only.

Pre-filtering options include:

- Enable Filter enable or disable tag pattern pre-options based on standard RFID protocol.
- **Tag Pattern** specify the hexadecimal character pattern to compare for tag filtering. Pattern matching is based on the Offset value with a maximum of 64-byte hexadecimal characters.
- **Target** indicate which flag shall be affected when pre-filter is applied from the following: SESSION S0, SESSION S1, SESSION S2, SESSION S3, SL FLAG.
- Memory Bank specify the memory bank to apply the filter as EPC, TID, or User memory.
- Action indicate whether matching tags assert or de-assert SL (Selected Flag) or set their inventoried flag to A or to B.

۹. 1:	23RFID Des	ktop				(O) 1 Reader Connecto	I 📑 How to Videos	- O X
<pre>     total     total</pre>	EXAMPLE DES EACK EACK EACK Frendy-Name Frendy-Name Constal Region Asterna Tinger Pis-Filter Advanced Modity Data	Ktop Pre-filters : Configue pre-the Enable Filter Tag Pattern Tarpet Memory Bank Action Offset(works)	Settings r settings 2 Fitter 1 SESSION_50 EPC NV_A_NOT_INV_J = 0	Filter 2           SESSION_50           EPC           NNV_A_NOT_NNV_J           0	EPC C	Filter 4           BESSION_50           EPC           RW_A_NOT_NW_1           0	d 📑 Here to Videos	Help with Condguration     Help with Pre-Filter Settings
About	Scamer Config Save Config	PREV	NDT					

## **Configuring Advanced Reader Parameters**

Set all the advanced reader parameters, including setting antenna cable compensation values.



**NOTE:** Advanced configurations differ depending on the reader type. Depending on the selected reader types, only the supported configuration tabs will be shown.

#### Figure 21 FXR90 Advanced Settings

<b>美</b> . 12	23RFID Des	ktop							(( <b>Q</b> )) 1 Reader Connected	How to Videos	Help with Configuration
Image: state sta	23RFID Des C BACK D 233 46 47 Antenna Trigger Advanced	Ktop Advanced Parameter chan ☑ Enable Editi Name Antenna Situpulation State Aware	Settings ges take effect instantly ing of Advanced Settings Antenna 1 SESSION_0 • ? Active A 10 AB SL DeAsserted 0 SL DeAsserted 0 SU 8 Both 0 SL DeAsserted 0 Su clack to access Cable Length (f) clack to access	Antenna 2 SESSION_0 • Active A b Ase SL DeAsserted SU DeAsserted So Su Su Cable Less (dB/1000 click to access Cable Length (t) click to access	Antenna 3 SESSION_0 • Active A b Asserted SL DeAsserted Both 100 Sync Cable Loss (dB/H001) click to access Cable Length (f) click to access	Antenna 4 SESSION 0 • Active A B AB SL DeAsserted Both 100 Sync Catle Less (dB/100h dick to access Catle Length (ft) dick to access	Antenna 5 SESSION_0 • Active A B AB SL DeAsserted 8 Both 60 Sync	Antenna 6 SESSION_0 • Active A b AcB SLAsserted SLAsserted Both 60 Sync	(O) 1 Reader Connected	How to Videos	Help with Configuration     Help with Advanced Settings
About		PREV	NEVT								
		PREV	NEAT								

- 1. Select the Enable Editing of Advanced Settings checkbox to edit any parameter.
- 2. Select an Antenna Singulation setting to specify the reader session.
- 3. Select State Aware settings.
  - a. Select the Active checkbox to enable these settings.
- 4. Enter the expected Tag Population in the field of view of the antenna.
- 5. Set Antenna Cable Compensation values:
  - **a.** Specify the cable loss in terms of dB per 100 feet for the antenna cable used to connect the antenna port to the antenna.
  - b. Specify the cable length in feet of the cable used to connect this antenna port to the antenna.



**NOTE:** Setting a non-zero cable loss compensation value enables the reader to automatically increase the transmit power on this antenna port equivalent to the loss value specified. Setting an inappropriate value of cable loss can break the regulatory setting and is illegal.

c. Press Enter after entering the value in the textbox to set the cable loss compensation value.



**NOTE:** Setting the cable loss compensation value requires restarting the reader server. The default antenna settings are applied after setting the cable loss compensation value. Accessing cable compensation values requires logging in to the reader.

6. For the RFD40 and RFD90, specify the maximum storage size to allocate for a tag EPC ID.

### **License Management**

Use license manager to acquire, release, and view available licenses for FX readers. Licenses are necessary for Ethernet IP, Profinet, and Modbus protocols.

- **1.** Manage licenses on the reader by completing the following form fields:
  - License Operation
  - Device
  - Install Run Application
  - Server Type
  - Server URL
  - Activation ID
- 2. Click Activate to activate the license based on the credentials provided.
- 3. View Available Licenses on the reader with details including:
  - License Index
  - License Name
  - License Version
  - Expiration Date
  - License Count
  - Host ID

#### Figure 22 License Manager

<b>(</b> . 12	23RFID Des	ktop (() 1 Reader Connected How to Videos 🚯 Help with Config	guration	Ж
(( <b>Q</b> )) Connect	← BACK	License Manager License Manager enables user to acquire, release and view the available licenses provided they are valid.		
N) @ Read	FX7500F1122C.0 08ASD.ZEBRA LA N	Manage License - Acquire and release licenses on the reader. License Operation:		^
Configure	Name	Device: ON-Line		
Firmware	Region	Server Type: Local License Server   Server URL:		-
	GPO	Activate		
	Communication	Available License(s) - List the available and valid license(s) informations.		
About	Δnnlicatione	PREV NEXT		*

#### **Communication Settings**

Configure Ethernet, Wi-Fi, and Bluetooth Settings for connected readers.

