

Solaria

User Guide



ersion 1.0



Release Notes

Dates	Release	Description		
2023 03 14	Version 1.0	Initial Release		



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1. Regulatory Regions

1.1. FCC Statement and IC Statement

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body



IC STATEMENT

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device. In additional, this device complies with ICES-003 of the Industry Canada (IC) Rules. Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Industry Canada licence-exempt RSS standard(s). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Note: French version please see end page.

1.2. European CE

Frequency range (CE) for RFID operation comprises:

1. 865-868 MHz band with 4 frequency channels



2. Introduction

2.1. SOLARIA Intelligent Integrated Reader with 1 External Port

The SOLARIA Integrated reader is an intelligent reader designed to work standalone in an autonomous manner. An intelligent Event Engine is embedded with configurable complex logic sequence, triggers and resultant actions that are automatically activated on power up. The settings can be saved and further deployed to as many readers, as many sites as you want, thus providing easy scalability for system integrators. SOLARIA integrated reader has 1 embedded antenna, plus 1 RF port that connects to an external antenna.



Figure 1. The SOLARIA reader has the following connectivity: Ethernet; GPIO; N-Type Antenna Port.

2.2. Software development kits

Software development kits are available in SSI website:

- 1) .NET API (HTTP)
- 2) .JAVA API
- 3) Custom Embedded RFID: sample codes in /opt



3. Reader Basics

3.1. Basic Hardware

The SOLARIA is an Integrated RFID reader.

Below is a side view of the SOLARIA Integrated Reader.

The LED indicators show the operating status of the reader.





LED	Operational description
Power	GREEN indicates power is applied to the reader
[PWR]	
Transmit	GREEN when transmitting
[TX]	
Error	RED indicates one or more radio error have occurred.
[ERR]	
STATUS	Ethernet Status. AMBER indicates the Link while the GREEN indicates the activity
	of the ethernet connection





Figure 3. SOLARIA connection diagram

Interface	Description
LAN	PoE+ (IEEE 802.3at Compliant (Type 2);
	Ethernet interface: IEEE 802.3 10BASE-T/100BASE-TX IEEE 802.3 compliant
	Ethernet transceiver through an RJ-45 connector that has PoE+ magnetics.
Power	DC power supply - 12V, 5A (60 Watts) Or PoE+ (IEEE 802.3at Compliant, 30W)
GPIO	4 pairs Opto-isolated inputs and outputs
Antenna Port	External Antenna port with N-type connector



3.2. Connectors pin out details.

The following diagram provides specific details regarding each connector type:



Figure 4. Different types of M12 connectors

Ethernet - LAN(PoE+):

Pin	Mode A	Mode B	Description		
1	Rx+, DC+	Rx+	LAN Rx+, DC+ for Mode A PoE Spec		
2	Rx-, DC+	Rx-	LAN Rx-, DC+ for Mode A PoE Spec		
3	Tx+, DC-	Tx+	LAN Tx+, DC- for Mode A PoE Spec		
4	Unused	DC+	DC+ for Mode B PoE Spec		
5	Unused	DC+	DC+ for Mode B PoE Spec		
6	Tx-, DC-	Tx-	LAN Tx-, DC- for Mode A PoE Spec		
7	Unused	DC-	DC- for Mode B PoE Spec		
8	Unused	DC-	DC- for Mode B PoE Spec		



Power - DC:

Pin	Signal	Description	Color
1	+V	Voltage (12-57v)	Brown
2	GND	Ground	White

GPIO

PIN	Signal	Description	Color	
1	GPO3	Open Collector General Purpose Output #3	Brown	
2	GPI1_3_Return	Optically isolated Input #1 and #3 common return	Blue	
3	GPI2	Optically isolated input #2	White	
4	GPI3	Optically isolated input#3	Green	
E	CDO2 2 Potura	Open Collector General purpose output #2 and #3	Dink	
5	GPO2_5_Return	common return	FILIK	
6	GPI1	Optically isolated input #1	Yellow	
7	GPO2	Open Collector General Purpose Output #2	Black	
	CDO0 1 Deture	Open Collector General purpose output #0 and #1	Crow	
ð	GPO0_1_Return	common return	Gray	
9	GPI0	Optically isolated input #0	Red	
10	GPO1	Open Collector General Purpose Output #1	Purple	
11	GPI0_2_Return	Optically isolated Input #0 and #2 common return	Red/Gray	
12	GPO0	Open Collector General Purpose Output #0 Red		



3.3. Hardware set up

a) DC Power

The Solaria reader can be powered up by (1) AC/DC power or (2) PoE+ (802.3at PSE,30W) injector

- Option 1: By AC Adaptor Unit [Optional Accessory]
 SOLARIA connect the AC adapter via the M12 Power cable and DC converter (optional).
 Please screw tight the lock on the M12 connector to ensure reliable power connection.
 By that way, the connector pair would not loosen up over time.
 With the power connected, the Power LED indicator should light up immediately.
- 2) Option 2: PoE+ (802.3at PSE,30W)SOLARIA also supports the use of Power over Ethernet (PoE+) to power up.

NOTE: It must be PoE Plus (comply with 802.3at) rated at 30W PSE to make sure enough power to SOLARIA.

Make sure you use PoE+ port or a PoE+ Switch to ensure SOLARIA receive enough power to operate. Alternatively, use a PoE+ injector for the power source.

b) RFID External Antenna Connection

With the external antenna port, SOLARIA can connect with one external RFID antenna with wrench (8mm torque with 100 N-cm).

Note: External antenna info as below:

- 1) Model: Kuma Gain: 10dBi Manufacturer: STAR Systems International Ltd.
- 2) Model: Avalon Gain: 13 dBi Manufacturer: STAR Systems International Ltd.
- 3) Model: Cheetah Gain: 12dBi Manufacturer: STAR Systems International Ltd.
- 4) Model: Avior Gain: 15dBi Manufacturer: STAR Systems International Ltd.



3.4. Mounting of the SOLARIA Reader

Installation method on metal poles:

Using the mounting bracket provided, the reader can be mounted onto a pole with a diameter of 40-60 mm.

1. Put on the mounting bracket in the orientation needed and put on the bolts. Tighten the bolts using a wrench.



IMPORTANT: ONLY USE THE BOLTS PROVIDED

2. Assemble the mounting bracket according to the figure shown.



3. Installing the Earth Cable on metal poles:

For proper and safe installation, you must properly ground the reader using a piece of suitable length earth wire connected on the reader side which is also attached the other end to a properly earthed location.

THIS IS REQUIRED TO FULFILL SAFETY AND REGULATORY REQUIREMENTS!





3.5. How to Connect to and Configure SOLARIA

User can connect to SOLARIA reader via Ethernet in the following ways:

- 1) Use the browser interface and the built-in event engine to configure the reader to run automatically based on certain logic sequence.
- 2) Write embedded program in the Linux OS inside directly to configure and control the reader.

To switch the connection interface, go to the browser interface, System/Access Mode page, and then choose the Access Mode, as shown below:

		System
Access Mod Access Mode : Set Cancel	e HTTP/XML ✓ HTTP/XML Unified API/High Level Unified API/Low Level Custom Embedded RFID	
	Access Mode : Set Cancel	Access Mode : HTTP/XML Set Cancel HTTP/XML Unified API/High Level Unified API/Low Level Custom Embedded RFID



3.6. Connecting to the SOLARIA reader using Browser

SOLARA Reader is set to connect to Ethernet in DHCP mode.

Connect Ethernet cable from your PC to the reader directly, or via an Ethernet switch while the reader is powered by DC adapter. Make sure the host is configured to work as a DHCP server. If the reader is powered up by PoE+ Switch or PoE+ injector, make sure the host is set in the same subnet and there should be a DHCP server in the subnet.

The reader may take up to 1 minute to boot up after connected the power.

Use a 3rd party IP scanning tool like <u>Advance IP Scanner</u>. Look for the Solaria Reader and its corresponding IP:



Open the browser and type in the IP found in the previous step. It is 192.168.10.84 in this example.



A User Login page will be shown

Key in	User	Name:	stars,	Password:	systems	then	click	Login
User	Logir	า						
User Passv Login	Name : vord :	stars	•					

The Status page is showed up after login.

	92.168.10.84/home//ilin/		2 A G 19 G 😔
OLARIA : Reader ID - IntelligeatRe sent Enabled : None	ader, Access Mode – HTTP/XML		
		Status	
Status	- RFID Management S	ystem	
ulsens System	+ Reader ID :	IntelligentReader	
Reader ID Company Label	Model Name :	Solaria-E	
Capture Point Name Access Mode	Host Name :	solaria-7684093e	
Custom Embedded RFID Application	Reader Serial # :	CHPA2241MP716028	
Frequency Configuration	PCB Serial # :	CHPA2241MP716028	
Operation Profile Advanced Settings	+ Freepency Band :	15	
SSI, Certificate	Regulatory Region :	ETSI	
Memory Information Power Up Notification	+ Access Mode :	HTTP/XML	
Hoart Boat	+ Up Time :	334.37 hours	
Reader Error Notification OPI Interrupt Notification	+ Free RAM Memory :	656 MBytes	
Configuration Backup / Restore Log File Configuration	+ Used RAM Memory :	243 MBytes	
Download Log File	Locid Time :	2023/04/04 Tuesday 17:03:16	
Schoduled Reboot Reboot System	Time Zone :	GMT+08:00	
etwark	+ UTC Time :	2023/04/04 Tuesday 09:03:16	
me & Timer ig & Ting Filter	+ Auto Logout Time :	60 minutes	
(PIO	+ * Enabled Events	None Enabled	

Default Access Mode should be HTTP/XML. Change the Access Mode if reader is not in HTTP/XML mode

- In order to read and show RFID tags in Web page, please change the Access Mode to "HTTP/XML" as shown below in System page.
- Please click "Set" to confirm the change.



			System
Status	Access Mod	de	
Users System Reader ID Company Label Capture Point Name Access Mode	+ Access Mode : Set Cancel	HTTP/XML HTTP/XML Unified API/High Level Unified API/Low Level Custom Embedded RFID	
Custom Embedded RFID Applicati Frequency Configuration	ion		

3.7. Connecting to the SOLARIA reader via SSH

Another popular way to connect to a Linux device is via SSH.

Choose SSH on the front page if using the application <u>PuTTY</u> or other SSH terminal program:

Start Putty, select SSH on Connection Type and type in IP address of SOLARIA, then click Open

Dategory:	Participation formalis DuTTY	and the second sec
Logging Terminal - Keyboard - Bell	Specify the destination you want to conner Host Name (or IP address) 192 168.10.84	etto Port 22
Features	Connection type:	
Benaviour Translation Selection Colours Connection Data Proxy SSH Serial Teinet Rlogin SUPDUP	Load, save or delete a stored session Saved Sessions Default Settings COM3_115200_8N1	Load
	COM7_11520_BNI_Regor COM7_9600_8NI_Carina	Saye Delete
	Close window on egit Always Never Only or	n clean exit
About	Hein Onen	Cancel



Next, you should type in

Login name : root

Password : hRd29sLr23

₽ 192.168.10.84 - PuTTY	-	×
🚰 login as:		^
		Ψ.





3.8. Embedded Linux Applications Development

By using SSH of SOLARIA reader, you can develop embedded Linux codes in the usual Linux development manner.

The SOLARIA Reader is using Yocto Linux.

For popular open source software, you can use the command "dnf" to download popular precompiled binaries (dnf is similar to apt-get) by the following steps below:

Step 1: type the command "dnf --refresh makecache" (beware of the double dash) to refresh the directory of available precompiled binaries

Step 2: type the command "dnf list" to list the available precompiled binaries in long name format.

Step 3: type the command "dnf list | grep <keyword of the application you want>" to narrow your search to those in long name format.

Step 4: type the command "dnf install <long name of the application as obtained from Step 3>"



3.9. GPIO Port and Accessories for Connection

SOLARIA has 4 General Purpose Inputs and 4 General Purpose Outputs, all of them are optically isolated, and also an isolated 12 Volt DC output power supply with a rating of 2 Watt.

GPIO



M12 Socket 12 Position A-Coded



4. GPIO Ports Connection Guide

SOLARIA GPIO ports are optically isolated switches only. There are various ways one can connect them up for common peripheral control. The following sub-chapters describe typical ways to connect up for General Purpose Input (GPI) and General-Purpose Output (GPO) operations.

The GPIO ports are optically isolated. To work with external relays or switches, an external power supply is needed. Some of the examples show how this is done in a safe manner. The important thing to remember is to handle exception cases when the load encounters a shorting failure, and the unlimited current can pass through that, and the optical isolated switch can be damaged if a protective resistor (high power resistor) is not placed in series with the power supply path. As long as a protective resistor is there, the overall circuit is protected. This is a standard industry practice.

4.1. General Purpose Input (GPI)

GPI ports contain an optical isolator inside. The input line has a series resistor of 1K Ohm with 1.5 Watt rating for protection. This will withstand external voltage up to 36 volts as shown below.

$$P = V^2 / R$$

P = 36² / 1000 = 1.296 Watt < 1.5 Watt

As such, the highest voltage the GPI port of the SOLARIA reader can be "seen" to be 36 volts.



Example 1: (GPI with +5V External Power Supply)

Each GPI pin pair "looks" into an optical isolator with an operational forward voltage of 1.2 Volt, maximum 50 mA current. An internal series 1K Ohm 1.5 Watt resistor is also present for protection.





Example 2: (GPI with +5V External Power Supply)

Each GPI pin pair "looks" into an optical isolator with an operational forward voltage of 1.2 Volt, maximum 50 mA current. An internal series 1K Ohm 1.5 Watt resistor is also present for protection.





Example 3: (GPI using the External +12V, 2 Watt Power Supply)

Each GPI pin pair "looks" into an optical isolator with an operational forward voltage of 1.2 Volt, maximum 50 mA current. An internal series 1K Ohm 1.5 Watt resistor is also present for protection.





Example 4: (GPI using the External+12V, 2 Watt Power Supply)

Each GPI pin pair "looks" into an optical isolator with an operational forward voltage of 1.2 Volt, maximum 50 mA current. An internal series 1K Ohm 1.5 Watt resistor is also present for protection.





4.2. General Purpose Output (GPO)

The maximum current that can pass through the GPO optically isolated switches of the SOLARIA reader is 2 Ampere.

Therefore, a protection resistor with very high-power rating must be added in series to the external circuit to limit the current to 2 Ampere. The value of this resistor should be such that the current cannot exceed 2 A.

Resistor Value = External Voltage / 2 A.

In addition, there is a resettable fuse internal to the GPO circuit in series with the circuit that will protect the switch as a last-ditch defense.

Example 1: GPO with +10V External Power Supply for High Load Current

A high wattage external resistor of **N** Ohm and rated to **P** Watt must be connected in case the LOAD shorts out. N and P must satisfy the following equation to limit current to 2 Ampere in such LOAD shorting situation: Resistance Value of Resistor:

N > Voltage of External Power Supply / 2

Power Rating of Resistor:

P > (Voltage of External Power Supply / N) ^2 * N

In this example, current in the load (e.g. a buzzer with 1K Ohm internal resistance) is calculated by the following equation:

ILOAD = (Voltage of External Power Supply – 0.6) / (N + RLOAD)

- = (10-0.6) / (10+1000)
- = 9.3 mA





Remark: The maximum current flowing through GPO pin pair is 2A







Remark: The maximum current flowing through GPO pin pair is 2A



5. Web Browser Interface Details

This chapter describes in detail the web browser interface. With SOLARIA, this web browser enables full control of the reader, including the event engine.

5.1. Home Page

The home page of the web-based administration interface can be entered by typing the IP address of the reader (default IP address is printed on the label) on the web browser.

For example, if the IP address of the reader is 192.168.10.84, you should type:

http://192.168.25.84

🗖 🕶 192.168.10.84/Login x +
← C G ▲ 不安全 192.168.10.84/Login
User Login
User Name : stars
Password :
Login

Use default User Name: stars and Password: systems and click Login to login to the Reader



5.2. Status

The "Status" page gives a quick overview of the status of the reader.

The reader basic information such as serial number and access mode can be found on the first page of status page



If any event was enabled and reading tag, the basic RFID related parameters will show on status page such as transmitting power, profile and session as below:



Status		and a second second second				
Users	+	Access Mode :	HTTP/XML			
System	+					
Vetwork	I	Up Time :	125.22 hours			
Tame & Tamer	1	E. BANKIN	0710			
SPIO	+	Free RAM Memory :	637 MBytes			
Events	-	Used RAM Memory :	244 MBytes			
Trigger	+					
Resultant Action	+	Local Time :	2023/03/27 Monday 19:18:43			
Event Management	+	Time Zone :	GMT+08:00			
Display Format	+	1010 2010 :	GHT 100.00			
Tag Inventory	-	UTC Time :	2023/03/27 Monday 11:18:43			
Capture Tags Raw Display Tag Group/I	Database	Auto Logout Time :	60 minutes			
Record Display Magnus Tag Data		Enabled Events : Default Event				
Version	+	Cloud Server Connection :				
Firmware Upgrade						
		Scheduled Reboot :	Not Enabled			
		Antenna Port 3 (External) Power	Not Enabled			
		Antenna Port 4 (Internal) Power :	30.0 dBm			
		Profile ID :	Default Profile			
		Tag Population :	50			
		Session No. :	0			
		PCB Version :	2.8			
		OS Version :	Linux v4.14.78-imx_4.14.78_1.0.0_ga+g94da7bd			

All firmware versions are shown on status page.

	192.168.1	0.84/home.html	2 A" 16 17 🗎 🗎 🥹
DLARIA : Reader ID = Intelligent vent Enabled : None	Reader, Acc	cess Mode = HTTP/XML	
		St-t	
		Status	
	1	RFID Management Syste	em -
Status			
Sustam	+	Scheduled Reboot :	Not Enabled
Reader ID			
Company Label		Antenna Port 3 (External) Pow	er : Not Enabled
Capture Point Name		- mental for o (External) fow	
Access Mode	- 1	Antenna Port 4 (Internal) Powe	r : Not Enabled
Custom Embedded RFID Application	. 1	Profile ID :	
Frequency Configuration		Tag Population :	
Operation Profile	+	rug r opulation .	
Advanced Settings	+	Session No. :	
SSL Certificate		DOD II.	
Memory Information		PCB version :	2.8
Power Up Notification		OS Version :	Linux v4.14.78-imx_4.14.78_1.0.0_ga+g94da7bd
Add Power Up Notific	cation		
Delete Power Up		Java Version :	1.8.0_221
Notification		RFID Firmware Version	26.45
List Power Up Notific	ation	The say I minimus version .	
Heart Beat	+	Web Application Version :	1.4.47
Reader Error Notification	+		
GPI Interrupt Notification	+	RFID JNI Library Version :	1.1.20
Configuration Backup / Resto	re +	GPIO JNI Library Version :	1.0
Log File Configuration			
Download Log File		Network Setting :	Ethernet
Scheduled Reboot			
Reboot System	-		Enable : true



Network information can be found on status page such as IP and Mac address

RFID Management Syste	m	
Tag Population :		
Session No. :		
PCB Version :	2.8	
OS Version :	Linux v4.14.78-imx	_4.14.78_1.0.0_ga+g94da7b
Java Version :	1.8.0_221	
RFID Firmware Version :	2.6.45	
Web Application Version :	1.4.47	
RFID JNI Library Version :	1.1.20	
GPIO JNI Library Version :	1.0	
Network Setting :	Ether	met
	Enable :	true
	Connection Type :	DHCP
	IP Address :	192.168.10.84
	MAC Address :	00057B84093E
	Subnet Mask :	255.255.255.0
Gataway	192 168 10 254	

5.3. Users Management

The "Users Management" page contains sub-menu for adding, deleting and modifying password, set auto-

logout time and login/logout.