Configurable Ethernet Settings include:

- IPV Type
- Obtain IPV4 Address via DHCP

#### Ethernet

When DHCP is enabled the current values IP/IPV6 address, prefix length, subnet mask, default gateway, and DNS server settings are available. These settings are obtained from the DHCP server and cannot be changed manually.



**NOTE:** Ethernet configuration is available on fixed readers only.

#### Figure 23 FX Reader Ethernet Configuration

<b>美</b> 。1	23RFID Des	ktop
<u>((Q))</u>	← BACK	Network Settings
Connect	100	
»))@	Owner	Configure Ethernet, Wi-Fi and Bluetooth Settings.
Read	10 233 46 36	Ethernet : Network configuration settings
	Name	IPV Type : IPV4
Scan	Region	Current IPV4 address 1 10 233 46 36
1	Antenna	IPV4 Subnet Mask : 255.255.255.0 IPV4 Gateway : 10.233.46.2
Configure	Trigger	IPV4 DNS Server: 10.233.1.200 IPV4 Domain Search: example.com
₩	GPO	MAC Address : C4:7D:CC:6A:0B:8C
Firmware	Advanced	Wi-Fi : Network configuration settings
	Communication	Bluetooth : Network configuration settings
	License	Save
	Applications	
	Save Config	

When DHCP is off, the following fields are configurable for IPV4:

- IP Address provide the reader's assigned IP address.
- Subnet Mask provide the Subnet Mask for the network the reader resides in.
- **Default Gateway** provide the Default Gateway for the network the reader resides in.
- DNS server provide the DNS Server appropriate for the network the reader resides in.
- MAC Address specify the reader's MAC address.
- **Domain Search** specify the search domain appropriate for the reader.



**NOTE:** When DHCP is enabled, changes take effect after setting the properties. When DHCP is disabled, the user must set the appropriate network parameters, and changes take effect after setting the properties.

When DHCP is off, the following fields are configurable for IPV6:

- IPV6 Address provide the reader's assigned IP address.
- Prefix Length provide the Prefix Length for the network the reader resides in.
- Default Gateway provide the Default Gateway for the network the reader resides in.
- DNS server provide the DNS Server appropriate for the network the reader resides in.
- MAC Address specify the reader's MAC address.


**NOTE:** When DHCP is enabled, changes take effect after setting the properties. When DHCP is disabled, the user must set the appropriate network parameters for changes to take effect after setting the properties.

#### Bluetooth

The reader supports automatic IP configuration of the Bluetooth interface.

When a Bluetooth client is connected to the reader, the reader's IPV4 address, subnet mask, IPV6 address, and prefix length are viewable. These settings are automatically configured and cannot be changed manually.



**NOTE:** Bluetooth configuration is available on fixed readers only.

#### Figure 24 FX Reader Network Settings

<b>美</b> . 1:	23RFID Des	ktop
(( <b>Q</b> )) Connect	← BACK	Network Settings
<b>1))</b> Read	10.233.46.36	Configure Ethernet, Wi-Fi and Bluetooth Settings.
Scan	Name	Wi-Fi : Network configuration settings     Bluetooth : Network configuration settings
scan	Region	IP Type: IPV4 Current IPV4 address : IPV4 Subnet Mask : 0.0.0.0
Configure	Trigger	MAC Address : 0.0.00 Discoverable : Off 💌
Firmware	Advanced	Pairable : Off  Use PassKey :
	License	PassKey : **** DHCP Start Address : 192.168.0.2
	Applications Save Config	DHCP End Address : 192.168.0.3
		Save

If a Bluetooth USB dongle is connected to the reader, the following Bluetooth properties are configurable:

- **Discoverable** determine whether the reader is viewable by other Bluetooth-enabled devices in discovery mode.
- Use Passkey enable the device to supply a predetermined passkey for authentication while pairing.
- **Passkey** used for authentication.
- DHCP Start Address the starting address of the DHCP IP range where an IP is assigned to the connecting device.

 DHCP End Address - the end address of the DHCP IP range out of where an IP is assigned to the connecting device.



**NOTE:** The DHCP IP range specified as the DHCP start address and DHCP end address determines the IP of the reader's Bluetooth interface.



**NOTE:** The first two octets of the reader Bluetooth interface's IP address are taken from the specified IP range, and the last two octets are formed using the reader BD address.

## **Serial Port Configuration**



NOTE: Serial Port configuration is available for FX9600 fixed readers only.

Configurable Port Settings include:

• Free Port - when enabled, this setting frees the serial port from internal usage and opens the port to be used by any application to send or receive data over the serial port.

Free Port O

• **Debug Port (Default Configuration)** - configure the RS232 port as the Debug port to obtain kernel and system debug messages.

Debug Port	۲	Configure D	ebug Port –						
		Baud Rate :	115200	-	Parity :	none 💌			
		Data Bits :	8	-	Flow Control :	hardware -			
		Stop Bits :	1	•					
						Save			

Push Data - enables serial port configuration, inventory operations, and data to push over the serial console.
 Push Data
 Configure Serial Port

Configure Serial Port –		
Baud Rate :	Parity :	
Data Bits :	Flow Control :	
Stop Bits :		
Inventory Control		
Auto Start :	Periodic Reporting :	Sec
Session :		
Start Trigger :		
Stop Trigger :		
Tag Field Selection		
EPC :	RSSI :	
PC :	Seen Count :	
Antenna ID :	Time Stamp :	
Channel Index :	Phase :	

## Wi-Fi Configuration

Edit an existing Wi-Fi configuration or create a new one.



**NOTE:** Wi-Fi configuration is available on handheld readers only.

1. In the existing connection, click **Get Details** for information on the SSID, Mac Address, IP Address, and the Connection Status of the connected network. Or click **Disconnect** to disconnect from the network.

#### Figure 25 RFD40/90 Wi-Fi Configuration

颜. 12	23RFID Des	ktop
(( <b>Q</b> )) Connect	← BACK	Wi-Fi End Point
)) Read	USB Serial Device (COM11)	Wi-Fi Configuration Existing Connection: - Get the details of connected network, disconnect from connected network.
Configure	Name	MAC Address : Status : Disconnected
¥	General	IP Address :
Firmware	Antenna Trigger	Connect to Network: - Scan and Choose network or enter network ssid manually or select the existing profiels to connect to the network.
	Pre-Filter	<ul> <li>Scan and Choose Network Enter SSID Choose existing profiles</li> <li>SSID : asdasd</li></ul>
	Communication	Hidden Profile :
	Certificate Modify Data	
	Save Config	

- 2. To add a Wi-Fi profile and connect to an existing profile, select Scan and Choose Network, Enter SSID or Choose existing profiles and enter the following information:
  - **SSID** scan, select or enter the available networks. SSID shall be listed in the drop-down menu and can be refreshed on clicking **O**.
  - **Protocol** the suggested protocol will be set when you select the SSID and can be changed.
  - **Passkey** enter the pre shared key for the WPA/WPA2 network.
  - **EAP** select the extensible Authentication Protocol.
  - CA Certificate click 📴 to add the installed CA certificate to the network.
  - Client Certificate click 📴 to add the installed Client certificate to the network.
  - Identify enter the identity/user name configured in the RADIUS server.
  - Anonymous Identity enter the Anonymous Identity/Username configured in the RADIUS server.
  - **Password** enter the password configured in the RADIUS server for the corresponding Identity/ Username.
  - **Private Key** click **D** to add the installed private/client key certificate to the network.
  - Private Password enter the password to decrypt the private/client key.
  - **Hidden Profile** this option allows the reader to connect to a Wi-Fi network even if it is not available during scanning.
  - Preferred Wi-Fi select this option to make this Wi-Fi as the first choice to associate and connect.

NOTE: Only SSID fields are required for the Choose existing profiles option.

- 3. Click Add to add a network profile or click Connect to connect to a network.
- 4. Click **Delete** to delete the selected network profile.

#### **End Point Configuration**

Create, update, or delete an end point configuration for device management using SOTI and MDM.



RA

**NOTE:** This feature is available for handheld readers only.

1. To add a new end point configuration, click **New**, enter the values and click **Add** to save the values.

2. Create a new end point by providing the following information:

#### Figure 26 RFD40 End Point Configuration

<b>美</b> 12	23RFID Des	ktop											ĺ	( <b>O</b> )) 1 Reade	er Connected
(( <b>Q</b> ))	← BACK	Wi-Fi End Point													
ebindet )) Read	USB Serial Device	End Point Con End point configuration	nfiguration n allows user to set endpo	oint configurat	tion for SOTI and MI	DM.									
Configure	(COM11) Name General Region Antenna Trigger Pre-Filter Advanced Communication Certificate	Type : Port : 1 Clean Session : 1 Host Verify : 1 Command Topic : 1 Nan TestM	MDM 1883 Peer MDM/clients/cmnd me Type IDM mdm	Protocol MQTT	Name : Tenant ID : URL : User Name : Response Topic : URL zebra.com	TestMDM TenantID Zebra.com MDM/clien Port 1883	ts/resp TenantID TenantID	User	Protocol : Keep Alive : Reconnect Delay : Password : Event Topic : Name Com	MQTT 40 Min : 5 MDM/clients/even mmand Topic /clients/cmnd	Max : 500	sec ic	New Sevent Topic	Save	Cancel Activate
	Modify Data Save Config	x [						И	,					Delete	Delete All

- Type select the end point type.
- **Protocol** select the protocol type.
- URL provide the end point destination URL.
- **Port** enter the port number of the connection.
- Keep Alive enter the duration (s) to buffer messages when the connection is lost.
- Tenant ID enter the tenant ID.
- Clean Session enable or disable cleaning the session data of the connection.
- Reconnect Delay enter the minimum and maximum seconds before attempting to reconnect.
- Host Verify enable or disable verifying that the hostname in the certificate is valid for the host.
- User name enter the Basic Authentication user name, if required.
- Password enter the Basic Authentication password, if required
- CA Certificate select and add the CA Certificate.
- Client Certificate select and add the Client Certificate.
- Private Key select and add the Private key.
- **Command Topic** enter the basic Command topic.

- **Response Topic** enter the basic Response topic.
- Event Topic enter the basic Event topic.



**NOTE:** The **End point configurations list** shows all existing end point configurations. User can select an end point configuration to update.

3. Click Save to save the selected configuration, or Cancel to cancel the current operation.

4. Click **Delete** to delete the selected configuration, or **Delete All** to delete all existing configurations.



**NOTE:** The default end point configuration appears on the application if there is no existing end point configuration.

## **Certificate Management**

Install or delete certificates on the reader by providing interface and certificate details.



**NOTE:** This feature is available for handheld readers only.

- **1.** Select the required interface. If the user selects a custom interface, the user must provide a custom interface name.
- **2.** Select the required certification type.
- 3. Click Browse and use the File Explorer to select the required certificate.

**4.** Click **Install** to install the new certificate.

#### Figure 27 Handeld Reader Certificate Management

美。12	23RFID Des	sktop
((O)) Connect )) Read Read	← BACK USB Serial Device (COM11) Name General	Certificate Management Certificate Manage enables user to add new certificates and delete certificates . Interface: custom  MDMCert Certificate Type: client_key  Select Certificate: C:\Users\pmidalwan\Desktop\cacert.pem Browse Install
¥	Region	Certificate Name Interface Certificate Type
Firmware	Antenna	MDMCert_client_key client_key
	Trigger	
	Pre-Filter	
	Advanced	
	Communication	
	Certificate	
	Modify Data	Delete All Delete
	Save Config	

5. Click Delete All to delete all certificates, or click Delete to delete the selected certificates from the list.



**NOTE:** A maximum of 10 certificates can be installed.

The 123RFID desktop application allows the user to select only the .pem certificate file for installation.

# **Configuring Reader Applications**

Install or remove applications on the reader.