				Users
Status	U	ser Account Table		
Jsers Add User	-	User Name		Description
Delete User	r	oot	top level administrator	
Modify Password	s	tars	general user	
List Users	-			
Set Auto Logout Time				
Logout				
lystem	+			
letwork	+			
me & Timer	+			
ag & Tag Filter	+			
PIO	+			
vents	+			
ersion	+			
irmware Upgrade	+			



5.3.1. Modify Password

To modify password, input the current password, new password and retype new password. Then click "Modify".

Status		Modify User Password
Users	_	
Add User		User Name : root
Delete User		
Modify Password		
List Users		New Password :
Set Auto Logout Time		
Logout		Repeat New Password :
System	+	
Network	+	Modify Cancel
Time & Timer	+	
Tag & Tag Filter	+	
GPIO	+	
Events	+	
Version	+	
Firmware Upgrade	+	



5.3.2. List Users

The "List Users" page lists all the users and his/her authority.

SOLARIA : Reader ID = Intelliger Event Enabled : None	atReader, Acce	ess Mode = HTTP/XML			
				Users	
Status	2	User Account Table			
Users Add Licer	-	User Name			Description
Delete User		root	top level administrator		
Modify Password		stars	general user		
List Users			4		
Set Auto Logout Time					
Logout					
System	+				
Network	+				
Time & Timer	+				
Tag & Tag Filter	+				
GPIO	+				
Events	+				
Version	+				
Firmware Upgrade	+				

5.3.3. Set Auto Logout Time

The "Set Auto Logout Time" page allows ones to set the time for automatic logout if the user is idle.

SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML Event Enabled : None						
				System		
Status	5		Set Auto Logout Time			
Users	Add User	-	Auto Logout Time (minute, 0 = login session never expire) : 60			
	Delete User Modify Password		Set Cancel			
	List Users					
	Set Auto Logout Time Logout					
Syste	m	+				
Netwo	ork	+				
Time	& Timer	+				
Lag &	lag Filter	+				
Event	s	+				
Versio	n	+				
Firmw	are Upgrade	+				


5.3.4. Login/Logout

The "Login/Logout" page is for users to login or logout the web browser interface.

E = 19	2.168.10.20/Login	× +
User Login		192.108.1020/£0311
User Name :	root	
Password :		
Login		

5.4. System

The "System" page contains many sub-menus to configure the reader for operation. Users are recommended to access these pages to determine the required settings before any operation.

← ○ 命 ▲ 不定主 192.16	1020 Porne Ann	A 10	sh 🔞	4 0
SOLARIA : Reader ID = IntelligentReader, / Event Enabled : None	oreen Mode = HTTP-XML System			
Status	Reader ID			
Uwes + System - System - Reader ID Carponey Lated Carpone Transition Carpone Transition Carpone Transition Carpone Transition Carpone Transition Carpone Transition Carpone Transition Carpone Transition Advanced Settings + SSC. Configuration Hender Entry NetTransition Carponetics Historican Carponetics Historican Carponetics Historican Carponetics Historican Carponetics Historican Companion Biochury Henders Configuration Downtood Log File Schodule Robod	Reader ID: intelligentificator Description :			
Network + Time & Timer + Tog & Tog Filter +				
GPIO + Events +				
Version +				
Firmware Upgrade +				
Application Version 1.4.46. Reader ID =	PC UTC Time 2023/03/14 10:3 PC UTC Time 2023/03/14 10:3	7:22 PC Local 7	ime 2023/0	3/14 18:37



5.4.1. Reader ID

Here is the "Reader ID" submenu:

Status	Reader ID
Users	
System -	Reader ID : IntelligentReader
Reader ID	
Company Label	Description :
Capture Point Name	
Access Mode	Modify Cancel
Custom Embedded RFID Application	
Frequency Configuration	

5.4.2. The Capture Point Name can be modified in this page

The name of each antenna port refers to the Capture Point Name (Some may refer to read point name). This name can be configured. In other words, each antenna port (or capture point, or read point) can be uniquely identified and accessed or referred to. Note that the word capture and read are interchangeably used in the context of this reader. A capture point is the same as a read point.

Status	Reader ID	
Users + System -	Capture Point	Name
Reader ID	Antenna Port 3 (External)	Capture Point 3
Company Label	Antenna Port 4 (Internal)	Capture Point 4
Access Mode	Modify Cancel	
Custom Embedded RFID Application		



5.4.3. Access Mode

Here is the "Access Mode" submenu:

					System
Status		Access Mod	le		
Users	+	Access Mode :	HTTP/XML	v)	
System	-		HTTP/XML		
Company Label Capture Point Name		Set Cancel	Unified API/High Level Unified API/Low Level Custom Embedded RFID		
Access Mode Custom Embedded RFID A Frequency Configuration	pplication		<u></u>		

SOLARIA offers 4 access modes:

- 1. HTTP/XML
- 2. Unified API/High Level
- 3. Unified API/Low Level
- 4. Custom Embedded RFID



5.4.3.1. Set Access Mode

If you configure the reader on the web interface (e.g. Network setting, Time settings, Event Engine, etc.), you must set the Access Mode to "HTTP/XML".

If you configure the reader using your own embedded control system, please set the Access Mode to "Custom Embedded RFID HTTP" and then configure it accordingly.

Status		Access Mod	e	
Users System	+ -	Access Mode :	Unified API/Low Level	
Reader ID Company Label		Set Cancel	Unified API/High Level Unified API/Low Level	Click here to
Access Mode	ion		Custom Embedded RFID	show all available
Frequency Configuration Operation Profile	+			access mode

5.4.3.2. Custom Embedded RFID application

This page is used to input custom embedded RFID application path and its command. This command will be

run on power on – provided Access Mode has been changed to "Custom Embedded RFID HTTP".



If one SSH into the reader, and change directory to /opt, you will indeed see a sub-directory with that name. If you go into that sub-directory, you will then see the program example.c and the related makefile and other resources. This example.c code demonstrates how to run the RFID circuits inside to do inventory. You can modify that code or build your own company's code based on that.



5.4.4. Frequency Configuration

The "Frequency Configuration" page allows user to configure the frequency to be used by the reader. Please refer to the regulatory law of your region for the allowed frequency to be used. Here is the "Frequency Configuration" submenu:

				System
944VA		Frequency Configurat	ion	
itatus				
Isors	+	Regulatory Region :	FCC N	
Reader ID	-	sugaratory sugara	100	
Company Label		Frequency Order :	Hopping	
Capture Point Name				
Access Mode		Hopping Channels (MHz) :	902.750	
Custom Embedded REID Applicat	ion.		903.250	
Frequency Configuration	0.000		903.750	
Operation Profile	+		904.250	
Advanced Settings	4		904.750	
SSI, Certificale			005 250	
Memory Information			905-230	
Power Up Notification	4		905.750	
Heart Beat	+		906.250	
Reader Error Notification	4		906.750	
GP1 Interrupt Notification	4		907-250	
Configuration Backup / Restore	+		907.750	
Log File Configuration	1		908.250	
Download Log File			908.750	
Scheduled Reboot			909.250	
Reboot System			000 200	
letwork	+		909,750	
me & Timer	+		910.250	
ng & Tag Filter	+		910.750	
PIO	+		911.250	
vents	+		911.750	
ersion immedia Unorada	1		912.250	
	1		912.750	
			013 250	
			017.750	
			914.750	
			914.250	
			914.750	



5.4.5. Operation Profile

The "Operation Profile" page is extremely important as it sets the basic RFID parameters of the reader.

Status		Operation Profile						
Jøers System	+	Profile ID :	Default Profile					
Reader ID Company Label		Capture Point :	Antenna			Transmit	Power (dBm)	Dwell Time (ms)
Capture Point Name Access Mode			Antenna Port 3 (Ext	ernal) (Name : Capl	ture Point 3)	30.0	0	2000
Custom Embedded RFID Application Frequency Configuration			Antenna Port 4 (Inte	mai) (Name : Capt	ure Point 4)	30.0	0	2000
Operation Profile Add Profile	-	Reader Mode/Link Profile :	1. Range/Dense Reader	*				
Delete Profile List Profile		Session # :	S0 ¥					
Advanced Settings SSL Certificate	+	Target :	A∕B Toggle ∽					
Memory Information		Retry :	0					
Power Up Notification Heart Beat	++	TagFocus (Impinj Tags Only):						
Reader Error Notification	+	Fast ID (Impinj Tags Only) :						
Configuration Backup / Restore	+	Query Algorithm :	Dynamic Q 🖌					
Log File Configuration Download Log File		Tag Population :	50 0	Q = 6				
Scheduled Reboot Reboot System		Tag Model :	Any v					
etwork ime & Timer	+++	Multi Bank Inventory :	Extra Bank	Bank	Offset		Count (# of W	(ords)
ng & Tag Filter PID	+	incorrect setting would cause no tag return	First Extra Bank	Security (Bank 0) 👻	0	0	1	0
vents Insion	+++		Second Extra Bank	Security (Bank 0) v	0	0	1	0
mwere upgrade	*	Reflected Power Threshold (dBm) :	24.0					
		Pre-Filter : max. 7 pre-filters	None v					
		Post-Filter :	None v					
		Automatic Reconfigure Antenna Port in case of Antenna Port Error :	Retry Error Antenn	a Port Every 20		secon	d (0 = never ref	ry)
		Unlock Modify Modify & Lock Modify & Permaloc	k Cancel					

Parameter	Description
Profile ID	Each profile can be saved and recall for use in Event
	Engine, or be uploaded and redeployed to other SOLARIA
	reader in the field.
Capture Point	Which antenna port to enable (turn power on) and the
	output conducted power of each antenna port, in terms
	of 10 x Power (dBm)
	Dwell time of each antenna port – how long the reader
	will stay in that particular antenna port to do RFID tag
	inventory in each antenna cycle.



Reader Mode/Link Profile	There are different Reader Modes:
	0- Best Multipath Fading Resistance
	1 – Longest Read Range, Dense Reader Mode
	2 – Read Range and Throughput, Dense Reader Mode
	<i>3</i> – Maximum Throughput
	Please see Appendix B for more details
Session #	Session # S0, S1, S2, and S3, as defined by EPC
Target	Flag A, B or A/B Toggle of the tag to be inventoried
Query Algorithm	Fixed Q or Dynamic Q Algorithm
Tag Population	Estimated population of tags to be read at a time.
	Based on this tag population estimate, the corresponding
	Q parameter to be broadcasted during a Query will be
	displayed on the right side of the edit box
Multi Bank Inventory	SOLARIA has a unique multi-bank inventory capability: up
	to 2 more banks, with each bank's starting address and
	length of words to be captured configurable
LNA	Control RF front end gain of reader
TagFocus	Enabling TagFocus feature can reduce the time to finish
	reading high number of tags. Pls note this feature can
	only work with those tags got this feature
FastID	If this feature was enabled, the tag chip with this
	feature, will backscatters the EPC and TID together during
	an inventory. Pls note this feature can only work with
	those tags got this feature
Tag Model	For special feature tag such as temperature reading, right
	model must be chosen



5.4.6. Memory Information

The "Memory Information" page shows the RAM and Flash memory used and free (available for use).

It also displays the Clear Cache cycle time. This is the periodic time when the Linux OS cache is cleared.

	Syste	m			
Custom Embedded RFID	Memory Information				
Frequency Configuration	Local Time :	2023/04/0	4 Tuesday	17:34:55	
peration Profile +	Un Time (hour) :	334 88			
Advanced Settings +	op mie (nod).	554.00			
SSL Certificate	DAM (MD-4)	Total	Used	Free	Buffer/Cached
Memory Information	RAM (MBytes) :	1000	245	652	104
Power Up Notification -					
Add Power Up Notification	Flash Memory (MBytes) :	Total	Used	Free	
Delete Power Up Notification		8132	4937	3195	
List Power Up Notification	Clear Cache Cycle Time (Hou	rs): 6			
Hoart Bost	Modify Cancel				
real bear +					

5.4.7. Configuration Backup/Restore

The "Configuration Backup/Restore" page allows backup of configurations, restoring of configurations.

5.4.7.1. Configuration Backup

To backup configuration, click "Download" in "Configuration Backup" page. The system would start to backup the configuration to file.

		System
atus.	Configuration Backup	
5015	+	
stem	- Settings to be included in the backup file :	
Reader ID		
Company Label	Lat Users	
Capture Point Name	Operation Profile	
Access Mode		
Custom Embedded RFID Applic	on Power Up Notification	
Frequency Configuration	10 mm 2010 (1225) 12	
Operation Profile	+	
Advanced Settings	+ Reader Error Notification	
SSI Certificate	and second lines related to	
Momory Information	GPI Interrupt Notification	
Deves in Methoday	A CONTRACTOR OF A CONTRACTOR O	
Power Op Notication	Cloud Server Configuration	
Henry Henry	+ R Charles and	
Feeder Enter Notification	+ La Cloud Server	
GPI Interrupt Notification	+ Data Format	
Configuration Backup / Restore		
Backup	TCP Listening Port Configuration	
Restore		
Log File Configuration	Mag Group	
Download Log File	19 Tag Eilter	
Scheduled Reboot	an regination	
Reboot System	Trigger	
itwark	+	
me & Timer	+ 🖾 Resultant Action	
g & Tag Filter	+	
10	+ El Display Format	
onts	+ Exent Management	
mware Lisenado	-	
under of the sec	Ethernet, WiFi, Time Zone, NTP and other settings	



5.4.7.2. Configuration Restore

To restore backup configuration, click "Choose File". Then select the backup configuration file and click

"Open".

SOLARIA : Reader ID = Intelligent Event Enabled : None	Reader, Access Mode = HTTP/XML			System
Status Users System Reader ID Company Label Capture Point Name Access Mode Custom Embedded RFID Appl Frequency Configuration Operation Profile Advanced Settings SSL Certificate Memory Information Power Up Notification Heart Beat Reader Error Notification	Configuration Restore + System will be restarted after rest Choose File Choose File Ication Restore + + + + + + + + + +	toration completed!		
 Open ← → ✓ ↑ → This Organize ▼ New folder 	PC > Desktop > norman > 463 >	manual > tem3 - マ さ) Search tem3	×
 OneDrive This PC 3D Objects Desktop Documents Downloads Music Pictures Videos Windows (C:) HP_RECOVERY (HP_TOOLS (E:) 	Name ConfigurationBackup_20181108_02 Type: Fi Size: 5.4 Date m	Date modified 18 11/8/2018 10:18 AM Ie 17 KB odified: 11/8/2018 10:18 AM	Type File	Size 6 KB
File <u>n</u> an	ne: ConfigurationBackup_20181108_021	8	✓ All Files <u>Open</u>	∼ Cancel



5.4.8. Power Up Notification

System can send power up notification to server with a particular format if it is enabled

5.4.8.1. Add Power Up Notification

Event Enabled : None	cess vioue = 1111/XviL
	System
Status	Add Power Up Notification
Users + System - Reader ID Company Label Capture Point Name Access Mode Custom Embedded RFID Application Frequency Configuration Operation Profile + Advanced Settings + SSL Certificate Memory Information	Power Up Notification ID : Type : HTTP POST Server ID : Example Free Cloud Server Data Format ID : Example Power Up Notification Data Format Enable : Add Cancel
Power Up Notification – Add Power Up Notification Delete Power Up Notification List Power Up Notification	

5.4.9. Heartbeat

Heartbeat is used to monitor the system if it is running

5.4.9.1. Add Heat Beat

The Heartbeat sending interval, type and address sending should be set on Add Heart Beat as below.

	System	
Status Jsers System	Add Heart Beat	
Reader ID Company Label Capture Point Name Access Mode Custom Embedded RFID App Frequency Configuration Operation Profile Advanced Settings SSL Certificate Memory Information Power Up Notification Heart Beat Add Heart Beat Delete Heart Beat List Heart Beat	Interval (s) : 30 Type : ICMP Ping v Address : v Reset Network : Reset Ethernet v port if no reply the set of the set	after 5 consecutive times fail



If the HTTP Post type server is selected, corresponding Server and Data Format should be selected as below. Server and Data Format was defined in Cloud Server page.

Status		Add Heart Beat
Status Users System Reader ID Company Label Capture Point Name Access Mode Custon Embedded PEID Analis	+ -	Heart Beat ID : Interval (s) : Type : HTTP POST v
Cusion Embedded RFID Applica Frequency Configuration Operation Profile Advanced Settings SSL Certificate	+ +	Server ID : Example Proce Cloud Server • Data Format ID : Example Power Up Notification Data Format • : Reset Network : Reset [Ethernet •] port if no reply after 5 consecutive times fail
Memory Information Power Up Notification Heart Beat Add Heart Beat	+ -	Enable : Add Cancel
List Heart Beat List Heart Beat Reader Error Notification	+	

5.4.10. Log File Configuration

There are different types of log files which can be enabled as shown below.

		System
Shahur.		Log File Configuration
loors	1	
System	<u> </u>	Enable Linux Syslog :
Reader ID		
Company Label		Enable System Log :
Capture Point Name		
Access Mode		Enable Health Log .
Custom Embedded RFID Applica	tion	Enable JNI Server Log : 🜌
Frequency Configuration		
Operation Profile	+	Modify Cancel
Advanced Settings	+	
SSL Certificate		
Memory Information		
Power Up Notification	+	
Heart Beat	20	
Add Heart Beat		
Delete Heart Beat		
List Heart Beat		
Reader Error Notification	+	
GPI Interrupt Notification	+	
Configuration Backup / Restore	+	
Log File Configuration		
Download Log File		
Scheduled Reboot		
Reboot System		
Vetwork	+	
lime & Timer	+	
ag & Tag Filter	+	
3PIO	+	
Events	+	
Version	+	
immware Upgrade	+	



5.4.11. Download Log file

All Log files can be download on this page, select Log files type going to download then click Download to

start download.