## Figure 28 Fixed Reader User Applications

颜. 1	23RFID Des	sktop	( <b>()</b> )	1 Reader Connected	How to Videos	Help with Configuration	X
((O)) Connect	← BACK	User Application Install or remove applications on t Existing Applications - See the	he reader installed applications, Start/Stop an applic	ation, Uninstall.			
Configure	Name Region Antenna	List of Installed Apps : Start/Stop : AutoStart : Uninstall Current App :	v Uninstall				
	Trigger GPO Advanced Communication License	Install New Application - Install Current Status : Package :	a new application on the reader. Browse Install				
About		PREV NE	σ				

## **Modifying Data**

Create a data formatting rule to modify scanned and RFID data before its transmission to the host.



**NOTE:** This feature is available for handheld readers only.

1. Navigate to the Modify Data section to access data formatting.

Figure 29	Handheld Reader Modify Data
i iguic Lo	Thanking Bata

颜. 12	23RFID Des	ktop					
((O)) Connect	← BACK	Modify Data					
<b>9))</b> Read	USB Serial Device (COM53)	If required, create a data formatting rule to modify scanned or RFID data before its transmission to host.   Send data as scanned or read, don't append any keystrokes (Factory Default).  Append an enter key: Adds an Enter key to the end of data.					
Scan	Name General	Append a tab key: Adds a Tab key to the end of data.     Prefix/Suffix Simple Formatting					
<b>\$</b>	Region	© <prefix><data></data></prefix>					
Configure	Antenna	<pre>@ <prefix><data><suffix1></suffix1></data></prefix></pre> <pre>@ <data><suffix2></suffix2></data></pre>					
¥	Trigger	<pre>         <pre>             <pre></pre></pre></pre>					
Firmware	Pre-Filter	C PRETAZ WAIAZ SUFFICESUFFICE					
	Advanced	Enter values for prefix/suffix					
	Communication	Prefix Type Extended Value Enter •					
	Certificate	Suffix1					
	Modify Data	Suffix2					
	Scanner Config	Type Extended v Value Enter v					
	Save Config						

#### 2. Select Prefix/Suffix Simple Formatting

- 3. Choose one of the following options to add a prefix or suffix to tag data.
  - <PREFIX><DATA>: Select to append a prefix to the data.
  - <PREFIX><DATA><SUFFIX1>: Select to append a prefix and suffix to the data.
  - <PREFIX><DATA><SUFFIX2>: Select to append a prefix and suffix to the data.
  - <PREFIX><DATA><SUFFIX1><SUFFIX2>: Select to append a prefix and two suffixes to the data.
  - <DATA><SUFFIX1>: Select to append a suffix to the data.
  - <DATA><SUFFIX2>: Select to append a suffix to the data.
  - <DATA><SUFFIX1><SUFFIX2>: Select to append two suffix to the data.

- **4.** Enter the prefix/suffix values:
  - Prefix: Select the suffix type and enter the value to append to the data as the prefix.
  - Suffix1: Select the suffix type and enter the value to append to the data as a suffix.
  - Suffix2: Select the suffix type and enter the value to append to the data as a suffix.



**NOTE:** Select a formatting setting to enter a value.



**NOTE:** Data formatting is available in HID mode and applies to HID mode data. HID mode must be enabled after basic data formatting occurs. When the mode is updated, readers on the **Connect** tab are updated simultaneously.

## **Scanning Configuration**

Configurable scanning settings include enabling or disabling specific symbologies and enabling/disabling specific settings at the system level, such as transmitting the no-read message or the device's trigger mode.



**NOTE:** This feature is available for handheld readers only.

- Symbology Settings- configure and enable/disable specific symbologies.
- **System Settings** configure and enable/disable specific settings at the system level, such as transmitting the no-read message or the device's trigger mode.

## Figure 30 Handheld Scanning Configuration

N. 123RFID Desktop						
( <b>(Q</b> ))	← BACK	SCAN				
1)E	(PP	The parameters below are so Click on blue links below for	nner settings to configure symbology and general system settings. aster parameter list navigation.			
Read	USB Serial Device (COM53)	Symbology Settings	Symbology Settings			
Scan	Name	System Settings	Athec     Chinese 2 of 5     Codebar			
\$	General		© Code 11 ⊙ Code 128			
Configure	Antenna		<ul> <li>♥ Code 39</li> <li>♥ Code#3</li> <li>♥ Composite</li> </ul>			
Firmaare	Pre-Filter		Conta Matria     Otscrete 2 of 5			
	Advanced		DotCode     Gridmatrix			
	Certificate		Got Getabler     Han Xin     Distributed 2 of 5			
	Modify Data		<ul> <li>Korean 3 of 5</li> <li>Matrix 2 of 5</li> </ul>			
	Scanner Config		Masicode  Masi			
	Save Config		Other Options     Other Options     POF.417     Postal     OR     Symbology Security Level     UPC EAN			
			System Settings			
			Transmit No Read Message			
			Parameter Scanning Allowed			

## **Offline Reader Configuration**

Use the reader configuration wizard to configure RFID, symbology, bluetooth, beeper, and data settings on RFD4030 Standard, RFD40 Premium, RFD40 Premium Plus, and RFD90 readers. Save the configuration to a file on the PC or print a report.

Click on the device icon to edit the offline reader's configuration or click **Open configuration file** to load a saved configuration file from the PC to a reader.

#### Figure 31 Configure Device Offline



- Assign names to the reader and the connected antennas.
- Set reader settings or reset them to factory defaults.
- Change the reader's region configuration.
- Create rules for your GPIO (General Purpose Input/Output) accessories on when to trigger inventory and output results.
- Save/print configurations to a file.
- Deploy the configuration file to a new device.



**NOTE:** Beeper volume, dynamic power, off mode timeout duration, and Bluetooth discovery settings are configurable for online readers only.

## **Reader Name**

Add a description or name the reader by filling out the form fields on the name screen.

# 🐞 123RFID Desktop

(( <b>Q</b> ))	← BACK	NAME AND N	NAME AND NOTES				
econnect	1770	Please be sure to give y	our settings a configuration name. You can also add notes.				
Read	PREMIUM-PLUS	Configuration Name:	Factory Default				
\$		Notes:					
Configure							
Firmware	RFID		Save only changed parameters from default				
	SCAN						
	MODIFY DATA						
	WIFI						
	END POINT						
	LOAD AND PRINT						

## **RFID Reader Configuration**

Configurable RFID options for offline readers include regulatory configuration, RFID data reporting, filter and querying options, trigger, and advanced options.



**NOTE:** Ensure that the reader is configured for the correct region it is used in. Configuring the device for a different region is illegal.

- Regulatory Configuration options include setting the country of operation and enabling or disabling Channel Hooping and Channel Mask.
- RFID Data Reporting options include first and last-time-seen time stamps, RSSI, phase difference, unique tag reporting, and the total number of tags seen.
- Advanced Configuration options include enabling Link Profile, configuring the RFID Transmit Power Level, and enabling dynamic power optimization.

- Filter Options for up to four filters, including Filter enable, target, action, memory bank, truncate, length, start position, and mask.
- Query options include selecting which tags, session, and target the query is applied to.
- Trigger Configuration, such as defining RFID operations and the conditions in which they are initiated and stopped.

#### Figure 32 RFID Settings (Offline)

<b>美</b> . 1:	23RFID Desl	ktop		
<u>((Q))</u>	← ВАСК	RFID		
Connect		The parameters below are RFID Click on blue links below for fas	settings. ster parameter list navigation.	
Read	PREMIUM-PLUS	Regulatory Configuration	Regulatory Configuration	
		RFID Data Reporting	Country of Operation	NO REGION SET.INV V
Scan		Advanced Configuration	Enable channel hopping	Enable 💌
	NAME NOTES	Filter Options	Enabled Channels Mask	15
	RFID	Query Options		
Configure	SCAN	Trigger Configuration		
¥	GENERAL		RFID Data Reporting	
Firmware	MODIFY DATA		First seen time-stamp	Enable 🔻
	WIFI		Last seen time-stamp	Disable •
	CERTIFICATES		Protocol Control field	Disable 🔻
			Received Signal Strength Indicator (RSSI)	Enable 🔻
			Phase difference	Disable 💌
			Channel index	Disable 🔹
			Unique tag reporting	Disable 🔻
			Tag seen count	Enable 🔻
			Advanced Configuration	

# **Scanning Configuration**

Configurable scanning settings include enabling or disabling specific symbologies and enabling/disabling specific settings at the system level, such as transmitting the no-read message or the device's trigger mode.



<b>淡</b> • 12	23RFID Desk	top		
<u>((Q))</u>	← BACK	SCAN		
Connect	100	The parameters below are so Click on blue links below for	canner settings to configure symbology and genera faster parameter list navigation.	al system settings.
Read	PREMIUM-PLUS	Symbology Settings	Symbology Settings	
Scan		System Settings	<ul> <li>Aztec</li> <li>Chinese 2 of 5</li> <li>Codabar</li> </ul>	
\$	NAME NOTES		<ul> <li>Code 11</li> <li>Code 128</li> <li>Code 39</li> </ul>	
Configure	SCAN		<ul> <li>Code93</li> <li>Composite</li> <li>Data Matrix</li> </ul>	
Firmware	MODIFY DATA		Discrete 2 of 5     DotCode	
			<ul> <li>Gridmatrix</li> <li>GS1 Databar</li> <li>Han Xin</li> </ul>	
	LOAD AND PRINT		<ul> <li>Interleaved 2 of 5</li> <li>Korean 3 of 5</li> <li>Matrix 2 of 5</li> </ul>	
			<ul> <li>Maxicode</li> <li>MSI</li> <li>Other Options</li> </ul>	
			<ul> <li>PDF-417</li> <li>Postal</li> <li>QR</li> </ul>	
			<ul> <li>Symbology Security Level</li> <li>UPC EAN</li> </ul>	
			System Settings	
			Transmit No Read Message	
			Parameter Scanning Allowed	V
About			Timeout Between Same Symbols	5 x100ms

# **General Settings**

General settings include batch mode, host type, HID keyboard, tag reporting, charging through the terminal (RFID40 and RFID90 UHF RFID handheld readers only), and timeout.

Figure 34 General Settings (Offline)

<b>美</b> . 12	2 <b>3</b> RFID Deskt	ор		
(( <b>Q</b> ))	← BACK	GENERAL		
Connect		The parameters below are for co Click on blue links below for faste	nfiguring "General" settings. r parameter list navigation.	
ı)e				
Read	PREMIUM-PLUS	General Settings	General Settings	
		Bluetooth	Bluetooth Batch Mode	Auto Batch Mode 💌
Scan		Beeper Settings	USB Batch Mode	Disable •
1	NAME NOTES		Delay before data transmission in batch mode	20 x 0.5 sec
Configure	RFID		Bluetooth Host Type	Serial Port Profile and Mfi Combo 🔻
<b>V</b>	SCAN		USB Host Type	CDC •
Firmware	MODIFY DATA		Convert Hex to ASCII	
	WIFI		HID Keyboard Country Type	North American 💌
	CERTIFICATES		HID Keyboard Keystroke Delay	0 x1ms
			HID Country Code Page	Default for a set Country Type
			Same Tag Reporting timeout In HID Mode	21 x1s
			Key Remapping	Upper trigger -RFID, Lower trigger -Sled scan 🔻
			eConnex Terminal Charge	DISABLE -
			iOS HID Virtual Keyboard	
			Off mode timeout	1800 x1s
			Blustooth	
			Reconnect Attempts	o attempts
			Beep on Reconnect	Disable Beep 💌
About			BT Discovery	×.

# **Modifying Data**

You can create a data formatting rule to modify scanned and RFID data before its transmission to the host.