SOLARIA : Reader 1D = Intelligen Event Enabled : None	tReader, Ac	cess Mode = HTTP/XML System	
Status Users Sustem	+	Download Log File	
Reader ID Company Label		System Log :	
Capture Point Name Access Mode		Health Log :	
Application Frequency Configuration		Download Cancel	
Operation Profile Advanced Settings	++		
Nemory Information Power Up Notification			
Heart Beat Reader Error Notification	+++++++++++++++++++++++++++++++++++++++		
GPI Interrupt Notification Configuration Backup / Rest	+ =		
Log File Configuration Download Log File Scheduled Reboot			
Reboot System	-		
Application Version 1.4.46, Rea	der ID = In	telligentReader, Access Mode = HTTP/XML	PC UTC Time 2023/03/17 08:52:23 PC Local Time 2023/03/17 16:52:2

5.4.12. Company Label

Company label can be shown on web page and was defined on this page

		Sys	tem	
Chakus		Company Label		
otatus Lisers				
System		Company Label :		
Reader ID				
Company Label		Modify Cancel		
Capture Point Name				
Access Mode				
Custom Embedded RFID Application				
Frequency Configuration				
Operation Profile	+			
Advanced Settings	+			
SSL Certificate				
Memory Information				
Power Up Notification	+			
Heart Beat	+			
Reader Error Notification	÷.			
GPI Interrupt Notification	1 I I			
Configuration Backup / Resto	re +			
Log File Configuration				
Download Log File				
Scheduled Reboot				
Reboot System				



5.4.13. Advanced Settings

The reader sensitivity can be set on this page by changing the parameters below.

🖻 😁 RFID Reader											
← 〇 向 ▲ 不安全	192.168.10.20/home.html						îò	ť≡		•	
SOLARIA : Reader ID = IntelligentReade Event Enabled : None	rr, Access Mode = HTTP/XML	System									
	Configure RELNA an	d IF I NA Gain									
Status	Configure Re Liver an	a ii Livri Galli									
Users +											
System -		RF LNA Compression mode :	1								
Reader ID											
Company Label		RF LNA Gain :	1dB								
Capture Point Name	Settings read from reader :	IEINIA Color	2440								
Access Mode		IF LINA Gam :	240B								
Custom Embedded RFID Application		AGC Gain :	-6dB								
Frequency Configuration											
Operation Profile +											
Advanced Settings -		RF LNA Compression mode :	1.								
Configure RF LNA and IF LNA Gain	Cattings units to use day .	RF LNA Gain :	1dB 🕶								
SSL Certificate	Settings while to reader .	IF LNA Gain :	2448 🛩								
Memory Information			(2100-1)								
Power Up Notification +		AGC Gain :	-6dB 🛩								
Heart Beat +											
Reader Error Notification +	Confirm Concel										
GPI Interrupt Notification +	Conten										
Configuration Backup / Restore +											
Log File Configuration											
Download Log File	-										
Application Version 1.4.46 Reader ID) = IntelligentReader, Access Mode =	HTTP/XML		PC UTC Time 2023/0	3/17 08	55-44	PCLA	cal Time	2023/0	3/17 16-	55-44

5.4.14. Scheduled Restart

RFID Reader						100	-	٥
← 〇 〇 ▲ 不安全	192.168.10.20/home.html			îò	ť≡		•	
SOLARIA : Reader ID = IntelligentReade Event Enabled : None	r, Access Mode = HTTP/XML							
	System							
Custom Embedded RFID Application	Scheduled Reboot Setup							
Frequency Configuration Operation Profile +	Schedule Mode : [Daity 👻]							
Advanced Settings + SSL Certificate	Reboot Time : 17.59 (local time in 24-hour form of hh:mm, e.g. 00:00, 23:59)							
Memory Information Power Up Notification +	Enable :							
Heart Beat + Reader Error Notification +	It is strongly recommended that at least a quarterly reboot is scheduled.							
GPI Interrupt Notification + Configuration Backup / Restore +	in case scheduled reboot cannot be arranged due to unknown hittire schedule, use API to invoke a reboot	at time	of con	venieno	e at least	once a	quarter.	
Log File Configuration Download Log File	Confirm Cancel							
Scheduled Reboot Reboot System								
Network +								
Time & Timer +								
Tag & Tag Filter +								
Events ±								
Version +								
Firmware Upgrade +	•							
Application Version 1.4.46, Reader III	= IntelligentReader, Access Mode = HTTP/XML PC UTC Time 2023/0	3/17 08	:56:35	PC Lo	cal Time	: 2023/0	3/17 16;	56:35

System Restart can be scheduled on this page



5.5. Restart System

To restart the system, input "Y" and click "Confirm"

Y must be capital letter





5.6. Network Management

"Network Management" page allows the user to set the network parameters. Here is the network

management sub-menu:

The connection can be static IP or DHCP

Connection Type can be set to static IP as below

Network					
Status	3	Ethernet Configu	iration		
Users System	++++	Ethernet			
Network Ethernet Configuration	-	Connection Type :	Static IP V		
Cloud Server	+	IP Address :	192.168.10.105		
Time & Timer	+	Subnet Mask :	255.255.255.0		
Tag & Tag Filter GPIO	+++	Gateway :	192.168.25.1		
Events	+	DNS Server 1 :	8.8.8.8		
irmware Upgrade	+	DNS Server 2 :	192.168.25.1		
		TCP Retry Count :	3 (Applicable to both Ethernet and WiFi interface)		
		TCP Retry Count : Set Cancel	3 (Applicable to both Ethernet and WiFi interface		

Connection Type can be set to DHCP as below.

SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML Event Enabled : None							
Network							
Status		Ethernet Configuration	n				
Users System	++++	Ethernet					
Network Ethernet Configuration	-	Connection Type :	DHCP V				
Cloud Server TCP Listening Port Configuration	+	Fallback Link-Local Fixed IP :	✓ IP Address : 169.254.20.100	(This item cannot be modified)			
Time & Timer Tag & Tag Filter GPIO	+ + +	TCP Retry Count :	3 (Applicable to both Ethernet and WiFi interface)				
Events Version Firmware Upgrade	+ + +	Set Cancel					



5.6.1. Ethernet Configuration

In "Network Configuration" page, one can configure the network parameters such as the reader IP address, Subnet mask, Gateway and DNS server.

RFID Reader					D
← C 命 ▲ 不安全	192.168.10.20/hom		A* Q 🔓 📬	@	
SOLARIA : Reader ID = IntelligentRead Event Enabled : None Status Users System Network Ethernet Configuration Cloud Server TCP Listening Port Configuration Time & Timer Tag & Tag Filter GPIO Events Version Firmware Upgrade	<pre>ter, Access Mode = HT ter, Access Mode</pre>	Network Configuration Type : Static IP • 192 168.10.84	sce)		
Application Version 1.4.46, Reader II	D = IntelligentReader,	Access Mode = HTTP/XML	PC UTC Time 2023/03/17 09:00:17 PC Local Tim	ie 2023/03/17 17	:00:17



5.7. Time and Timer Setting

Here is the "Time and Timer Setting" submenu:

						Time	& Time
tus		Set Sy	stem UT	C Date/	Time		
\$	+	Local D	ate and Ti	me			
n	+	Year	Month	Day	Hour	Minute	Second
	+	2023	03	17	17	01	46
imer Date/Time	-						
Time Zone		Set UT	C Date and	Time			
NTD Satur		Year	Month	Day	Hour	Minute	Second
a Eiltor		2023	03	17	09	01	46
ig rinter	+						
	Ť	Rat	Concel				
	I	Set	Jancer				
Lingrado	Ť						

5.7.1. Date/Time

The "Date/Time" page allows the user to set the real time clock inside the reader. Please configure the UTC (GMT) time on the reader. The local time will then be calculated based on the time zone that is being set. Note that for some countries, Daylight Savings Time is applied.

S ader ID = Intelligent E : None	Reader, Acce	ess Mode =	HTTP/XM	1L				
			Tim	e & Ti	mer			
Status		Set Sy	stem UT	C Date/	Time			
Users	+	Local D	ate and Ti	me				
System	+	Year	Month	Day	Hour	Minute	Second	
Network	+	2023	03	14	18	56	18	
Time & Timer	-							
Date/Time								
Time Zone		Set UTC	Date and	Time				
NTP Setup		Year	Month	Day	Hour	Minute	Second	
Tog & Tog Filter		2023	03	14	10	56	18	
GPIO	- <u>+</u>	Set C	`opool					
Events	+	Ser	ancer					
Version	+							
Firmware Upgrade	+							

Warning: After changing the date and time, the reader may pause reading 30-60 seconds for re-initiation. It is recommended not to open the "Capture Tags Testing" page in "Tag & Tag Filter" for viewing tags during this period.



5.7.2. Time Zone

The time zone can be set on this page

SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML 1								
Time & Timer								
Status		Set System Time Zone						
Users	+	Time Zone : (UTC+08:00) Beijing, Chongging, Hong Kong SAR, Urumgi						
System	+							
Network	+	Set Cancel						
Time & Timer	-							
Date/Time								
Time Zone								
NTP Setup								
Tag & Tag Filter	+							
GPIO	+							
Events	+							
Version	+							
Firmware Upgrade	+							

5.7.3. NTP Setup

This page allows one to setup the NTP server. The SOLARIA reader will update its time by connecting to the NTP server at a preset time and preset mode. Be sure to enter the gateway and DNS server in the network configuration page in order for the NTP server be reachable by the reader.

SOLARIA : Reader ID = Intellige Event Enabled : None	ntReader, Acce	ess Mode = HTTP/XML
		Time & Timer
Status		NTP Setup
Users System Network Time & Timer Date/Time	+ + + -	Automatically update time NTP Server 1 : time.nist.gov NTP Server 2 : pool.ntp.org
Time Zone NTP Setup		Update Mode : Everyday 🗸
Tag & Tag Filter GPIO Events	+++++++	Update Time : 01 : 00
Version Firmware Upgrade	+++++	Set Set and Update Now Cancel



5.8. Tag & Tag Filter

The "Tag & Tag Filter" page allows you to create the Tag group or Tag database which will be used in Trigger page and define filter to be enabled on operation profile. In actual deployment, RFID reader is used to do security screening of incoming or outgoing objects. A list of predefined tag IDs can be downloaded to each RFID reader so that the RFID reader will distinguish whether that tag belongs to that list (tag group or tag database). Only when a tag belongs to that group would the RFID reader carry out further action as stipulated by the event – for example open the gate.

5.8.1. Tag Group

Tag groups can be created and download from the SOLARIA reader as follow

• Add tag group

Go to Tag group in Tag & Tag Filter and click Add Tag Group

Input the new tag group name as below

		Tag & Tag Filter	
Status		Add Tag Group	
Users	+		
System	+	Tag Group ID :	
Network	+		
Time & Timer	+	Add Cancel	
Tag & Tag Filter	-		
Select Tag			
Read/Write Tag			
ASCII Read/Write Tag			
FM13DT160			
UCODE DNA			
Magnus			
Tag Group	-		
Add Tag Group			
Delete Tan Group			
List Tea Group			
Ten Database			
Tag Database	+		
Tag Hitter	+		
GPIO	+		
Events	+		
Version	+		



Click Add to confirm the new group

Add Tag ID to the group

Click Add to add new tags to the group and below menu will pop up

Click confirm the to confirm the addition of new tag to the tag group

SOLARIA : Reader ID = Intelligenti Event Enabled : None	Reader, Acco	ess Mode = HTTP/XML Tag & Tag Filter
Status Users System Network Time & Timer Tag & Tag Filter Select Tag Read/Write Tag ASCII Read/Write Tag FM13DT160 UCODE DNA Magnus Tag Group Add Tag Group Delete Tag Group	+ + + +	Tag Group Tag Group ID : 30624700 Tag I Add Tag ID : Confirm Cancel



Click Save to save the new tag group

SOLARIA : Reader ID = IntelligentRe Event Enabled : None	eader, Acc	sess Mode = HTTP/XML
		Tag & Tag Filter
Status Users System Network Time & Timer Tag & Tag Filter Select Tag Read/Write Tag ASCII Read/Write Tag FM13DT160 UCODE DNA Magnus Tag Group Add Tag Group Delete Tag Group List Tag Group	+++++ +	Tag Group Tag Group ID : TagGroup 3 Tag IDs : 123456789012345678901234 Delete Delete All Import
Tag Filter GPIO Events Version Firmware Upgrade	+ + + + +	Save Save & Download Cancel
Firmware Upgrade	+	

Import New tag ID

Click Import then select the tags record file

💿 Open						Х
← → × ↑ 📙 « Desk	top > norman > 463 > manual > tagdata	~ č) Search tagdata			Q
Organize 🔻 New folder						?
This PC	Name	Date modified	Туре	Size		
🗊 3D Objects	E28011606000020D76E3448F.txt	11/13/2018 11:28	Text Document		2 KB	
E. Desktop						
Documents						
🖊 Downloads						
🔎 Galaxy S8						
b Music						
Pictures						
📕 Videos						
🏪 Windows (C:)						
HP_RECOVERY (
📥 HP_TOOLS (E:) 🗸						
File nan	ne: F28011606000020D76F3448E.txt		✓ All Files			\sim
			<u>O</u> pen	•	Cancel	



New Tag ID was added to the window

		Tag & Tag Filter
Tag Group		
Tag Group ID	TepOrove 4	
Tag IDs :	201710000000000000000000000000000000000	
Save Save 8	Dewnload Cancel	

Click Save to save new record to the tag group

Click Save & Download

All record in the tag group was saved to file as below

	Tag & Tag Filter
Tag Group	
Successful!	



5.8.2. Tag Database

Database can be created in reader for user to link tag with database record include basic information such as Vehicle name, plate number and corresponding photo, then show the record on web page after proper event defined.

The defined database can be shown on page List Database

🗈 🔤 RFID Reader							
← ○ ◎ ▲ 不安全 19	2.168.10	20/home.html			6 @	Q,	
SOLARIA : Reader ID = IntelligentRead Event Enabled : None	der, Acce	ess Mode = HTTP/XML Tag & Tag Filter					
Statur		Database Table					
Users	-						_
System	+	Database Name		Tab	le Name		
Network	+	ExampleDatabase	Tag				
Time & Timer	+	ReaderDBDemo	Tag				
Tag & Tag Filter	-	Kasterizizente	rag				
Select Tag							
Read/Write Tag							
ASCII Read/Write Tag							
FM13DT160							
UCODE DNA							
Magnus							
Tag Group	+						
Tag Database	-						
Configuration							
Add Database							
Delete Database							
List Database							
Input Data to Database	+						
Database Backup / Resto	re +						
Tag Filter	+						
GPIO	+						
Events	+						
Version	+						
Firmware Upgrade	+						

The location of Database in reader can be set on Database Configuration submenu.



	Tag & Tag Filt	er.
Status	Database Configuration	
Users		
System	Database Path : //run/media/mmcblk	2p5/mysql
Network		
Time & Timer	Modify Cancel	
Tag & Tag Filter	Lances Tel Constrained	
Select Tag		
Read/Write Tag		
ASCII Read/Write Tag		
FM13DT160		
UCODE DNA		
Magnus		
Tag Group		
Tag Database		
Configuration		
Add Database		
Delete Database		
List Database		
Input Data to Database		
Database Reduin (Dest		
Delabase Dackup / Nest		
Tag Filter		
GPIO		
Events		
Version		
Firmware Upgrade		

Database can be added on Add Database submenu as below

			Tag &	Tag Filt	er				
Status	A	dd Da	atabase						
Users	+								
System	+ D	atabase	•						
Network	+ ^N	ame :							
Time & Timer	+ Ta	able	-						
Tag & Tag Filter	- N	ame :	lag						
Select lag									
Read/Write Tag	Fi	ields :		Name		D	ata Type		
ASCII Read/Write Tag									
FM13DT160			EPC		Key Field	S	STRING 🗸		
UCODE DNA								-	
Magnus		dd C	ancol						
Tag Group	+		ancer						
Tag Database	-								
Configuration									
Add Database									
Delete Database									
List Database									
Input Data to Database	+								
Database Backup / Restor	e .								
	+								
Tag Filter	+								
0010	.								