## Figure 35 Modify Data (Offline)

<b>美</b> 12	23RFID Deskt	ор								
<u>((Q))</u>	← BACK	Modify Data								
Connect )))@ Read	PREMIUM-PLUS	If required, create a data formatting rule to modify scanned or RFID data before its transmission to host.  Send data as scanned or read, don't append any keystrokes (Factory Default).  Append an enter key: Adds an Enter key to the end of data.  Append a tab key: Adds a Tab key to the end of data.								
Scan		Prefix/Suffix Simple Formatting								
4	NAME NOTES	<pre>@ <prefix> <data> </data></prefix></pre> <pre>O <data> <suffix1></suffix1></data></pre>								
Configure	RFID	<pre>     <prefix> <data> <suffix1></suffix1></data></prefix></pre>								
Firmware	SCAN GENERAL MODIFY DATA	<pre>     <prefix><data><suffix2></suffix2></data></prefix></pre>								
	WIFI	Enter values for prefix/suffix								
	WIH CERTIFICATES END POINT LOAD AND PRINT	Prefix Type Extended  Value Enter  Suffix1  Type Extended Value Enter  Value Enter  Value Type Extended Value Enter								

# Wi-Fi Configuration

Configure the Wi-Fi settings on the reader.

## Figure 36 Wi-Fi Configuration (Offline)

<b>美</b> い 1:	23RFID Desl	ktop					
(( <b>Q</b> ))	← BACK	WIFI					
v))		Choose from the Wi-Fi opti	ions below				
Read	PREMIUM-PLUS	Wi-Fi Configurati Wi-Fi Connection: - Set W	ion /i-Fi network reader connection settings.				
		Profile has been adde	d successfully.	SSID	Protocol	EAP	Identity
				wi-fi123	WPA_Enterprise_TKIP	TTLS	test123
Configure		99ID ·	wi-fi123				
◄	NAME NOTES	Protocol :	WPA_Enterprise_TKIP v				
Firmware	RFID	EAP :	TTLS •				
	SCAN	CA Certificate :	लू= wifi_ca_cert				
	GENERAL	Identity :	test123				
	MODIFY DATA	Anonymous Identity :	test123				
	WIFI	Password :	*****				
	CERTIFICATES		Hidden SSID Veferred SSID				
	END POINT		Add				
	LOAD AND PRINT						
				Doloto All	Delete		
				Delete All	Delete		

# **Certificate Management**

You can install or delete certificates on the reader and provide details of the installed certificates.



<b>美</b> 1:	23RFID Des	ktop			
<u>((Q))</u>	← BACK	Certificates			
Lonnect	100	Configure certificates from options be	low		
Read	PREMIUM-PLUS	Certificate Managem	ent		
Configure		Certificate Management enables	users to add/delete certificates in offline cor	nfiguration.	
¥	NAME NOTES	Interface: wifi Certificate Type: client	_key v		
Firmware	SCAN	Select Certificate: C:\Us	ers\pmidalwan\Desktop\wifi.pem	Browse	
	GENERAL MODIFY DATA	Certificate Name	Interface	Certificate Type	
	CERTIFICATES	wifi_client_key	wifi	client_key	
	END POINT				
					Delete All Delete

# **End Point Configuration**

End Point Configuration, allows you to add, update or delete end point configurations for SOTI.



<b>美</b> . 1:	23RFID Des	ktop						<u>()</u>	)) 1 Reader Conn
(( <b>Q</b> ))	← BACK	End Points							
v))@	(P)	Configure end-points fror	n options below						
Read	PREMIUM-PLUS	End Point Co	nfiguration						
		End point configuration	on allows user to set end point configuration fo	r SOTI.					
Configure		End point configuration	MDM V Name : TestMDM	Operation	Name	Activate Type	Protocol URL	Port Client ID Tenant ID	User Name
Firmware	NAME NOTES	URL :	Port : 1883	new 📃	TestMDM	mdm 🗌	MQTT testUrl	1883 123456 123456;	
Tinnuare	SCAN	Protocol :	MQTT - Keep Alive : 30 sec						
	GENERAL	Command Topic :							
	WIFI	Response Topic :							
	CERTIFICATES	Event Topic :							
	END POINT	Host Verify :	None   Clean Session						
	LOAD AND PRINT	Reconnect Delay :	Min : 5 sec Max : 500 sec						
		Client ID :	Tenant ID :						
		User Name :							
		Password :							
			Add Update	Delete All	Delete				

## Load and Print Configuration

- **Save configuration** Save the configuration in encrypted .rfdcfg format. The user must enter the password to encrypt the file.
- Create Giga-DAT package Save the configuration to an encrypted Giga-DAT package (.EDAT). The user must enter the password to encrypt the Giga-DAT file.
- **Email configuration file** This option allows the user to email a saved configuration file. The user must enter the password to encrypt the file.
- **Print or export summary report** This option allows users to print or export summary reports of changed configurations.
- **Print or export barcode report** This option allows users to print or export parameter barcode reports of changed configurations.



# **Firmware Management**

K

Update reader firmware on up to 20 devices of the same type simultaneously.

**NOTE:** Go to <u>zebra.com/support</u> to download the latest device firmware.

1. Select the checkbox of the device(s) and click **Update Firmware**.

徳. 12	2 <b>3</b> RF	ID Desktop									(()) 5 Readers Connected	How to Videos	Help with Firmware Update
(( <b>Q</b> )) Connect	Upd	late Reader F	irmware								0 d	rvices selected for update	👱 UPDATE FIRMWARE
-0.00	ED.	Reader Name	Model	IP/COM Port	Reader ID	Firmware	Serial Number	Min. Date	Locale	Update Status			
Read		RFD90+_220525201D0036	RFD9031-G30G700-US	COM14	220525201D0036	PAAFKS00-004-R04	220525201D0036	21Feb22	USA	-			
		US8 Serial Device (COM57)	RFD9031-G30G700-US	COM57	22322520101351	PAAFK500-004-R04	22322520101351	18Nov22	USA				
Scan		Bobs-E-8-E50 Sled	RFD4031-G108700-E8	COM4	211555201D0064	PAAFK500-004-R04	211555201D0064	04Jun21	ETSI				
~		US8 Serial Device (COM18)	RFD4031-G108700-US	COM18	22055520100815	PAAFK500-003-R03	22055520100815	24Feb22	USA				
Configure		US8 Serial Device (COM21)	RFD9091-G30G700-US	COM21	220115201D0061	PAAFK500-003-R03	220115201D0061	11.lan22	USA				
िक	-	COM21											
Firmware													
	1												
About													

2. Click Browse to select the firmware version to enable on the device.

## Figure 39 Update Reader Firmware

ilable	Readers (5)	IIIIware										50	evices selected	for updat
v	Reader Name	Model IP/COM Por	t Reader ID	Firmware	Serial Number	Mfg. Date	Locale Up	date Status				_		_
	RFD90+_220525201D0036 COM14	RFD9031-G30G700-US COM14	220525201D0036	PAAFKS00-004-R04	220525201D0036	21Feb22	USA Qu	eued						
z	USB Serial Device (COM57) COM57	RFD9031-G30G700-US COM57	22322520101351	PAAFKS00-004-R04	22322520101351	18Nov22	USA Qu	eved						
8	Bobs-E-8-E50 Sled	RFD4031-G108700-E8 COM4	211555201D0064	PAAFKS00-004-R04	211555201D0064	04Jun21	ETSI Qu	eued						
8	USB Serial Device (COM18) COM18	RFD4031-G108700-US COM18	22055520100815	PAAFKS00-003-R03	22055520100815	24Feb22	USA Qu	eued						
	US8 Serial Device (COM21)	RED9091-G30G700-US_COM21	220115201D0061	PAAFK500-003-R03	220115201D0061	11.Jan22	USA Ou	eued_						
		Select Firmware File ← → * ↑ → Thi	PC > Documents	> Old Laptop > RFD4	0-90 → wave-2-inte	nnal-Engineeri	ing≯new				~	ð 🔎 Search	new	
		Organize - New folde	r										10 • D	0
		Cuick access	Nam	e ^	1	Status	Date modifie	d Ty	pe	Size				
		ar Quick access	. ,	MFG		0	1/26/2023 10	35 AM Fi	le folder					- 1
		<ul> <li>OneDrive</li> </ul>		CAAFKS00-004-R04E0.DA	т (	9	1/26/2023 3:1	4 PM D	AT File	3,823 KB				- 1
		OneDrive - Zebra Tech	nologies	SAAFKS00-004-R04E0.DAT	r d	0	1/26/2023 3:3	4 PM D	AT File	11,012 KB				- 1
		This PC												- 1
		3D Objects												- 1
		Desktop												- 1
		Documents												- 1
		Downloads     Marie												- 1
		Pictures												- 1
		Videos												- 1
		SDisk (C:)												- 1
		A Network												- 1
														- 1
														_
		File ni	me: SAAFKS00-004-	R04E0.DAT								Firmware fil	e(*.FCDAT; *.DAT;)	~
												Open	Cance	

The progress bar next to the associated reader indicates the completion percentage of the firmware update.

徳。12	3RFI	D Desktop									(0) 1 Reader Connected	How to Videos	X Help with Firmware Update
((O)) Connect	Upd Available	ate Reader Fi Readers (1)	rmware								0/1 devic	es updated successfully	👱 UPDATE FIRMWARE
H))	×	Reader Name	Model	IP/COM Port	Reader ID	Firmware	Serial Number	Mfg. Date	Locale	Update Status			
Read		BT-HID-Mode-United-States COM17	RFD9031-G30G700-US	COM17	220525201D0036	PAAFKS00-003-R03	220525201D0036	21Feb22	USA	Updating (53%)			
Scan													
Configure													
Firmware													
About													



**NOTE:** The user must enter the password to update the firmware using an encrypted Giga-DAT file (.EDAT file). This applies to RFD40 and RFD90 devices.

## **RFID Sled Support for DataWedge Mode**

The DataWedge mode enables RFD40+ (Premium Plus models) and RFD90 RFID sleds to connect to the scanning framework, making the devices capable of capturing data from various input sources. This section describes how to configure RFID sleds for DataWedge mode.

Prerequisites:

- RFID Sled firmware version 006-R01 or higher.
- 123RFID Desktop version 2.0.1.28 or higher.
- DataWedge 13.0 or higher.
- **1.** If needed, perform a factory reset to the RFID sled. Pull the trigger to scan the Restore Defaults barcode.



- 2. Allow the sled to reboot. The default factory settings are in place when the sled powers back on.
- **3.** To configure the country of operation, click **Configure** > **RFID** > **Regulatory Configuration** > **Country of Operation**. Select the country from the drop-down menu.

#### 123RFID Desktop 🗲 ВАСК ((Q)) RFID Connect The parameters below are RFID settings. Click on blue links below for faster parameter list navigation. **り)**@ Read **Regulatory Configuration** PREMIUM-PLUS **Regulatory Configuration** Country of Operation NO REGION SET, INV -**RFID Data Reporting** Advanced Configuration Enable channel hopping Enable 🔻 Scan **Filter Options** 15 Enabled Channels Mask NAME NOTES Query Options RFID Configure Trigger Configuration **RFID Data Reporting** 4 GENERAL First seen time-stamp Enable 🔻 Firmware MODIFY DATA WIFI Last seen time-stamp Disable 🔻 CERTIFICATES Protocol Control field

4. To configure to Datawedge, click **Configure** > **GENERAL** > **General Settings** > **Bluetooth Host Type** > **DataWedge**.