Particular Database can be deleted on Delete Database

Event Enabled ; None	Tag & Tag Filter	
Status Users System Network Time & Timer Tag & Tag Filter Select Tag Read/Write Tag Magnus UCODE DNA	Delete Database Database Name : vou ReaderD8Demo v Delete Cancel	
Tag Group		
Tag Database Configuration Add Database Delete Database List Database		
Input Data to Database Database Backup / Restore		

All defined database can be shown on List Database Submenu as below

SOLARIA : Reader ID = Intelligent Event Enabled : None	eader, Acc	ess Mode = HTTP/XML	
		Tag & Tag Filter	
Status		Database Table	
Users	+	Database Name	Table Name
Network	I	ExampleDatabase	Tag
Time & Timer	I	ExampleDatabase	lag
Tag & Tag Filter	1.1	ReaderDBD	Tag
Select Tag			
Read/Write Tag			
ASCII Read/Write Tag			
FM13DT160			
UCODE DNA			
Magnus			
Tag Group	+		
Tag Database	_		
Configuration			
Add Database			
Delete Database			
List Database			
Input Data to Databas	e 🕂		
Database Backup / Restore	+		
Tag Filter	+		
GPIO	+ .		
	•		
Application Version 1.4.46, Read	er ID = Inte	elligentReader, Access Mode = HTTP/XML PC U	TC Time 2023/03/17 09:20:27 PC Local Time 2023/03/17 17:20:27



Tag Record in a particular database can be added after choosing right database

SOLARIA : Reader ID = Intell Event Enabled : None	ligentReader, Ac	ccess Mode = HTTP/XML	
		Tag & Tag Fil	ter
Status		Add Tag Record	
Users	+	Select Database : ExampleDatabase ~	
System	+		
Network	+	Confirm	
Time & Timer	+		
Tag & Tag Filter Select Tag	-		
Read/Write Tag			
ASCII Read/Write Tag			
FM13DT160			
UCODE DNA			
Magnus			
Tag Group	+		
Tag Database	-		
Configuration			
Add Database			
Delete Databas	se		
List Database			
Input Data to D	atabase -		
Add Re	ecord		
Delete	Record		
List Re	ecord		
Database Back	tup / 🚬 👻		
Application Version 1.4.46,	, Reader ID = In	telligentReader, Access Mode = HTTP/XML	PC UTC Time 2023/03/17 09:22:49 PC Local Time 2023/03/17 17:22:49

The Tag Record content can be added to database on this page

SOLARIA : Reader ID = IntelligentRe Event Enabled : None	ader, Acc	eess Mode = HTTP/XM	L Tag & Tag Filter
Time & Timer	T .	Add Tag Record	1
Tag & Tag Filter Select Tag	-	Database Name :	ExampleDatabase
Read/Write Tag ASCII Read/Write Tag		EPC :	
FM13DT160 UCODE DNA		UIDofEquipment :	
Magnus Tag Group	+	PhotoofEquipment :	Choose Image
Tag Database Configuration	-		Do not use image larger than 1MByte
Add Database Delete Database		StaffID :	
List Database Input Data to Database	-	StaffPhoto :	Choose Image
Add Record Delete Record			Do not use image larger than 1MByte
List Record Database Backup / Restore	+	Add Cancel	
Tag Filter	÷		
GPIO	+		
Events	+ *		
Application Version 1.4.46, Reade	ID = Int	elligentReader, Access 1	Mode = HTTP/XML PC UTC Time 2023/03/17 09:26:40 PC Local Time 2023/03/17 17:26:40



Tag Record in a particular database can be deleted after choosing right database

Event Enabled : None		
		Tag & Tag Filter
		Delete Tag Record
Status		
Users	+	Select Database : CSLReaderDBDemo 🗸
Network	÷	
Time & Timer	~ _	Contirm
Tag & Tag Filter	-	
Select Tag		
Read/Write Tag		
Magnus		
UCODE DNA		
Tag Group	÷	
Tag Database	-	
Configuration		
Add Database		
Delete Database		
List Database		
Input Data to Database	-	
Add Record		
Delete Record		
List Record		
Database Backup / Restore	6 - C	
	÷	
Tag Filter	÷	
1/0	÷	
Events	÷	
Version	+	
Firmware Upgrade	+	

Click Delete to delete a particular record on selected Database as shown on below

Status Users + System + Network + Tag & Tag Filter + Select Tag Read/Write Tag Magnus UCODE DNA Tag Group + Tag Database - Configuration Add Database Delete Database - Add Record Delete Record List Record Database Backup / Restore + Tag Filter +
I/O 中 Events 中 Version 中 Firmware Upgrade 中



Tag Record in a particular database can be modified on List Tag Record submenu after choosing right database as below

Event Enabled : None		
		Tag & Tag Filter
Status		List Tag Record
Users	÷	Select Database : CSI ReaderDBDemo
System	÷	
Network	+	Confirm
Tag & Tag Eilter	-	
Select Tag		
Read/Write Tag		
Magnus		
UCODE DNA		
Tag Group	÷	
Tag Database	-	
Configuration		
Add Database		
Delete Database		
List Database		
Input Data to Database	-	
Add Record		
Delete Record		
List Record		
Database Backup / Restor	re +	
Tag Filter	+	
1/0	+	
Events	÷	
Version	+	
Firmware Upgrade	÷	
Status		Tag Record Table
Users	+	Dathe Mar French Dather
System	+	Database Name . ExampleDatabase
Network	+	EPC UIDofEquipment StaffID
Time & Timer	+	123456780013245678001324 88888888866666666666661324 700204888870030466661324
Tag & Tag Filter	-	125436789012343678901234
Select rag		
Read/white Tag		
ASCII Read/write Tag		
FM13DT160		
UCODE DNA		
Magnus		Click nere to start the
Tag Group	+	
Tag Database	-	modification
Configuration		
Add Database		
Delete Database		
List Database		
Input Data to Database	-	
Add Record		
Delete Record	0	
List Record		
Database Backup / Res	store	
	+	
Tag Filter	+	
GPIO	+	
Events	+	
version Firmware Ungrade	+	
r innware opgrade	+	
Application Version 1446 Reader	r ID = I	ntelligentReader. Access Mode = PC UTC Time 2023/03/14 11-08:52 PC Local Time 2023/03/14
ITTP/XML		19:08:52



The content of database on particular record can be modified on this page as below

			Tag & Tag Filter		
6.0		Tag Record			
15	-	ALCONDUCTION OF THE			
dem	+ 1	Dotabase Name :	sampioDatabase		
Swork.	+				
o & Timor	+ 1	IPC :	23456789012345670901234		
6 Tag Filter	-				
Select Tag	1	/IDofEquipment :	03000000000000001234		
Read White Tag					
ASCII Read Write Tag					
PM13DT100					
LICODE DNA					
Magnus					
Tad Group	4				
Tao Ostobene			Choose Image		
Contenation	1	PhotoodEquipment :			
Add Database			to not use image larger than 1MByte		
MOS CARGENSO					
Dease Database					
List Detabase					
Input Data to Database	1.000				
Add Record					
Dekete Record	t.				
List Record		staffID :	09394888870939466601234		
Delabase Backup / Re	store				
	+				
Tag Filter	+			0	
0	+				
ints.	+				
sion	+		A		
mware Upgrade	+		(Three lines		
	1.1	staffPhoto :			
			to not use image larger than 1MByte		

Then click Modify to confirm the modification

Each Database can be backup on Database Backup/Restore submenu as below after choosing target database

SOLARIA : Reader ID = Intelligent Event Enabled : None	Reader, Acc	ess Mode = HTTP/XML
	Ta	g & Tag Filter
Status Users System Network Time & Timer Tag & Tag Filter Select Tag Read/Write Tag ASCII Read/Write Tag FM13DT160 UCODE DNA Magnus Tag Group Tag Database Configuration Add Database	+++++ + + + + + + + + + + + + + + + + +	Backup Database Select Database : ExampleDatabase ExampleDatabase Backup Cancel ReaderDBDemo
Application Version 1.4.46, Read	ler ID = Inte	lligentReader,PC UTC Time 2023/03/14 11:10:20 PC Local

Click Backup to start the backup



Databases can be restored to system from pervious backup file as below

		Tag & Tag Filter
Status	<u>^</u>	Restore Database
Jsers	+	System will be restarted after restoration completed!
iystem	+	System win be restance and restolation completed.
letwork	+	Choose File
me & Timer	+	
ag & Tag Filter	1.00	
Select Tag		Restore
Read/Write Tag		
ASCII Read/Write Tag		
FM13DT160		
UCODE DNA		
Magnus		
Tag Group	+	
Tag Database	-	
Configuration		
Add Database		
	*	

5.8.3. Tag Filter

The tag filter was used to identify particular tags from a large population. There are two types of filter can be used including pre filter and post filter. If the pre filter is used, tags not matching filter will not respond while post filter, the reader will filter out all non matching tags after received all tags response.

All defined filters can be found in page *List Filter* under *Tag & Tag Filter* page as below

				Tag & Tag Filter			
	Tag Filter Table						
:	Filter ID	Тури	Bank	Mask	Offset (hits)	Pre-Filter Action	Post Filter Match/Not Match
+	20201030	PRE_FILTER	EPC (Bank 1)	20201030	0	0	
ner +	E2018	PRE_FILTER	EPC (Bank 1)	£2018	0	0	
Feter -	202010302	POST_FILTER	EPC (Bank 1)	20201030	0		Match
within Tar	BBBBBBB04	PRE FILTER	EPC (Bank 1)	BBBBBB04	64	2	
10000 + 10000se + 1740 - Antifare - Calles Filter - Lat Filter + Lat Filter + Lagrade + - 							



Filters can be added in Add Filter as shown below

		Tag & Tag Filter
Natus Sers Sers Vistem Read Tag Tag Filter Select Tag Read/Write Tag ASCII Read/Write Tag FM13DT160 UCODE DNA Magnus Tag Group Tag Database Tag Filter	+ + + + - Bank Mask Offse Action	I Tag Filter I Tag Filter II Tag Tag Not Matching
Add Filter Add Filter Delete Filter List Filter Onts	+++	0 assert SL or inventoried -> A 1 assert SL or inventoried -> A 2 do nothing 3 negate SL or (A-> B, B -> A
mware Upgrade	+	4 deassert SL or inverted 5 deassert SL or 6 do nothing Only tag with same character on memory bank beginning
		7 do nothing with will apply the action

Once filters are defined, they can be enabled in operation profile then take effect as shown below

.

			System				
		Operation Profile					^
atus		ragr ocus (impinj	0				-
ers	+	Tags Only) :					
Reader ID	-	Fast ID (Innini Tan					
Company Label		Only):					
Capture Point Name							
Access Mode		Query Algorithm :	Dynamic Q 🛩				
Custom Embedded RFID Application		Tag Population :	50 Q = 6				
Frequency Configuration		Tag Model :	Any				
Operation Profile	-	ing mouer .	ruly +				
Add Profile		Multi Bank Inventory	E	P	0.00	Constant and a la	
Delete Profile		:	Extra Bank	Bank	Oliset	Count (# of words)	
List Profile		Incorrect setting	First Extra Bank	Security (Bank 0) V	0	1	
Advanced Settings	+	would cause no tag			-		
SSL Certificate		return	Second Extra Bank	Security (Bank 0) ~	0	1	
Memory Information							
Power Up Notification	+	Reflected Power	24.0				
Heart Beat	+	Threshold (dBm) :	24.0				
Reader Error Notification	+	Des Filter					
GPI Interrupt Notification	4	Fierfiller,	None 👻				
Configuration Backup / Restore	+	max. 7 pre-filters	None				
Log File Configuration		Dest Filter	20201030 E2018				
Download Log File		Post-Filter :	BBBBBB04				
Scheduled Reboot		Automatic					
Reboot System		Reconfigure Antenna	Retry Error Anten	na Port Every 20	<		
twork	+	Port in case of Antenna	retry)		/	Chance the f	iltorto
e & Timer	+	Port Error :		(,	choose the t	mer to
& Tag Filter	+						
C	+ +	Unlock Modify Mod	fy & Lock Modify & Perm	alock Cancel	$\langle \rangle$	apply from	here



Any filters can be deleted from this page

SOLARIA : Reader ID = IntelligentReader, A Event Enabled : None	ccess Mode = HTTP/XML
	Tag & Tag Filter
Status Users + System + Network + Time & Timer + Tag & Tag Filter - Select Tag Read/Write Tag ASCII Read/Write Tag FM13DT160 UCODE DNA Magnus Tag Group + Tag Database + Tag Filter - Add Filter Delete Filter	Delete Tag Filter Tag Filter ID : 20201030 Delete Cancel
GPIO + Events + Version + Firmware Upgrade +	



5.9. I/O Management

The "I/O Port Testing" page allows users to test functionality of I/O port

5.9.1. I/O Port Testing

Below is the "*I/O Port Testing*" page, it allows one to look at sensor input (you MUST press the "Refresh" button to update the input state), and control the outputs for system testing.

		I/O			
Status Jsers System	+++	GPIO Port Testing Refresh			
etwork	+	GPIO Port	State	Output Control	GPI Interrupt Notification
g & Tag Filter	+	General Purpose Input Port 1	Low	N/A	None
10	-	General Purpose Input Port 2	Low	N/A	None
GPIO Port Testing		General Purpose Input Port 3	Low	N/A	None
rsion	++	General Purpose Input Port 4	Low	N/A	None
nware Upgrade	+	General Purpose Output Port 1	Opened	Close Open	N/A
		General Purpose Output Port 2	Opened	Close Open	N/A
		General Purpose Output Port 3	Opened	Close Open	N/A
		General Purpose Output Port 4	Opened	Close Open	N/A



5.10. Event Management

Event management is the most important part of the reader configuration. By setting it properly, you can handle business applications more efficient and autonomous. To create and enable an event, one needs to set up triggers, resultant actions, and then use that to assemble events. Once an event is created, the reader would run it accordingly. In other words, the reader is running autonomously.

🖬 🔤 RFID Reader	× -	+											- o
← ○ ◎ ▲ 不安全	192,168	10.20/incrine Hurri											
SOLARIA : Reader ID = IntelligentReade Event Enabled : None	r, Access	1 Mode = HTTP/XML				Events							
Status		Event Table											
Users System Network	+++++	Event ID	Description	Operation Profile	Exclusivity	Tag Duplicate Elimination Window (mi)	Inventory Enabling Trigger	Inventory Enabling Action	Trigger Logic	Resultant Action	Intension Disabiling Trigger	Inventory Disabiling Action	Enthie
Time & Timer Tag & Tag Filter	++++	Defmit Event	Ex Factory Default Event, Internal Antenna (Port 4)	Defsuit Profile	Non- exclusive	6000	Always On	None	Read Any Tags	None	Never Stop	None	Disable
GPIO Events	+	Example Tog Database Display:	Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	Nome	Tag Within Database Detected	Show on Display Tag Database Record Page	Never Stop	None	Disable
Trigger Resultant Action	++	Example TCP Send using CSV 2 Format	Internal Antenna (Port 4)	Default Profile	Non- exclusive	1000	Always On	None	Read Any Tags	Send TCP using CSV 2. Format	Never Stop	None	Disable
Event Management Add Event	-	Example Tags Group Display	display Group Tags - Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag within Tag Group Detected	Show on Display Tag Group Record Page	Never Stop	None	Disable
Delete Event List Event		Read Temp	Read Temperature from Magnus S3 Tag - Internal Antenna (Port 4)	Read Temp Magnus S3	Non- exclusive	0	Always On	None	Read Temp tag	Pulse 2s	Never Stop	None	Disable
Display Format Tag Inventory	+ +	Read Moisture	Read moisture from Magnas S2 Tag - Internal Antenna (Port 4)	Read Moisture S2	Non- exclusive	0	Always On	None	Read 52	None	Never Stop	None	Disable
Version Firmware Upgrade	+ +	MQTT		Default Profile	Non- exclusive	65000	Always Ou	None	Tag within Tag Group Detected	MQTT AND Pulse 2s	Never Stop	None	Disable
		Tag Data Send from TCP Listening Port 50008	1	Defsuit Profile	Non- exclusive	60000	Always On	None	Read Any Tags	TCP Send by Listening Port inside Reader	Never Stop	None	Disable



5.10.1. Event Management

Here is the "Event management" submenu:

Note that there is ex-factory a "Default Event" running the "Default Profile". It comes disabled (in the Enable column, it is False). Once you enable it, it will start reading RFID tags from Port 1 (assuming an antenna is connected to Port 1 for model SOLARIA and there are RFID tags in front of the antenna)

SOLARIA : Restler ID = Intelligent Event Enabled : Neue	(Render, Acc	xss Mode – HTTP/XML				Events							
Satus		Event Table											
Usons System	-	Event ID	Description	Operation Profile	Exclusivity	Tag Duplicate Elimination Window (ms)	Inventory Easting Trigger	Inventory Enabling Action	Trigger Logic	Resultant Action.	Inventory Disabiling Trigger	Inventory Disabling Action	Eashie
Tere & Teres	++	Default Eyent	Ex Fac ory Default Event, Internal Antena (Port 4)	Default Profile	Non- esclusive	6000	Always On	Neue	Read Any Tage	Noue	Never Stop	None	Disable
GPIO Eventa	4	Display	Internal Anteuna (Port 4)	Test Tag Database Profile	Non- euclusive	1000	Always On	None	Tag Within Database Detected	Show on Display Tag Database Record Page	Never Stop	None	Disable
Trigger Resultant Action	+++++	Example TCP Sand using CSV 2 Format	Internal Antenno (Port 4)	Default Profile	Non- enclusive	1000	Ahaays On	Norm	Real Any Tags	Send TCP using CSV 2 Format	Never Stop	None	Disable
Event Management Add Event	-	Example Tags Orosp Display	display Oroup Tags - Internal Anterna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	Nete	Tag within Tag Group Detected	Show on Display Tag Group Record Page	Never Slop	None	Disable
Delete Event		Rend Damp	Read Temperature from Magmus S3 Tag. - Internal Antenna (Port 4)	Read Temp Magnus S3	Non- exclusive	0	Always On	Norm	Read Temp Isg	Pulse 2s	Never Stop	Nime	Disable
Display Format	+	Rend Moistare	Read moisture from Magaza S2 Tag - Internal Antenna (Port 4)	Read Moisture 82	Non- exclusive	0	Always On	None	Reed S2	None	Never Slop	None	Disable
Version Firmwier Upgrade	+	MQTI		Default Profile	Non- exclusive	65000	Always On	None	Tag within Tag Group Detected	MQTT AND Palse 2s	Never Stop	None	Disable
		Trg Data Send from TCP Lintuning Post 50008		Default Profile	Non- exclusive	60000	Always On	None	Read Any Tags	TCP Send by Listening Port inside Reader	Never Stop	None	Disable

5.10.1.1. Add Event

Below is the "Add Event" page:

			Events		
Status		Add Event			
Jsers System	+++	Event ID :			
letwork ime & Timer	+++++++++++++++++++++++++++++++++++++++	Description :			
SPIO	+	Operation Profile :	Default Profile	•	
Trigger	+	Exclusivity :	Non-exclusive ~		
Event Management	-	Tag Duplicate Elimination Window :	1 minutes 0 seconds		
Delete Event List Event		Tag Duplicate Eliminate Antenna Differentiation :	0		
Display Format	+	Inventory Enabling Trigger :	Always On		
lersion	+	Inventory Enabling Action :	None VIAND V	None	~
innware opgrade	+	Trigger Logie :	Read Any Tags	~	
		Resultant Action :	None v	AND ¥	
		Inventory Disabling Trigger :	Never Stop		
		Inventory Disabling Action :	None VIAND V	None	•
		Enable Event :	0		

Input *Event ID* field for each event.



One should select the operation profile for the event. This operation profile is defined in the "System" page "Operation Profile" submenu.

The *Inventory Enabling Trigger* is the initial trigger that turns on the RF power of the reader to start doing inventory. This trigger can be set to be "Always On" and then the reader will do inventory the moment the reader is powered on. Note that this trigger has to be defined in the Trigger page. Note that if one wants the reader to be always on, simply choose "Always On" in the *Inventory Enabling Trigger* field.

The *Inventory Enabling Action* is the action that accompanies an inventory enabling trigger. For example, one may want to turn on a signal light when the inventory starts.

Once the inventory enabling cycle is entered, then the event engine would look for actual event triggers, and these triggers can be Boolean operated together as defined in the entry *"Trigger Logic"*. The Trigger Logic is a Boolean combination of triggers that are defined in the *"Trigger"* page which will be described later.

When the Trigger Logic is satisfied, the event is established, and the resultant actions are defined in *"Resultant Action"* section. Again, it can be a combination, sequential (THEN) or (AND), of actions.

The overall inventory enabling cycle is ended based on the triggers defined in *"Inventory Disabling Trigger"* section. Sometimes this can be other sensor at the exit of the reader read zone, or it can be defined as a period of time of no tag reads. If the user wants the reader to be always reading tags, then the selection "Never Stop" should be chosen here.

The *Inventory Disabling Action* is the action that accompanies the inventory disabling trigger. For example, one may want to turn off a signal light (that was turned on due to an inventory enabling action as described before) when the inventory is stopped.


5.10.1.2. Modify Event

To modify event, go to "List Event" page and select the "Event ID", modify the event and click "Modify".

SOLARIA : Reader ID = Intelligent	Reader, Acce	ss Mode = HTTP/XML	
Event Enabled - None			Fvents
		Event	
Status	+		
System	+	Event ID :	Default Event
Network	+		
Time & Timer	+	Description :	Ex Factory Default Event, Internal Antenna (Port 4)
Tag & Tag Filter	+		
GPIO	+	Operation Profile :	Default Profile
Events	-	Exclusivity .	
Trigger	+	Exclusivity.	
Resultant Action Event Management	+	Tag Duplicate Elimination Window :	0 minutes 6 seconds
Add Event Delete Event List Event		Tag Duplicate Eliminate Antenna Differentiation :	
Display Format	+	Inventory Enabling Trigger :	Always On 🗸
Tag Inventory Version	+++++++++++++++++++++++++++++++++++++++	Inventory Enabling Action :	None Item Item
Firmware Upgrade	+	Trigger Logic :	Read Any Tags
		Resultant Action :	None THEN THEN
		Inventory Disabling Trigger :	Never Stop 🗸
		Inventory Disabling Action :	None VITHEN VINone V
		Event Enabled :	
		Unlock Modify Modify & Loc	k Modify & Permalock Cancel
Application Version 1.4.46, Read	der ID = Intel	ligentReader, Access Mode = HT	TP/XML PC UTC Time 2023/03/14 11:26:44 PC Local Time 2023/03/14 19:26:44



5.10.1.3. Enable/Disable Event

SOLARIA : Reader ID = IntelligentRea Event Enabled : None	der, Access Mo	de = HTTP/XML	
]	Events
Status Users System	+ + + Eve	ent ent ID :	Default Event
Network Time & Timer Tag & Tag Eitter	+ + Des	scription :	Ex Factory Default Event, Internal Antenna (Port 4)
GPIO Events	+ Ope	eration Profile :	Default Profile
Trigger Resultant Action Event Management	+ Exc + Tag - Wit	clusivity : ; Duplicate Elimination ndow :	Non-exclusive × 0 minutes 6 seconds
Add Event Delete Event List Event	Tag Ant	Duplicate Eliminate tenna Differentiation :	
Display Format Tag Inventory	+ Inv	entory Enabling Trigger :	Always On 🗸
Version Firmware Llograde	+ Inv	entory Enabling Action :	None
r mnware opgraue	Trig	gger Logic :	Read Any Tags
	Res	sultant Action :	None THEN THEN
	Inv	entory Disabling Trigger :	Never Stop 👻
	Inv	entory Disabling Action :	None V THEN V None V
	Eve	ent Enabled :	
	Uni	ock Modify Modify & Lock	Modify & Permalock Cancel
Application Version 1.4.46, Reader	ID = Intelligentl	Reader, Access Mode = HTT	PC UTC Time 2023/03/14 11:26:44 PC Local Time 2023/03/14 19:26:44

To enable/disable event, select/de-select the checkbox "Enable Event" and click "Modify".



5.10.1.4. Delete Event

To delete event, select the "Event ID" and click "Delete".

SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML Event Enabled : None					
	Events				
Status Users	Delete Event				
System Network	+ Delete Cancel				
Time & Timer Tag & Tag Filter GPIO					
Events Trigger					
Resultant Action Event Management	+ -				
Add Event Delete Event					
List Event Display Format					
Version Firmware Upgrade	+ + +				

5.10.1.5. List Event

Below is the "List Event" page:



5.10.2. Trigger

A trigger is a stimulus that causes the reader to recognize it and do something about it.

The trigger is used in Inventory Enabling, Inventory Disabling, and of course inside the actual Event Triggering Logic section. Below is the "Trigger" submenu:

	- Contractor			
	Trigg	per Table		
		Trigger ID	Description	Trigger Mode
	Real	Any Tays		Read Any Tags (any ID, 1 trigger per tag)
	Pert.	Level High Tripper		Input Sensor State
	Real	Tags Every 10 Seconds	Time Elapsed Type Trigger	Specified Time Span elapsed
	- Infra	and Sensor OPI Port 1 High		Input Sensor State
	- Infra	nd Seasor GPI Port 2.High		Input Sensor State
	Tag. M	tithin Tag Group Detaated		Trigger in Tag Group
	Read	Any Taga bigger than -60 dBm		Trigger if RSSI larger than or equal to
0	· Des.Y	Vithin Database Detected		Trigger in Tag Database
	+ Top is	n Default DB		Trigger in Tsg Database
	P. Read	Temp tea	Read Temp tag	Trigger if Temperature is larger than or equal to
	Band	52	Messnare Measure	Trigger if Moistner is larger than or equal to
	ctenix			Trigger if Temperature is larger than or equal to
	Tes f	Ion Antona Port 4		Trigger in Tag Group
	Tre 6	ion Antenna Port 4 within Registered Tay Group		Trigger in Tag Orosa

5.10.2.1. Add Trigger

Below is the "Add Trigger" page:

Status		Add Trigger		
Users System	+++	Trigger ID :		
Network	+			
Time & Timer	+	Description :		
Tag & Tag Filter GPIO	+++	Trigger Mode :	Read Any Tags (any ID, 1 trigger per tag)	~
Events Trigger	_	Capture Point :	Antenna Port 3 (External) (Name : Capture Point 3)	
Add Trigger Delete Trigger List Trigger			Antenna Port 4 (Internal) (Name : Capture Point 4)	
Resultant Action	+	Add Add & Lock	Add & Permalock Cancel	
Event Management	+			
Display Format	+			
Tag Inventory	+			
Version	+			
Firmware Upgrade	+			

There are many different types of triggers shown below:



Add Trigger	
Trigger ID :	
Description :	
Trigger Mode :	Read Any Tags (any ID, 1 trigger per tag)
	Read Any Tags (any ID, 1 trigger per tag)
Capture Point :	Input Sensor State
	No Tag Read in Specified Time Span from Start of Inventory
	No Tag Read in Specified Time Span from last Tag Read and Triggered
	Trigger in Tag Group
Add Add & Lock	Trigger in Tag Database
	Trigger if RSSI larger than or equal to
	Trigger if Moisture is larger than or equal to
	Trigger if Moisture is less than or equal to
	Trigger if Temperature is larger than or equal to
	Trigger if Temperature is less than or equal to
	Specified Time Span elapsed

- 1. "Read Any Tags (any ID, 1 trigger per tag)" would look at tags coming into the antenna ports (or capture points), the ones being ticked here would be selected, and will generate 1 trigger per tag (different ID) notification. By selecting which antenna port one can then select tags read by specific antennas to trigger an event. Note that in Time Windowed Mode there is a duplicate elimination action within each time window, and for the same ID within that window, it will only be recorded once into the buffer unless the box called "Antenna Differentiation" in the Event Management page is ticked, in that case the same tag read by different antennas will generate different triggers. Hence for each different ID within that duplicate elimination time it will generate an event.
- 2. "Input Sensor State" would look at the state (high or low) of one of the general-purpose IO input.
- 3. "No Tag Read in Specified Time Span" would check if for a specified time read, no tag passes through the reader read zone.
- 4. "Trigger in Tag Group" would check if any tag is within a pre-defined tag group.
- 5. "Trigger if RSSI larger than or equal to" would check if read tag rssi is larger or equal to defined value
- 6. Specified Time Span elapsed".



For "read any tags" trigger, the user also has to specify which antenna port or capture point it is collecting the tags from. To choose it, just tick the box on the left of each entry.

		Add Trigger		
Status		Add Trigger		
Users	+			
System	+	Trigger ID :		
Network	+			
Time & Timer	+	Description :		
Tag & Tag Filter	+	Timeral		
GPIO	+	Trigger Mode :	Read Any Tags (any ID, 1 trigger per tag)	~
Events	-	Capture Point -		
Trigger	-	Capture Fornt .	Antenna Port 3 (External) (Name : Capture Point 3)	
Add Trigger				
Delete Trigger			Antenna Port 4 (Internal) (Name : Capture Point 4)	
List Trigger				
Resultant Action	+	Add Add & Lock	Add & Permalock Cancel	
Event Management	+			
Display Format	+			
Tag Inventory	+			
/ersion	+			
Firmware Upgrade	+			

For "*Input Sensor State*" trigger, the Port Number 1 shown on below, is mapped to physical GPI1 port which using pin 2 /pin12 of GPI1 terminal (GPI1 ports details see section 5.8).

Level "*High*" was selected on below case so the trigger will be set if there is high voltage applied on pin2 (GPI1(+)) and pin 12 (GPI1(-)) is properly connected

	Events
Status	Trigger
Users + System +	Trigger ID : Infrared Sensor GPI Port 1 High
Time & Timer +	Description :
GPIO + Events -	Trigger Mode : Input Sensor State
Trigger	Port Number : 1 Level (High/Low) High
Delete Trigger List Trigger	Mode : Level Change V
Resultant Action +	Unlock Modify Modify & Lock Modify & Permalock Cancel
Display Format +	
Tag Inventory + Version +	
Firmware Upgrade +	



5.10.2.2. Modify Trigger

To modify trigger, go to List Trigger and select the "Trigger ID", modify the Trigger and click "Modify".

	Events
Status Users +	Trigger
System + Network + Time & Timer +	Trigger ID : Read Any Tags Description :
Tag & Tag Filter + GPIO + Events -	Trigger Mode : Read Any Tags (any ID, 1 trigger per tag)
Trigger – Add Trigger Delete Trigger List Trigger	Capture Point : Antenna Port 3 (External) Name : Capture Point 3)
Resultant Action +	Unlock Modify Modify & Lock Modify & Permalock Cancel
Event Management +	
Display Format +	
Tag Inventory +	
Version +	
Firmware Upgrade +	



5.10.2.3. Delete Trigger

To delete trigger, select the "Delete Trigger" and click "Delete".

			Events
Status		Delete Tr	igger
Isers	+	Trigger ID :	Infrared Sensor GPI Port 1 High
ystem	+		Infrared Sensor GPI Port 1 High
etwork	+	Delete Can	Infrared Sensor GPI Port 2 High
ne & Timer	+		Dest 1 Level High Trigger
g & Tag Filter	+		Port I Level High Trigger
IO	+		Read Any Tags
ents	-		Read Any Tags bigger than -60 dBm
Trigger	-		Read S2
Add Trigger			Read Tags Every 10 Seconds
Delete Trigger			Read Temp tag
List Trigger			Tag Within Database Detected
Resultant Action	+		Tag from Antenna Port 4
Event Management	+		Tag from Antenna Port 4 within Registered Tag Group
Display Format	+		Tag in Default DB
Tag Inventory	+		Tag within Tag Group Detected
rsion	+		ctesius
rmware Upgrade	+		



5.10.2.4. List Trigger

Below is the "List Trigger" page.

	Event		
latus	Trigger Table		
sers	+ Trigger ID	Description	Trigger Mode
etwork	+ Read Any Tags		Read Any Tags (any ID, 1 trigger per tag)
me & Timer	+ Port 1 Level High Trigger		Input Sensor State
ig & Tag Filter	+ Read Tags Every 10 Seconds	Time Elapsed Type Trigger	Specified Time Span elapsed
vents	- Infrared Sensor GPI Port 1 High		Input Sensor State
Trigger	- Infrared Sensor GPI Port 2 High		Input Sensor State
Add Trigger	Tag within Tag Group Detected		Trigger in Tag Group
List Trigger	Read Any Tags bigger than -60 dBm		Trigger if RSSI larger than or equal to
Resultant Action	+ Tag Within Database Detected		Trigger in Tag Database
Event Management	+ Tag in Default DB		Trigger in Tag Database
Display Format	+ Read Temp tag	Read Temp tag	Trigger if Temperature is larger than or equal to
Tag Inventory	+ Read S2	Moisture Measure	Trigger if Moisture is larger than or equal to
ersion irmware Upgrade	+ ctesius		Trigger if Temperature is larger than or equal to
	Tag from Antenna Port 4		Trigger in Tag Group
	Tag from Antenna Port 4 within Registered Tag Group		Trigger in Tag Group

5.10.3. Resultant Action

The "Resultant Action" pages define the resultant action that will be enforced when an event logic is established. Below is the "Resultant Action" submenu:

	Resultant Action Table		
Status Users +	Resultant Action ID	Description	Action Mode
Vetwork +	Turn ON LED on GPO Port 1		Output Port
Time & Timer +	Turn OFF LED on GPO Port 1		Output Port
Tag & Tag Filter +	Turn ON LED on GPO Port 2		Output Port
Events -	Turn OFF LED on GPO Port 2		Output Port
Trigger +	Open Boom Barrier on GPO Port 3		Output Port
Resultant Action -	Close Boom Barrier on GPO Port 3		Output Port
Delete Resultant Action	Save to External USB Memory	Save to USB using CSV format	Save to External USB Memory
List Resultant Action	Show on Display Tag Database Record Page		Display Tag Database Record
Event Management 🔸	Send TCP using CSV 2 Format		Low Latency Alert to Server
Display Format +	Show on Display Tag Group Record Page		Display Tag Group Record
Tag Inventory +	test5	null	Instant Alert to Server (No Duplicate Elimination)
Firmware Upgrade +	Pulse 2s		Output Port
	MQIT		Low Latency Alert to Server
	TCP Send by Listening Port inside Reader		Alert on TCP Listening Port



5.10.3.1. Add Resultant Action

There are 8 types of action:

SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML Event Enabled : None					
		Events			
Status Users System Network Time & Timer Tag & Tag Filter GPIO Events Trigger Resultant Action Add Resultant Action Delete Resultant Action Delete Resultant Action Event Management Display Format Tag Inventory Version Firmware Upgrade	Add Resultant A + Resultant Action ID Description : + Condition : - Action Mode : - Add Add & Lock + + + + + + + + +	ction			
Application Version 1.4.46, Reader I	D = IntelligentReader, Access N	/lode = HTTP/XML	PC UTC Time 2023/03/17 09:53:21 PC Local Time 2023/03/17 17:53:21		

- Do Nothing (Only Show on Screen) Nothing is affected, except the tags collected can be shown on browser screen. Note that there are APIs that can collect the tag IDs or information on demand from the remote server. So, this is actually a polling mode in terms of collecting tag information.
- 2. Batch Alert to Server here the collected tag information is sent to Server at the end of each duplicate elimination cycle (Time Window)
- 3. Instant Alert to Server here the collected tag information is sent to Server immediately as it is read.
- 4. Low Latency Alert to Server
- 5. Output Port here the General-Purpose IO output port would be controlled to have certain level change or pulse or even pulse train.
- 6. Save to External USB Memory here the tag information was sent to external USB flash memory.
- 7. Display Tag Database Record
- 8. Display Tag Group Record

If one selects "Batch Alert to Server", "Low Latency Alert to Server" or the "Instant Alert to Server", then one has to select the Server ID, which is defined in the Trusted Server page of the Network page. The user has to select the Server ID and Data format ID that are going to use.



			Events
Status Users + System + Network + Time & Timer + Tag & Tag Filter + GPIO + Events - Trigger + Resultant Action -	++++++	Add Resultant Action Resultant Action ID : Description : Condition : Action Mode : Batch Alert Time Cycle (s)	None Batch Alert to Server : 60
Add Resultant Action Delete Resultant Action List Resultant Action		Transport Type :	HTTP POST
Event Management Display Format	+++++++++++++++++++++++++++++++++++++++	Server ID : Data Format ID :	Example Free Cloud Server Example Power Up Notification Data Format
Version Firmware Upgrade	++++	Add Add & Lock Add &	Permalock Cancel

Data Format ID is defined in Cloud Server page

		Network		
Status		Data Format Table		
Users System	+	Data Format ID	Description	Format
Network	<u> </u>	Example Power Up Notification Data Format		JSON
Ethernet Configuration		Example Tag Upload to Cloud Server Data Format		JSON
Cloud Server	-	Example Heart Beat Data Format		JSON
Configuration		Save to CSV File Format		CSV
Add Cloud Server		Save to CSV 2		CSV
List Cloud Server		ontenno portigene 1	reflected power too high	ISON
Add Data Format		TCD Date Engineer 2	Teneeted power too night	CON
Delete Data Format		<u>ICP Data Format 2</u>		CSV
List Data Format				
TCP Listening Port Configuration				
Time & Timer	+			
Tag & Tag Filter	+			
GPIO	+			
Events	÷.			
Firmware Upgrade	+			



Different field can be added to reporting format as below

			Network			
Status		Data Forma	at			
Users System Network Ethernet Configuration Cloud Server Configuration	+++	Data Format ID : Description : Format :	Example Tag Upload to Cloud Server Data	Format		
Add Cloud Server Delete Cloud Server List Cloud Server Add Data Format Delete Data Format		Parameters :	SequenceNumber NumberOfTags EthernetMACAddressWithColon WiFiMACAddressWithColon HeartReatFlan		Field	Label
List Data Format TCP Listening Port Configuration			TimeOfHeartBeat TimeStampOfHeartBeat PowerLinElag		RFIDReaderSerialNumber	rfidReaderSer 🗙
Tag & Tag Filter GPIO	++++		TimeOfPowerUp TimeStampOfPowerUp		RFIDReaderInternalSerialNumber	rfidReaderInte X
Events Version Firmware Upgrade	++++++		ReaderErrorCode ReaderErrorCode		EthernetMACAddress	pcEthernetMA ×
			ReaderErrorAntennaPort ReaderErrorReflectedPower ReaderErrorReflectedPowerThreshold		WiFiMACAddress	pcWiFiMACA(
			TimeOfReaderError TimeStampOfReaderError GPIPort		TimeZone	timeZone X
			InterruptType TimeOfInterrupt TimeStampOfInterrupt		TagDataList 	tags X

If one selects "Output Port" then one has to input few more fields. The user has to select the Port Number, 1 to 4. The Output Logic has to be selected, which can be either Open, Close or Pulse.

		Events
Status		Add Resultant Action
Users	+	
System	+	Resultant Action ID :
Time & Timer	+	Description :
Tag & Tag Filter	+	
GPIO	+	Condition : None 🗸
Events	-	Action Mode : Output Port
Resultant Action	+	
Add Resultant Action	_	Pre-action Wait (ms) : 0
Delete Resultant Action		Post-action Delay (ms) :
List Resultant Action		
Event Management	+	Output Port Number : 1 V Switch (Open/Close/Pulse) : Open V
Display Format	+	Open
Tag Inventory	+	Add Add & Lock Add & Permalock Cancel Oldse Pulse
Version	+	
Firmware Upgrade	+	



For Pulse, there are more parameters to be configured. The Pulse Logic, which can Open-Close-Open, or Close-Open-Close, and Pulse Mode, which can be One Shot Pulse or Pulse Train, the Pulse Width in msec., and for Pulse Train, the duty cycle and Pulse Duration. These are all self-explanatory.