颜. 12	23RFID Deskt	ор		( <u>o)</u> ) or
<u>((Q))</u>	← BACK	GENERAL		
Connect		The parameters below are for co Click on blue links below for fast	onfiguring "General" settings. er parameter list navigation.	
Read	RFD90	General Settings	General Settings	
**		Bluetooth	Bluetooth Batch Mode	Auto Batch Mode *
Configure		Beeper Settings	USB Batch Mode	Disable •
¥	NAME NOTES		Delay before data transmission in batch mode	20 x 0.5 sec
Firmware	RFID		Bluetooth Host Type	Datawedge 💌 🔺
	SCAN		USB Host Type	HID Keyboard Emulation Profile Serial Port Profile and Mfi Combo
	MODIFY DATA		Convert Hex to ASCII	Datawedge
	LOAD AND PRINT		HID Keyboard Country Type	North American 💌

5. Generate the barcode report by clicking Configure > LOAD AND PRINT > Print or export barcode report.

Example of a generated barcode report.



# Barcode : 1 of 1

6. Open the **Bluetooth Pairing Utility** on the Android device (RFID sled).

7. Scan the generated pairing barcode using the RFID sled.



8. Tap PAIR to connect.



**9.** At this point, the sled is configured to function similarly to a Zebra Bluetooth scanner.



**10.** For quick testing, open **DWDemo** (or any applications that accept data input) and scan the following sample barcode.



The barcode result displays.

2:01 PM 💠 🛡 🖬	Vi 🖞
DWDemo	
Imil	
Result: Zebra-Sample-Barcode String length: 20 Decoder: QRCODE	
۶ * 🗐	:
<b>∢ ●</b> I	

- **11.** You can also use DWDemo to test RFID function.
- 12. Open DataWedge settings.
- 13. Select the DWDemo profile.

#### 14. Enable RFID Input.



**15.** Tap on **Reader selection** and enable the RFID sled.

2:03 PM 💠 🐺 🖬	<b>1</b>
Available Readers	
RFD40+_212735201D0047 48:A4:93:00:0B:B0	
RE40 COM_PORT	

16. Go back to DWDemo and scan for RFID tags.

The RFID result displays.



# Troubleshooting

This section describes potential issues that could arise while using 123RFID Desktop with Zebra fixed and handheld readers and solutions that could correct the problem.

Problem	Cause	Solution
The RFID sled does not read tags.	The RF region configuration is not set.	Use the 123RFID Desktop or 123RFDID Mobile application to set the regulatory region or country operation per the application instructions.
The RFID sled is attached to a mobile device and is not responsive to an RFID application, even after the trigger is pressed.	The battery is too low and not able to power the RFID sled.	Press the trigger for a few seconds to power the RFID sled On. The RFID sled LED blinks amber when it is turned On. (By default, pressing the trigger turns On the RFID sled if it is in Off mode. However, the RFID sled can be disabled, in which case this step is unnecessary.) Place the RFID sled in the charging cradle. The RFID sled blinks amber LEDs, indicating charging commenced.
	The Zebra-supported mobile computer is not correctly inserted in the RFID sled.	Ensure the Zebra-supported mobile device is securely in the RFID sled, and the USB cable is correctly inserted.
	Damaged battery.	If the sled LED does not blink amber after sitting on the charging cradle, contact Zebra Service to request a battery replacement.
The sled is responsive but cannot read tags.	The battery is critically low.	Place the RFID sled in the charging cradle. The RFID Sled LED blinks amber. The RFID sled can be used when its LED turns on momentarily amber or green upon removal from the charging cradle.

#### Table 2 Device Troubleshooting

## Table 2 Device Troubleshooting (Continued)

Problem	Cause	Solution		
The sled LED blinks fast and amber when in the cradle.	Charging error.	Restart charging by removing the RFID sled from the cradle and reinserting it. If the issue persists, contact Zebra Service to request a battery replacement.		
The sled LED blinks red, or LED blinks red, alternating with green or amber while in use (not while charging).	Battery end-of-life indication.	Contact Zebra Service to request a battery replacement.		
Zebra-supported mobile computer battery is not charging.	The charging cradle was unplugged from AC power.	Ensure the charging cradle is receiving power.		
	The Zebra-supported mobile computer is not fully seated in the cradle.	Remove and reinsert the Zebra- supported mobile computer into the cradle, ensuring it is firmly seated in the charging cradle.		
Data Communication				
During data communication with a host computer, no data transmitted or transmitted data is incomplete.	Sled removed from cradle during communication.	Replace the sled in the cradle and re-transmit.		
	Incorrect cable configuration.	Consult the system administrator.		
	Communication software was incorrectly installed or configured.	Perform setup.		
During data communication over Bluetooth, no data transmitted or transmitted data was incomplete.	The Bluetooth radio is not on.	Turn on the Bluetooth radio.		
	The sled moved out of range of another Bluetooth device.	Move within 10 meters (32.8 feet) of the other device.		
Decode				
The sled does not decode with a reading barcode.	The scanning application is not loaded.	Load 123RFID Mobile on the device or 123RFID Desktop on the PC. See the system administrator.		
	Unreadable barcode.	Ensure the symbol is not defaced.		
	The distance between the exit window and the barcode is incorrect.	Place the device within the proper scanning range.		
	The device is not programmed to generate a beep.	If the sled does not beep on a good decode, set the application to generate a beep on a good decode.		
	The battery is low.	Check the battery level if the sled stops emitting a laser beam upon a trigger press. When the battery is low, the sled shuts off before the low battery condition notification.		
Table 2 Device Troubleshooting (Continued	d)			
---	----			
---	----			

Problem	Cause	Solution	
Bluetooth			
The device cannot find any Bluetooth devices nearby.	Too far from other Bluetooth devices.	Move closer to the other Bluetooth device(s) within a range of 10 meters (32.8 feet).	
	The Bluetooth device(s) nearby are not turned on.	Turn on the Bluetooth device(s).	
	The Bluetooth device(s) are not in discoverable mode.	Set the Bluetooth device(s) to discoverable mode.	



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