	Events
Status Users System Network Time & Timer Tag & Tag Filter GPIO Events Trigger Add Resultant Action Delete Resultant Action List Resultant Action Event Management Display Format Tag Inventory Version Firmware Upgrade	Add Resultant Action Resultant Action ID: Description : Condition : None Action Mode : Output Port Pre-action Wait (ms) : 0 Post-action Delay (ms) : Output Port Number : 1 v Switch (Open/Close/Pulse) : Pulse Logic : Postive v Pulse Logic : Postive v Pulse Mode : One Shot Pulse v Pulse Width (ms) : 0 Add Add & Lock Add & Add & Permalock
Status Users System Network Time & Timer Tag & Tag Filter GPIO Events Trigger Resultant Action Delete Resultant Action List Resultant Action Event Management Display Format Tag Inventory Version Firmware Upgrade	Add Resultant Action Resultant Action ID: Description : Description : Condition : None Action Mode : Output Port Pre-action Wait (ms): 0 Post-action Delay (ms): 0 Output Port Number : 1 v Switch (Open/Close/Pulse) : Pulse v Pulse Logic : Postitive: Pulse Logic : Postitive: Pulse Mode : One Shot Pulse v Pulse Width (ms) : 0 Add Add & Lock

5.10.3.2. Modify Resultant Action

To modify resultant action, select the "Resultant Action ID" from list table, modify it and then click "Modify".

Events					
Status		Resultant Action			
Users System	++++	Resultant Action ID :	Turn ON LED on GPO Port 1		
Time & Timer	+	Description :			
GPIO Events	+	Condition :	None 🗸		
Trigger	+	Action Mode :	Output Port 👻		
Resultant Action Add Resultant Action	-	Pre-action Wait (ms) :	0		
Delete Resultant Action List Resultant Action	4	Post-action Delay (ms) :	0		
Event Management	+	Output Port Number :	1 V Switch (Open/Close/Pulse) : Pulse V		
Display Format Tag Inventory	+++	Pulse Logic :	Positive Positive: "Open-Close-Open", Negative: "Close-Open-Close"		
Version	+	Pulse Mode :	One Shot Pulse 🗸		
Timmare opgrade	-	Pulse Width (ms) :	3000		
		Unlock Modify Modif	y & Lock Modify & Permalock Cancel		



5.10.3.3. Delete Resultant Action

To delete resultant action, select the "Resultant Action ID" and click "Delete".

SOLARIA : Reader ID = IntelligentReader, A	excess Mode = HTTP/XML
Event Enabled : None	
	Events
Status	Delete Resultant Action
Users +	Resultant Action ID Close Boom Barrier on GPO Port 3
System +	
Network +	Delete Cancel
Time & Timer +	
Tag & Tag Filter +	
GPIO +	
Events -	
Trigger +	
Resultant Action -	
Add Resultant Action	
Delete Resultant Action	
List Resultant Action	
Event Management +	
Display Format +	
Tag Inventory +	
Version +	
Firmware Upgrade +	
Application Version 1.4.46, Reader ID = I	ttelligentReader, Access Mode = HTTP/XML PC UTC Time 2023/03/14 11:42:09 PC Local Time 2023/03/14 19:42:



5.10.3.4. List Resultant Action

Below is the "List Resultant Action" action page.

0	Resultant Action Table		
Status			
System +	Resultant Action ID	Description	Action Mode
letwork +	Turn ON LED on GPO Port 1		Output Port
me & Timer +	Turn OFF LED on GPO Port 1		Output Port
ag & Tag Filter +	Turn ON LED on GPO Port 2		Output Port
Events -	Turn OFF LED on GPO Port 2		Output Port
Trigger +	Open Boom Barrier on GPO Port 3		Output Port
Resultant Action -	Close Boom Barrier on GPO Port 3		Output Port
Delete Resultant Action	Save to External USB Memory	Save to USB using CSV format	Save to External USB Memory
List Resultant Action	Show on Display Tag Database Record Page		Display Tag Database Record
Event Management +	Send TCP using CSV 2 Format		Low Latency Alert to Server
Display Format +	Show on Display Tag Group Record Page		Display Tag Group Record
Tag Inventory +	test5	null	Instant Alert to Server (No Duplicate Elimination)
firmware Upgrade +	Pulse 2s		Output Port
	MQTT		Low Latency Alert to Server
	TCP Send by Listening Port inside Reader	-	Alert on TCP Listening Port

5.10.4. Tag Inventory

Capture Tags Raw

If there is any Event was enabled to read tags, all raw tags data can be found on this page

			D	ents						
ahaa	Cap	ture Ta	ags Raw (Refresh Time = 1	second)						
ers +										
stem +	Rate	Rate = 141 Tags/s Total Unique IDs = 29 Elapsed Time = 7 seconds Clear Error Message &								
twork +	-	_		_	_		_			
ne & Timer +	#	PC	EPC	Count	Ant	Time	Freg(MHz)	RSSI(dBm)	Phase(Degree)	
g & Tag Filter +										
* 010		2000				2023/03/14	0.74 74		101.75	
ents -	1	3000	E2002075690301340480E617	45	4	19:43:24	925.75	-00	101.25	
Trigger +		-								
Resultant Action +	2	3000	01320949E4C6600100000012	41	4	2023/03/14	925.75	-61	73.12	
Event Management +	-					19:43:24				
Display Format +		2000	TOODOT COOLOU DO DOT DOC			2023/03/14	010.25		70.24	
Tag Inventory -	3	3000	3000 E2002075690301100430EBC6 2	21	4	19:43:24	918.25	-64	70.31	
Capture Tags Raw		-								
Display Tan Group/Database	4	3000	982379ADDFFC9903022928B6	48	4	2023/03/14	925.75	-57	140.62	
Record						19:43:24				
Display Magnus Tag Data						2023/03/14			6.00	
rsion +	P	1800	003015001BF0	131	4	19:43:23	918.25	-70	98.44	
mware Upgrade +		-								
	6	3000	300833B2DDD901400000000	65	4	2023/03/14	925.75	-67	73.12	
						19:43:24				
						2023/03/14				
	7	1000	E2000606	47	4	19:43:24	925.75	-54	129.38	
		-			-					
	8	2400	01320949E48FCF00	24	4	2023/03/14	926.25	-67	73.12	
						19:43:24				
						2023/03/14				
	9	3000	E2002075690200671170A370	16	4	19:43:23	902.75	-65	87.19	
		-			-					
	10	3400	59A8CF888A21CF888A210000	27	4	2023/03/14	918.25	-70	59.06	
						19:43:23				
						2023/03/14				
	11	3000	E2002075690301400390EF0E	23	4	19:43:23	914.25	-05	123.75	
		-								
	12	3000	3416214B8860030004878362	32	4	2023/03/14	925.75	-64	95.62	
		1				19:43:24				



5.10.4.1. Display Tag Group/Database Record

When tag record within particular database was read by reader, the database content can be shown on this

page as below

	Tag	& Tag Filter
Satus Users Syntem Natush Syntem Natush Time & Targe Bag Users Tigger Radiata Action Event Management Display Format Tig Invention Capture Targe Row Display Targe Couple Record Display CTESIUS IT Version Formican Upgrade	Display Tag Group / Database Record	
Application Version 118 Read	ier ID = CSL Reader, Access Mode = HUTP XML	PC UTC Time 2020 12:01 05:14:33 PC Local Time 2020 12:03 16:14 3

Below is the Event called "Example Tag Database Display", once the Event was enabled and right tag was detected, the database content will be shown as previous diagram

		Events	
tatus	Event		
sers /stem	+ + Event ID :	Example Tag Database Display	
nwork me & Timer g & Tag Filter	+ Description :	Internal Antenna (Port 4)	
PIO	+ Operation Profile :	Test Tag Database Profile 🗸	
Trigger	+ Exclusivity :	Non-exclusive 👻	
Resultant Action Event Management	+ Tag Duplicate Elimination Window :	0 minutes 1 seconds	
Add Event	Tag Duplicate Eliminate Antenna Differentiation :		
List Event	Inventory Enabling Trigger :	Always On 👻	
Display Format Tag Inventory	+ Inventory Enabling Action : +	None	*
rrsion mware Unorade	+ Trigger Logic :	Tag Within Database Detected 🗸	
	Resultant Action :	Show on Display Tag Database Record Page 🕶 AND 💌 None	~
	Inventory Disabling Trigger :	Never Stop 👻	
	Inventory Disabling Action :	None	~
	Event Enabled :		
	Unlock Modify Modify & Lock Modify & Permal	ock Cancel	



5.11. Version Management

The "Version Management" page allows you to review the version upgrade history (in the Version Control Submenu), and to do firmware upgrade (in the Firmware Upgrade Submenu).

5.11.1. Version Control

In the "Version Control" sub-menu page, one can see the version number of the software. This is an important page to check if the versions are correct, especially after a firmware upgrade. It also shows the upgrade history of the reader.

SOLARIA : Reader ID = IntelligentReade Event Enabled : Norse	e, Access Mode = HTTP/XML		Version	
Status	Version Control			
Users System Network Tear & Timer	+ Bowler ID : IntelligentReader + Model Name : Solaria-F			
Tag & Tag Piller OPIO Events Version Version Control	+ RFID Firmware Version : + Web Application Varsion : RFID JNI Library Version :			2.8.41 1.4.40 1.1.39
Firmwice Upgrade	+ OPIO JNI Library Version :			1.0
	File	Vertine	Upgrade Time	Resark
And only Marine 1.4.44 Backs 10	a ballionificado Asono Male e UTTRAM			BC 1702 Time 2023/03/14 11-46.06 (BC 2 and Time 2023/03/14 10:46.06



5.12. Firmware Upgrade

In the "Firmware Upgrade" submenu, just press the "Choose File" button and find the upgrade file. Then press the "Firmware Upgrade" button. The upgrade takes a few minutes, depending on the size of that particular upgrade. Please wait until you see the success message. After that please wait for the WebApplication to automatically restart to the login page.

Firmware upgrades include the following 5 items:

- 1. Web Application Upgrade
- 2. JNI Library Upgrade
- 3. SSI API Library Upgrade
- 4. Apply Patch
- 5. RFID Firmware Upgrade

5.12.1. Upgrading Web Application

Below is the page to upgrade Web application.

SOLARIA : Reader ID = IntelligentRe Event Enabled : None	ader, Acc	ess Mode = HTTP/XML	
		Firmware Upgrade	
Status Users System Network Time & Timer Tag & Tag Filter GPIO Events Version Firmware Upgrade Web Application Upgrade GPIO JNI Library Upgrade Apply Patch RFID Firmware Upgrade	+ + + + + + + -	Web Application Upgrade Web Application will be restarted after upgrade. It takes abo Choose File Upload	ut 2.5 minute.
Application Version 1.4.46, Reade	ID = Inte	lligentReader, Access Mode = HTTP/XML	PC UTC Time 2023/03/17 10:02:31 PC Local Time 2023/03/17 18:02:31



the upgrading can be done directly using the zipped file

÷	\leftrightarrow \rightarrow	~	\uparrow	二 > 本	:機 > Data	(D:) >	SSI HW 🤉	Reader	> W	ebapp Chan	ge > Te	sting >	
	名稱						修改日期			類型		大小	
	🚞 V1	.4.44					7/3/2023	14:15		檔案資料夾			
	7 W	ebAppl	licatio	n_41478_	V1.4.46		7/3/2023	14:15		壓縮的 (zipj	ped)	17,415	KB
-													
_													

						of a second his local data	The second second second	
						rirmware	Upgrade	
<u>.</u>	We	eb Application Up	grade					
	+							
m	+	o Application will be	restarteo atter upgrad	le. It takes about 2.5 min	aute.			
ork	+ 0	hoose File						
& Timer	+							
Tag Filter	+							
	+ Up	load						
8	+							
20	+							
are Upgrade	-	O HR						×
Web Application Upgrade		Contraction of the second s						<u></u>
RFID JNI Library Upgrade		$ \leftrightarrow \rightarrow \vee 1 $	> 31# > Data	(D) > SSLHW > Reader	> Webapo Change >	Testing	× C 581	ating p
GPIO JNI Library Upgrade								
Apply Patch								E • 👔 🙆
RFID Firmware Upgrade		Constant of Consta						
		614		修改日期	種型			
		V1.4.44		7/3/2023 14:15	德察資料交			
		WebApplicati	ion_41478_V1.4.46	7/3/2023 14:15	展编的 (zipped)	17,415 KB		
			BROSENNY				u) leann	ressed (zinned) Folder
							Comp	cases (appea) route
							- INI	性(Q) 取測

Application Version 1.4.46, Reader ID = IntelligentReader, Access Mode = HTTP/XML



Then click Upload after choosing the Web application file and upgrading will start

		Firmware Upgrade
Status Users System Network Time & Timer Tag & Tag Filter GPIO Events	+ + + + + +	Web Application Upgrade Web Application will be restarted after upgrade. It takes about 2.5 minute. Choose File WebApplication_41478_V1.4.46.zip Upload
Version Firmware Upgrade Web Application Upgrade RFID JNI Library Upgrade GPIO JNI Library Upgrade Unified API Library Upgrade Apply Patch RFID Firmware Upgrade	+ -	Tuum upioaded piease wait

5.12.2. Upgrading JNI Library

Choose the JNI Library zipped file (no need to unzip)

	Firmware Upgrade	
Sona Uce + System + Neterk + D - D - + D - + D - + D - + D - + Weise - + Wei	RED 3NI Library Upgnde Reading will be restarted after upgrade. It takes about 2.5 minute. Restligs_4458_00137cp Upload Completed Stert upgrade	
Application Version 1.4.46, Reader ID = Iz	nelligent/Resder, Accoss Mode = HTTP: XML	PC UTC Time 2023/03/17 10:27:55 PC Local Time 2023/03/17 18:27:55

Then click Upload



Upgrading Unified API library

Choose the zipped Daemon file.

		Firm	ware Upgrade
Status Users System Network Time & Timer Tag & Tag Filter IIO Events Version Filmware Upgrade Web Application Upgrade JNI Library Upgrade CS451 Law Level API (MACHT) Library Upgrade LLRP Library Upgrade Apply Patch	+++++++	Unified API Library Upgrade Cheese File Unax3035UnifedDaemon_V101zip Upload	

Then click upload.

Applying Patch to System

If there is any patch for system, it can be done on this page. Linux OS versions: 3.0.35 or 4.x.x can use same Patch file

Apply Patch	
Apply Patch	
Web Application will be restarted after apply patch. It takes about 1 minute.	
Choose File	
Upload	
imited All Rights Reserved. Application Version 0.4	PC



Choose the zipped patch file then click upload

upply rates	ly natch. It takes about	minute	
Choose File	ý parca, ar takés abour	and the second	
S453Patch2.1.zip			



6. Read Tag using Web

Interface and Event Engine

One can use a browser to quickly configure the SOLARIA reader to autonomously read tags based on certain logic sequence defined in the event engine and operation profile.

6.1. Read Tag using Default Profile and Default Event

The SOLARIA reader comes with a Default Profile and a Default Event. The Default Event is not enabled yet. Once the user enables that event, then the user can use that to immediately read RFID tags from antenna Port.

After login to the reader and ensuring the reader is in HTTP/XML access mode as explained in section 4.3.

Go to the Operation Profile in System page and select List Profile to ensure there is Default Profile can be found as below:

			System						
atus		Operation Profile Table							
sers	+	Profile ID	Antenna Port	Reader Mode/Link Profile	Session #	Target	Query Algorithm	Tag Population	Extra Bar
Reader ID	-	Default Profile	4.	Range/Dense Reader	S0	A/B Toggle	DynamicQ	50	
Company Label		Test Tag Database Profile	4	Range/Dense Reader	50	A/B Togole	DynamicO	2	
Capture Point Name		Test and Annuality Fromit	4	Range Dense Reader	SU	A Loggie	DynamicQ	0	
Access Mode			",	Range Dense Reader	31	A	DynamicQ	0	-
Custom Embedded RFID		Kead Moisture 54	\sim			A/B loggle	DynamicQ	50	
Frequency Configuration		ctesius	>	#D C H		A/B Toggle	DynamicQ	50	
Operation Profile		Read Temp Magnus S3	1	"Default		A/B Toggle	DynamicQ	50	
Add Profile		Example Profile for Doorway 1 Antenna Port 4				/B Toggle	FixedQ	2	TID,
Delete Profile		Example Profile for Doorway 1 Antenna Port 3 (External)	3,	Profile"		A/B Toggle	FixedQ	2	TID,
List Profile		Default Profile Antenna Port 3	3.	rionic		A/B Toggle	DynamicO	50	
Advanced Settings									
SSL Certificate									
Memory Information									
Power Up Notification	+								
Heart Beat	+								
Reader Error Notification	+		<u> </u>						
GPI Interrupt Notification	+ -		\sim						
Indication Version 1446 Res	der ID = Int	elligentReader Access Mode = HTTP/XML	Cli	ck "List Profil	۵″ to	chow	P	Local Time 2023	U03/17 18-
			CI			3110 1	Y		
)		
		`		all Prof	ile				
				un 1 1 0 1					



						Events							
tatus		Event Table											
Jsers. System Hetwork	** *	Event ID	Description	Operation Profile	Exclusivity	Tag Duplicate Elimination Window (ms)	Inventory Enabling Trigger	Inventory Enabling Action	Trigger Logic	Resultant Anti-			
lane a Timer lag & Tag Filter	+	Default Event	Ex Factory Default Event, Internal Automory	Default	Non-	6000	Always On	None	Read Any Tags	Y	Click	"Defa	ult
Events Trigger Resultant Action	+ - + +	Example Tag Database Display	Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	Noize	Detected	- \ E	vent" t	to con	tinue
Event Management Add Event	+	Example TCP Send using CSV 2 Format	Internal Antenna (Port 4)	Default Profile	Non- exclusive	1000	Always On	None	Read Any Tags	S CS			
Delete Event List Event Display Format	-	Example Tags Group Display	display Group Tags - Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag within Tag Group Detected	Show on Disp. Tag Group Record Page	111		mable
Tag Inventory Version	* * *	Rend Temp	Read Temperature from Manual S3 Tag - Internal	Read Temp Magnus S3	Non- exclusive	0	Always On	None	Read Temp tag	Pulse 2s	Never Stop	None	Disable
		Read Moisture	Read moisture - Magnus S2 Tag - Interna- Antenna (Port 4)	777	Non-	0	Always On	None	B		Never Stop	None	Disable
		MQTI		Default Profile	Non- exclusive			CI	ick "Lie	t Event'	,	None	Disable
		Tag Data Send from TCP Listening Port 50008		Default Profile	Non- exclusive	60000	Alwaya	te	o show	default		lone	Disable
									Eve	ent		/	

Go to the List Event of Event Management in Event page and click List Event to show the Default Event

In Default Event, the reading tag from antenna port 4 can be started after the default event was enable and click Modify to confirm the change



			Events	
tatus		Event		
sers ystem	+++++++++++++++++++++++++++++++++++++++	Event ID :	Default Event	
ime & Timer	+	Description :	Ex Factory Default Event, Internal Antenna (Port 4)	
ag & Tag Filter PIO	+++	Operation Profile :	Default Profile 👻	
vents Trigger	+	Exclusivity :	Non-exclusive ¥	
Resultant Action	+	Tag Duplicate Elimination Window :	0 minutes 6 seconds	
Add Event	_	Tag Duplicate Eliminate Antenna Differentiation :	0	
Delete Event List Event		Inventory Enabling Trigger :	Always On 🗸	
Display Format	+	Inventory Enabling Action :	None	
rag inventory ersion	+	Trigger Logic :	Read Any Tags	
irmware Upgrade	+	Resultant Action :	None V TH	Click "Enable
		Inventory Disabling Trigger :	Never Stop	Event" to enable
		Inventory Disabling Action :	None	
		Event Enabled :		the tag reading
		Unlock Modify Modify & Lock Modify & Permak	ock Cancel	
			Click "Modify" to	
Application Version 1.4.46, Res	ider ID = Int	elligentReader, Access Mode = HTTP/XML	confirm the	C Local Time 2023/03/17 18
			changing	

Reading tag from antenna port 1 can be stopped once the default event was disable by unchecking Enable Event and click Modify to confirm the change

6.2. Example 1: Read Tag using Custom Profile and Custom Event

To define your own profile and event, the following steps are needed:

Add Profile:

Go to the Operation Profile in System page, then click Add Profile as below



atus		Add Operation Profile		~ ~						1 port have been
ers stem	+ -	Profile ID :							L	I port nave been
Reader ID Company Label		Capture Point :	Antenna			Transmit	Power (dBm)	Dwell Time (ms		activated with
Capture Point Name Access Mode			Antenna Port 3 (Ex	demal) (Name : Capt	ure Point 3)	30	0	2000	E 4	maximum autaut
Custom Embedded RFID Applicat Frequency Configuration	ion		C Antenna Port 4 (Int	ternal) (Name : Captu	re Point 4)	30	(0)	2000	1011	maximum output
Operation Profile Add Profile	-	Reader Mode/Link Profile :	1. Range/Dense Roader	v						power equal to
Delete Profile		Session # :	S0 ¥							
Advanced Settings	+	Target :	A/B Toggle 🐱							30dBm and other
SSL Certificate Memory Information		Retry :	0 [0]							3 norts are not
Power Up Notification	+	TagFocus (Impinj Tags Only) :	0							5 ports are not
Reader Error Notification	+	Fast ID (Impinj Tags Only):								activated.
GPI Interrupt Notification Configuration Backup / Restore	+++	Query Algorithm :	Dynamic Q 👻							
Log File Configuration		Tag Population :	50 0	Q = 6						
Scheduled Reboot		Tag Model :	Amy 👻							
Reboot System ork	+	Multi Bank Inventory :	Extra Bank	Bank	Offset		Count (# of V	Vords)		
a & Timer & Tag Filter	++	Incorrect setting would cause no tag return	First Extra Bank	Security (Bank 0) v	0	16	1	10		

Star Systems International Ltd Application Version 1.4.44, Reader ID = Solaria-E, Access Mode = HTTP/XML





Please click "Add" to confirm the change.

Add Event and change to use Demo1 which created before

		Add Event								
s em	++	Event ID :	EVENT DEMO							
& Timer	Ŧ	Description :	[
s Tag Filter D	÷	Operation Profile :	Demot	*						
ts Trigger	+	Exclusivity :	Test Tag Database Profile							
Resultant Action Event Management	+	+	+	+	+	Tag Doplicate Elimination Window :	Read Moisture S2 ctesius Read Temp Magnus S3			
Add Event		Tag Duplicate Eliminate Antenna Differentiation :	Example Profile for Doorw Example Profile for Doorw	ay 1 Antenna Port 4 ay 1 Antenna Port 3 (External)						
List Event		Inventory Enabling Trigger :	Default Profile Antenna Po Dissoci	ch						
Display Format Tao Inventory	+	Inventory Enabling Action :	None	✓ (AND ✓ None	¥					
lon	+	Trigger Logie :	Read Any Tags	*						
ware Opgrade	+	Resultant Action :	None	♥ AND ♥ None		•				
		Inventory Disabling Trigger :	Never Stop	v						
		Inventory Disabling Action :	None	♥ AND ♥ None	*					
		Enable Event :								
		Add Add & Lock Add & Permalock Cancel								

Click Add to create new event.

Start inventory reading using Event Demo:

Go to List Event in Event Management and click "Event Demo" to modify the Event.

					13	vents							
Testus		Event Table											
Jsers	+	ALVER .	(Port 4)	FTOLDE	exclusive				rage				
System Vetwork Time & Timer Tag & Tag Filter	+ + + +	Example Tag Database Display	Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag Within Database Detected	Show on Display Tag Database Record Page	Never Stop	None	Disable
Events Trigger Resultant Action	+ - + +	Example TCP Send using CSV 2 Format	Internal Antenna (Port 4)	Default Profile	Non- exclusive	1000	Always On	None	Read Any Tags	Send TCP using CSV 2 Format	Never Stop	None	Disable
Event Management Add Event Delete Event	-	Example Taga Group Display	display Group Tags - Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag within Tag Group Detected	Show on Display Tag Group Record Page	Never Stop	None	Disable
List Event Display Format Tag inventory	+ + +	Read Temp	Read Temperature from Magnus S3 Tag - Internal Antenna (Port 4)	Read Temp Magnus S3	Non- exclusive	0	Always On	None	Read Temp tag	Pulse 2s	Never Stop	None	Disable
irmware Upgrade	+	Read Moisture	Read moisture from Magnus S2 Tag - Internal Antenna (Port 4)	Read Moisture S2	Non- exclusive	0	Always On	None	Read S2	None	Never Stop	None	Disabl
		MQTT		Default Profile	Non- exclusive	65000	Always On	None	Tag within	A MODEL AND		None	Disabl
		Tag.Data Send from TCP Listening Port 50008		Default Profile	Non- exclusive	60000	A	(Click "E	ivent [Demo	" to	
		EVENT DEMO		Demo1	Non- exclusive	60000	Alway		mod	ify the	Even	t	



vent Enabled : None			Fronte	
			Events	
Status		Event		
Users System Network	++++	Event ID :	EVENT DEMO	
îme & Timer	+	Description :	[
ag & Tag Filter iPIO	+++	Operation Profile :	Demo1 V	alect Always On
vents Trigger	+	Exclusivity :	Non-exclusive ~	elect Always Off
Resultant Action Event Management	+	Tag Duplicate Elimination Window :	1 minutes 0 seconds	
Add Event		Tag Duplicate Eliminate Antenna Differentiation :		
Delete Event List Event		Inventory Enabling Trigger :	Always On	
Display Format	+	Inventory Enabling Action :	None	~
ersion	+	Trigger Logie :	Read Any Tags 🔹	
rmware Upgrade	+	Resultant Action :	None V AND V None	Click Enable Event to
		Inventory Disabling Trigger :	Never Stop 👻	enable it
		Inventory Disabling Action :	None VIAND VINone	
		Event Enabled :	\checkmark	
		Unlock Modify Modify & Lock Modify & Permale	ck Cancel	
			Click "Modify" to)
Application Version 1.4.46, Re	ader ID = Inte	lligentReader, Access Mode = HTTP/XML	apply the change	56 PC Local Time 2023/03/20 18

Please click "Modify" to confirm the change and inventory will start.

Go to Tag inventory to check inventory result.

				Ev	ents					
	Capt	ure Tags l	Raw (Refresh Time = 1 second)							
:	Rate =	112 Tags/s	Total	Unique IDs = 35		Elapsed Time -	17 seconds		Clear Error Message & Restart E	
+ +	#	PC	EPC	Count	Ant#	Time	Freq(MHz)	RSSI(dBm)	Phase(Degree)	
iter +	1	3000	3416214B8860030004878362	47	4	2023/03/20 18:13:18	905.75	-70	106.88	
+					-					
yer +	2	1800	003015001BF0	358	4	2023/03/20 18:13:19	924.25	-66	149.06	
ultant Action +	3	3000	E2002075690301100430EBC6	63	4	2023/03/20 18:13:18	905.75	-65	92.81	
nt Management +	4	1000	E2000606	02	4	2023/03/20 18:13:18	905.75	-61	30.94	
lay Format +	-	1000	2200000	~		2020/00/20 10:10:10	203.13	~~	50.24	
inventory -	5	35B0	3E000000030C2052F31B0000	42	4	2023/03/20 18:13:19	924.25	-69	140.62	
Capture Tags Raw	6	3000	00000000000000000001471	113	4	2023/03/20 18:13:19	924.25	-65	165.94	
Record		2400	E30020286003006733002163	6		2022/02/20 16:12:12	011.75	20	01.64	
Display Magnus Tag Data		3400	E20030286802003723802152	0	4	2023/03/20 18:13:13	911.75	-70	81.30	
porade +	8	30	01320949E403FE0100043F55	33	4	2023/03/20 18:13:17	919.75	-71	75.94	
- Frank	9	3000	106064110145EE3E	103	4	2023/03/20 18:13:19	924.25	-67	90	
	10	3000	013209492	105	4	2023/03/20 18:13:19	924.25	-65	95.62	
	11	3000	E234420937506013017	106	4	2023/03/20 18:13:19	924.25	-61	92.81	
	12	1000	E2000707		4	2023/03/20 18:13:19	924.25	-65	78.75	
	13	2400	01320949E48FCF00	\sim '	\searrow			-63	143.44	
n Version 1.4.46, Reader ID = In	telligentRe	ader, Acces	s Mode = HTTP/XML					23/03/20 10:13:	18 PC Local Time 2023/03	
					(lick "Tag In	ventory"			
						то спеск п	ventory			
				\backslash		resu	lt			



The Inventory can be stopped by disabling the Event 1 on Event Management as below

			Events	
us		Event		
3 em	+	Event ID :	EVENT DEMO	
k Timer	+	Description :	l	
Tag Filter	‡	Operation Profile :	[Demo1 V]	
s Trigger	+	Exclusivity :	Non-exclusive ¥	
Resultant Action Event Management	+	Tag Duplicate Elimination Window :	1 minutes 0 seconds	
Add Event		Tag Duplicate Eliminate Antenna Differentiation :	0	
Delete Event List Event		Inventory Enabling Trigger :	Always On 👻	
Display Format Tag Inventory	++	Inventory Enabling Action :	[None •][AND •][None	Unchecked Enable Event
n	+	Trigger Logic :	Read Any Tags 🔹	
are Upgrade	*	Resultant Action :	None VIAND VINge	to disable it
		Inventory Disabling Trigger :	Never Stop	
		Inventory Disabling Action :	None	*
		Event Enabled :	0	
		Unice Modify & Lock Modify & Permak	vit Cancel	Click "Modify" to
				apply the change

Below procedure to enable particular group of tag to be detected and used this group as trigger

Add tag group:

Go to Tag group in Tag & Tag Filter and click Add Tag Group

Input the new tags group name as below

	Tag & Tag Filter	
Status		Add Tag Group
Users	+	
System	+	Tag Group ID : TagGroup3
Network	+	
Time & Timer	+	Add Cancel
Tag & Tag Filter	-	The Ounce
Select Tag		
Read/Write Tag		
ASCII Read/Write Tag		
FM13DT160		
UCODE DNA		
Magnus		
Tag Group	-	
Add Tag Group		
Delete Tag Group		
List Tag Group		
Tag Database	+	
Tao Filter	1	

Click Add to confirm the new group

Add Tags to the group

Click Add to add new tags to the group and below menu will pop up.



Click confirm to confirm the addition of new tag to the tag group

SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML Event Enabled : None									
		Tag & Tag Filter							
Status Users System Network Time & Timer Tag & Tag Filter Select Tag ASCII Read/Write Tag ASCII Read/Write Tag FM13DT160 UCODE DNA Magnus Tag Group List Tag Group List Tag Group Tag Database Tag Filter GPIO	++++ +++	Tag Group Tag Group ID : [TagGroup3 Tag IDs : Add Tag ID : [E2002075690301100430EBC6] Confirm Cancel							
Events Version Firmware Upgrade	+ + +	Save Save & Download Cancel							

Click Save to save the new tag group

SOLARIA : Reader ID = IntelligentR Event Enabled : None	SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML Event Enabled : None										
Tag & Tag Filter											
Status		Tag Group									
Users	+										
System	+	Tag Group ID : TagGroup3									
Network	+	Tag IDe -									
Tag & Tag Filter	+	Add Add									
Select Tag	-	E2002075690301100430EBC6 Delete									
Read/Write Tag		Delete All									
ASCII Read/Write Tag		import									
EM13DT160											
Magnua											
Tas Casus											
Tag Group	-										
Add Tag Group											
Delete Tag Group											
List Tag Group											
Tag Database	+										
Tag Filter	+										
GPIO	+										
Events	+										
Version	+	Save Save & Download Cancel									
Firmware Upgrade	+										



Import New tags:

SOLARIA : Reader ID = IntelligentReader, Access Mode = HTTP/XML Event Enabled : None							
		Tag & Tag Filter					
Status Users System Network Time & Timer Tag & Tag Filter Select Tag Read/Write Tag ASCII Read/Write Tag FM13DT160 UCODE DNA Magnus Tag Group Add Tag Group Delete Tag Group List Tag Group	++++	Add Tag Group Tag Group ID : TagGroup4 Add Cancel					

Prepare tag record file, below is the example file and view by notepad

(iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	-	\times
Eile Edit Format View Help		
E2801160600020D76E3448F		^
E2801160600020D76E0C89D		
E2801160600020D76E2A26F		
E2801160600020D76E0C87A		
E2801160600020D7723F875		
E2801160600020D77234C51		
E2801160600020D77242AF4		
E2801160600020D77229C91		
E28011606000020D76E1522E		
E2801160600020D76E1C23E		
E2801160600020D7722E2B5		
E2801160600020D77246835		
E2801160600020D76E152CD		
E2801160600020D76E1284D		
E2801160600020D76E2000F		
E28011606000020D76E1525E		
E2801160600020D76E2708D		
E2801160600020D76E2340D		
E28011606000020D76E1C20D		
E2801160600020D772528A1		
E2801160600020D76E2326E		
E2801160600020D76E2A24E		
E28011606000020D7722E2C1		
E2801160600020D76E0EADE		
E2801160600020D7724FCC1		
E2801160600020D76E09A2D		
E2801160600020D76E2A27F		
E2801160600020D76E0A45D		
E2801160600020D76E152AE		
E2801160600020D76E3046E		~
< compared to the second secon		>

Click Import then select the tags record file

oper						
e + 📙 «	Desktop > norman > 463 > manual	> tagdata 🔍 🖓	5 Search tagdat	3		p
Organize . New fo	sider			11. •		0
This PC	A Name	Date modified	Type	Size		
3D Objects	E28011606000020076E3448F.ord	F1/13/2018 T1-28	Test Document		2.88	
Desktop						
B Documents						
+ Downloads						
📓 Galaxy 58						
Music						
Fictures						
Videos						
S Windows (C:)						
- HP_RECOVERY (
= HP_TOOLS (E)	~					
Fe	a parter [23011606000020076E3448F.bd		~ Alfie			v
			Onen		Cancel	



New Tags was added to the window

Status	Tag Group	
Users 4		
bystem -4	The Group ID - Sections a	
Hebrot 4	vality rescents the indicational w	
Time & Timer 4	Tes IDa 30/700000000000000007 - And	
Log & Tog Filter - Access Parsword Kit Tage Tecting Heat Tage Tecting Heat Tage Tecting Middly Protocol-centrol (PC) Bits Tag Drosp -	E 2019 1198000002010 01940 01400 01 2 2019 1198000002010 0140 0140 01 2 2019 11980000000000000 0140 0140 01 2 2019 119800000000000000000000000000000000	
Add Tag Droub	E2081110000000000001011121E	
Delete Tag Group	£200 11000000000056 15CD	
List Tag Group	E2401460600020078E1C20D	
Capture Tags Testing	E2001100000002007822000F	
10 4	E2001/100000020C79E2009D +	
Events 4		
Version 4	Seve Save & Devrived Cancel	
Familiare Upgrade 4		

Click Save to save new record to the tag group

In the Add trigger of Event menu, new tag group (TagGroup 3) is available as shown below

	Add Trigger	
tatus Isers ystem Ietwork Time & Timer	+ + Trigger ID : Group Trigger 3 + + Description :	
ig & Tag Filter PIO rents Trigger Add Trigger Delete Trigger	+ Trigger Mode : Trigger in Tag Group - Capture Point : Antenna Port 3 (Ext Antenna Port 4 (Inte	v ernal) (Name : Capture Point 3) ernal) (Name : Capture Point 4)
List Trigger Resultant Action Event Management Display Format Tag Inventory ersion	+ Tag Group ID : TagGroup 3 v + Add Add & Lock Add & Permalock Cancel + +	

Go to Event management, Group Trigger can be used in Trigger Logic on Event Demo



		Events
tatus	Event	
ystem	+ Event ID :	EVENT DEMO
ime & Timer	+ Description :	
PIO vente	Operation Profile :	Demo1 ~
Trigger	+ Exclusivity :	Non-exclusive 🛩
Resultant Action Event Management	 Tag Duplicate Elimination Window : 	1 minutes 0 seconds
Add Event Delete Event	Tag Duplicate Eliminate Antenna Differentiation :	
List Event Display Format	+ Inventory Enabling Trigger :	Always On 💌
Tag Inventory	+ Inventory Enabling Action :	[None •][AND •][None •]
irmware Upgrade	+ Trigger Logie :	Read Any Tags
	Resultant Action :	Read Tags Every 10 Seconds Tag within Tag Group Detected Read Any Tags bigger than -60 dBm
	Inventory Disabling Trigger :	Tag in Default DB Read Temp tag
	Inventory Disabling Action :	Read S2 Ctesius The free Antenne Part 4
	Event Enabled :	Tag from Antenna Port 4 within Registered Tag Group

				Even	ts				
ahas	Cap	ture Tags	Raw (Refresh Time = 1 second)	·					
tem +	Rate	= 145 Tags	s Total Unic	que IDs = 33		Elapsed Time = 6	seconds	Clear	Error Message & Restar
me & Timer +		PC	EPC	Count	Ant#	Time	Freq(MHz)	RSSI(dBm)	Phase(Degree)
& Tag Filter +	1	3000	E200030300000000000000002	20	4	2023/03/20 18:31:46	918.75	-67	53.44
ents —	2	3000	982379ADDFFC9903022928B6	45	4	2023/03/20 18:31:46	918.75	-59	106.88
Resultant Action +	3	3000	3416214B8860030004878362	20	4	2023/03/20 18:31:46	918.75	-68	90
Event Management +	4	3000	E2002075690300291040AFA3	46	4	2023/03/20 18:31:46	918.75	-57	132.19
Tag Inventory –	5	3000	E2002075690301340480E617	45	4	2023/03/20 18:31:46	918.75	-63	8.44
Capture Tags Raw Display Tag Group/Database	6	1000	E2000505	45	4	2023/03/20 18:31:46	918.75	-61	50.62
Record Display Magnus Tag Data	7	3000	E200421E6690601301AEA0CD	4	4	2023/03/20 18:31:44	904.25	-68	146.25
sion +	8	2400	01320949E48FCF00	50	4	2023/03/20 18:31:46	918.75	-63	39.38
mare opgrave T	9	3000	E200421D206064110145EE3E	41	4	2023/03/20 18:31:46	918.75	-69	151.88
	10	1800	003015001BF0	145	4	2023/03/20 18:31:46	918.75	-65	33.75
	11	3000	000000000000000000000000000000000000000	43	4	2023/03/20 18:31:46	918.75	-63	112.5
	12	3000	01320949E4C6600100000012	41	4	2023/03/20 18:31:46	918.75	-63	143.44
	13	3400	59A8CF888A21CF888A210000	26	4	2023/03/20 18:31:46	918.75	-70	22.5
	14	3000	E2002075690301100430EBC6	27	4	2023/03/20 18:31:46	918.75	-66	14.06



6.3. Example 2: Example Event using Database Tag Group and Database Display

The event Example Tag Database Display can display content of database located in reader if tag within database tag group was detected from antenna port 1 on SOLARIA or antenna port 4 on SOLARIA. This database record can contain Picture/Photo and text such as equipment photo, staff photo and corresponding text

						Events							
Status		Event Table											
Users System Network	++++++	Event ID	Description	Operation Profile	Exclusivity	Tag Duplicate Elimination Window (ms)	Inventory Enabling Trigger	Inventory Enabling Action	Trigger Logic	Resultant Action	inventory Disabling Trigger	Inventory Disabling Action	Enable
Time & Timer Tag & Tag Filter	+	Default Event	Ex Factory Default Event, Internal Antenna (Port 4)	Default Profile	Non- exclusive	6000	Always On	None	Read Any Tags	None	Never Stop	None	Disable
Events Trigger	+	Example Tag Database Display	ternal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag Within Database Detected	Show on Display Tag Database Record Page	Never Stop	None	Disable
Event Management Add Event	-	Example TCP Send using CSV 2 Format	Internal Antenna (Port 4)	Default Profile	Non- exclusive	1000	Always On	None	Read Any Tags	Send TCP using CSV 2 Format	Never Stop	None	Disable
Delete Event List Event Display Format	+	Example Taos Group Display	display Group Tags - Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag within Tag Group Detected	Show on Display Tag Group Record Page	Never Stop	None	Disable
Tag Inventory Version	+++++++++++++++++++++++++++++++++++++++	Read Temp	Read Temperature from Magnus S3 Tag - Internal Antenna (Port 4)	Read Temp Magnus S3	Non- exclusive	0	Always On	None	Read Temp tag	Pulse 2s	Never Stop	None	Disable
ermware upgraue — +	Read Moisture	Read moisture from Magnus S2 Tag - Internal Antenna (Port 4)	Read Moisture S2	Non- exclusive	0	Always On	None	Read S2	None	Never Stop	None	Disable	
	MQTT		Default Profile	Non- exclusive	65000	Always On	None	Tag within Tag Group Detected	MOTT AND Pulse 25	Never Stop	None	Disable	
		Teg Data Send from TCP Listening Port 50008		Default Profile	Non- exclusive	60000	Always On	None	Read Any Tags	TCP Send by Listening Port inside Reader	Never Stop	None	Disable

After corresponding even was enabled, database content will be shown on below page if the tag in database was detected and its corresponding record can be found in database





Below show the database event details.

tus		Event			
ers + dem +	+	Event ID :	Example Tag Database Display		
work le & Timer	+	Description :	Internal Antenna (Port 4)		
i & Tag Filter ID ints	++	Operation Profile :	Test Tag Database Profile v		
Trigger	+	Exclusivity :	Non-exclusive v		
Resultant Action Event Management	+	Tag Duplicate Elimination Window :	0 C minutes 1 C seconds		
Add Event		Tag Duplicate Eliminate Antenna Differentiation :	0		
Delete Event List Event Display Format + Tao Inventory +		Inventory Enabling Trigger :	Always On 👻		
	++	Inventory Enabling Action :	None v AND v None		
sion nware Upprade	++++	Trigger Logic :	Tag Within Database Detected		
		Resultant Action :	Show on Display Tag Database Record Page v AND v None		
		Inventory Disabling Trigger :	Never Stop v		
		Inventory Disabling Action :	None v) AND v) None	v	
		Event Enabled :			
		Unlock Modify Modify & Lock Modify & Permalock Co	anot		

The database is going to use in this event, was choose in Trigger page as shown below

		Events
Status Users System Network Time & Timer Tag & Tag Filter GPIO Events Trigger Add Trigger Delete Trigger List Trigger Resultant Action Event Management Display Format Tag Inventory Version Firmware Upgrade	Trigger Trigger ID : Description : Trigger Mode : Capture Point : Tag Database Name Unlock Modify Modifier	Tag Within Database Detected Trigger in Tag Database

The way showing database content was defined in Display Format, so, you need choose right display format in Resultant Action page as shown below on Display Tag Database Record Action Mode



	Events
Status	Resultant Action
Users System	+ Resultant Action ID : Show on Display Tag Database Record Page
Network Time & Timer	+ + Description :
Tag & Tag Filter GPIO	+ + Condition : None ~
Events Trigger	+ Action Mode : Display Tag Database Record V
Resultant Action Add Resultant Action	Display Format ID : display format 2 v
Delete Resultant Action List Resultant Action	Display Time Factor Type : Additive
Event Management	+ Display Time Additive Factor (ms) : 6000.0 0 = forever until next data comes in
Display Format Tag Inventory	+
Version	+ Unlock Modify Modify & Lock Modify & Permalock Cancel
Firmware Upgrade	

Display Format can be modified/added in Display format page as shown below




Type of record on database can be listed in List Database as shown below.

		T	ag & Tag Filter				
Status		Database					
Users	+						
System	+	Database Name	Current-Database				
Network	+	:	ExampleDatabase				
Time & Timer	+						
Tag & Tag Filter	-	Table Name :	Tag				
Select Tag		Fields :					
Read/Write Tag		rielus.	Name		Data Type		+
ASCII Read/Write Tag							
FM13DT160			EPC	Key Field	STRING V		
UCODE DNA							
Magnus			UIDofEquipment		STRING V	×	
Tag Group						1000	
The Detabase			PhotoofEquipment]	IMAGE 🗸	×	
	-						
Configuration			StaffID	1	STRING M	*	
Add Database			Stanto]	STRING Y	^	
Delete Database							
List Database			StaffPhoto]	IMAGE 🗸	×	
Input Data to Database	+		8			<u></u>	
Database Backup / Restore							
	+	Modify Cancel					
Tag Filter	+						
GPIO	+						
Events	+						
Version	+						
Lippulara Lindrado	-						
Star Systems International Ltd App	olication	Version 1.4.44, R	eader ID = Solaria-E,	PC UTC Time	2023/03/20 11:0	00:03 PC Local	Time



The content of each record on each database can be changed from List Tag Record as shown below



Status		Tag Record Table		
Jsers	+	Database Name : ExampleDatabase		
System	+			
letwork	+	EPC	UIDofEquipment	StaffID
Time & Timer	+	123456789012345678901234	8888888888866666666666666	709394888870939466661234
ag & Tag Filter	-	120100100012010001201		100001000010000100001201
Select Tag				
Read/write lag				
ASCII Read/Write Tag				
FM13DT160			click here to choose	which
UCODE DNA				
Magnus			record to be mod	ified
Tag Group	+			
Tag Database	-			
Configuration				
Add Database				
Delete Database				
List Database				
Input Data to Database	-			
Add Record				
Delete Record				
List Record				
Database Backup / Pestor	~			
buttabase buckup / Restor	+			



The content of record can be modified on this page

tus	Tag Record		
ers	+ Database Name	Terrest Database	
dam Invide	Lanabase reame	Content of the second second	
er ft. Tarrer	+ EPC:	123456789012345678901234	
& Tag Filter	-		
Select Tag Read/Write Tag ASCII Read/Write Tag	UIDofEquipment :	EREESERENCECCOULOUS 224	
PHILIDITISO			ALL IN THE REAL PROPERTY OF
UCODE DNA			
Hagrus			
Tag Group	•	Choose Image	
Configuration	PhotootEquipment	1	
Add Database		Do not use image larger than 1MByte	
Delete Database			
List Database			
Input Data to Database	-		
Add Record			
Delete Record			
List Record	StaffID :	709394888870939466661234	
Detabase Backup / Restor			
Terlike			
10	+		
reta	+		7
19601	+		
ressare Upgrade	+		
	StaffPhoto :	Chome Image	
		Do not use image larger than 1MByte	

The new record can be added to particular database in Add Record as shown below





The content of each record on particular database can be added on this page as shown below

		Tag & Tag Filter
		Add Tag Record
Status		
Users	+	
System	+	Database Name : ExampleDatabase
Network	- -	FPC ·
Tag & Tag Filter		
Select Tag		UIDofEquipment :
Read/Write Tag		
ASCII Read/Write Tag		Characterization
FM13DT160		PhotoofEquipment :
		Do not use image larger than 1MByte
Magnus		
Tag Crown	-	StaffID ·
Tag Database	_	
Configuration		Choose Image
Add Database		Do not use image larger than 1MByte
Delete Database		
List Database		
Input Data to Database	-	Add Cancel
Add Record		
Delete Record		
List Record		
Database Backup / Resto	re +	
Tag Filter	+	
GPIO	+	
Events	+	
Version	+	
Firmware Upgrade	+	



After all necessary modification was done, the event can be run again by clicking Even Enabled as shown below

		Events
Status Users + Users + System + Network + Network + Time & Timer + Tog & Timer + Operation Profile - Events - Tag Duplicate Elimination Window : 0 minutes 1 seconds Tag Duplicate Elimination Window : 0 minutes 1 seconds Tag Duplicate Elimination Window : 0 minutes 1 seconds Tag Duplicate Eliminate Antenna Inventory Enabling Trigger : Add Event Differentiation : Display Format + Trigger Logic : Tag Wavys On Inventory Enabling Trigger : Always On Inventory Enabling Action : None Inventory Disabiling Trigger : Tag Wavys On Trigger Logic : Tag Within Database Detected Inventory Disabiling Trigger :: Newer Stop Inventory Disabiling Trigger : Newer Stop Inventory Disabiling Action : None Inventory Disabiling Action : None Inventory Disabiling Action : None Inventory Dis	Status Users + System + Network + Time & Timer + Tag & Tag Filter + GPIO + Events - Trigger + Resultant Action + Event Management - Add Event - Delete Event List Event User Vernt + Tag Inventory + Version + Firmware Upgrade +	Event Event ID : Example Tag Database Display Description : Internal Antenna (Port 4) Operation Profile : Test Tag Database Profile Exclusivity : Non-exclusive ▼ Tag Duplicate Elimination Window : 0 © minutes 1 © seconds Tag Duplicate Eliminate Antenna Imeration : Differentiation : None Inventory Enabling Trigger : Always On ▼ Inventory Enabling Action : None Trigger Logic : Tag Within Database Detected Resultant Action : Show on Display Tag Database Record Page ▼ AND ▼ Inventory Disabling Trigger : Never Stop Inventory Disabling Trigger : Never Stop Inventory Disabling Action : None ▼ AND ▼ None Inventory Disabling Trigger : Never Stop Inventory Disabling Action : None ▼ AND ▼ None Inventory Disabling Action : None ▼ AND ▼ None Inventory Disabling Trigger : Never Stop Inventory Disabling Action : None ▼ AND ▼ None Inventory Disabling Action : None ▼ AND ▼ None

You should see the event status changed to Enabled

						Events							
Status		Event Table											
Libers System Network	* * *	Event ID	Description	Operation Profile	Exclusivity	Tay Duplicate Elimination Window (ms)	Inventory Enabling Trigger	Inventory Enabling Action	Trigger Logic	Resultant Action	inventory Disabiling Trigger	Inventory Disabling Action	Enable
Tana A Taner Tag & Tag Filter	+	Default Event	Ex Factory Default Event, Internal Antenna (Port 4)	Default Profile	Non- exclusive	6000	Always On	None	Read Any Tags	None	Nevet Stop	None	Disable
Events	-	Example Tag Database Display	Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag Within Database Detected	Show on Display Tag Database Record Page	Never Stop	None	Enable
Resultant Action	-	Example TCP Send using CSV 2 Format	internal Antenna (Port 4)	Default Profile	Non- exclusive	1000	Always On	None	Read Any Tags	Send TCP using CSV 2 Format	Never Stop	None	Disable
Add Event	-	Example Tags Group Display	display Group Tags - Internal Antenna (Port 4)	Test Tag Database Profile	Non- exclusive	1000	Always On	None	Tag within Tag Group Detected	Show on Display Tag Group Record Page	Never Stop	None	Disable
List Event		Read Temp	Read Temperature from Magnus 53 Tag - Internal Antennia (Port 4)	Read Temp Magnus S3	Non- exclusive	0	Always On	None	Read Temp tag	Pulse 2s	Never Stop	None	Disable
Deplay Format Tag Enventory	:	Read Moisture	Read moisture from Magnus S2 Tag - Internal Antenna (Port 4)	Read Moisture \$2	Non- exclusive	0	Always On	None	Read S2	None	Never Stop	None	Disable
Version Firmwave Upgrade	*	MOTT		Default Profile	Non- exclusive	65000	Always On	None	Tag within Tag Group Detected	MQTT AND Pulse 2s	Never Stop	None	Disable
		Tag Data Send from TCP Listening Port 50008		Default Profile	Non- exclusive	60000	Always On	None	Read Any Tags	TCP Send by Listening Port inside Reader	Never Stop	None	Disable



If you go to Display Tag Group/Database Record, you can see the database record content linking to the detected tag (The tag with EPC 123456789012345678901234 was used in this event Example Tag Database Display shipped with reader).





6.4. Read Tag using Custom Embedded RFID

Change the access mode to Custom Embedded RFID

			System
Status Users + System - Reader ID Company Label Capture Point Name Access Mode Custom Embedded RFID Application Frequency Configuration Operation Profile + Advanced Settings + SSL Certificate Memory Information	Access Mode Access Mode Set Cancel	de : Custom Embedded RFID HTTP/XML Unified API/High Level Unified API/Low Level Custom Embedded RFID	Gystem
Power Up Notification +			

Click Set to confirm the change

Input the Embedded RFID application path and its command on this page as shown below, the application will run once the access mode changed to "Custom Embedded RFID"

sers ystem Reader ID Capture Point Name Access Mode Custom Embedded RFID Application Frequency Configuration Operation Profile Hemoxy Information	Command Path : //opt/csl_embedded_rfid_example_2.6_20190828 Command : //esample-conf config_HK txt ModRy Cancel
Reader ID Reader ID Capture Point Name Access Mode Custom Embedded RPID Application Frequency Configuration Operation Profile Memory Information	Command Path : [spt/csl_embedded_ffid_example_2.6_20150828 Command : Assample -conf config_HK tot ModRy Cancel
Reader ID Capture Point Name Access Mode Custom Embedded RPID Application Frequency Configuration Operation Profile Memory Information	Command : /example -conf config_HK tot Modify Cancel
Capture Point Name Access Mode Custom Embedded RFID Application Frequency Configuration Operation Profile Weenox Information	Command : /example -conf config_HK tot Modify_Cancel
Access Mode Custom Embedded RFID Application Frequency Configuration Operation Profile Memory Information	Modify Cancel
Custom Embedded RFID Application Frequency Configuration Operation Profile + Memory Information	Modity Cancel
Frequency Configuration Operation Profile + Memory Information	
Operation Profile + Memory Information	
Memory Information	
and the second s	Select this page to input
Configuration Backup / Restore de	Select this page to hiput
Power Up Notification 🔶	command path and it
Heart Beat 🔶 🔶	
Log File Configuration	command
Download Log File	
Scheduled Restart	
Restart System	
Network 🔶	
lime & Timer 🔶 🔶	
Гад & Tag Filter 🛛 🔶	
i0 +	
Events 🔶	
/ersion +	



Demo Source Codes for Download

The source codes are available on request. The support page could be found in the below link

https://star-int.net/support/

Support -Size Systems Interval: x + C		- ۸۹۵ ۴ ۲ ۹
X	About Us ~ Smart City Selution	ns v Resources v News Q
07	Support Form The survey will take approximately 4 minutes to complete.	
0	* 必有 1. First Name * 輸入型的答案	
	2.Last Name * 输入型的资源	
	3.Company* 職入犯罪論案	
Capyright	4. Email Address *	Privacy Capyright & Patents Support



Historical Firmware Versions

The following are lists of historical firmware versions of each firmware:

Web Application:

Version Number	Date	Description

JNI Library:

Version Number	Date	Description

Patch:

Version Number	Date	Description

Unified API Library (Daemon):

Version Number	Date	Description



About Us

Founded in 2013, STAR Systems International (SSI) is a world leader in Automatic Vehicle Identification Technologies. SSI focuses on providing best-in-class transponders, readers and professional consulting services for Smart City Initiatives, including Electronic Tolling (ETC), Electronic Vehicle Registration (EVR), Fleet Management, Parking and Secure Access Control applications.

SSI is guided by three principles: Outstanding People, Innovative Products and Service Excellence. These principles reflect the Company's long-term expansive strategy to advance Smart City Technologies. SSI strives to ensure customer success by leveraging the Company's technical expertise and implementation experience. "Your Success Is Our Vision".

For more information on SSI, visit www.star-int.net.

Technical Support

Visit the SSI's Support at www.star-int.net and click Smart Cities Solutions > Technical Support, or go to https://star-int.net/support/ to apply support request for your RFID product.



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Solaria User Guide Version 1.0

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Cet appareil est conforme aux normes RSS exemptes de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) Cet appareil ne doit pas causer d'interférences nuisibles et (2) cet appareil doit accepter toute interférence reçue, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l' appareil. De plus, cet appareil est conforme à la norme ICES-003 des règles d'Industrie Canada (IC).

Tout changement ou modification non expressément approuvé par la partie responsable de la conformité pourrait annuler l'autorité de l'utilisateur à faire fonctionner l'équipement.

Remarque : cet équipement a été testé et déclaré conforme aux limites d'un appareil numérique de classe B, conformément aux normes RSS exemptes de licence d'Industrie Canada. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère des utilisations et peut émettre de l'énergie de radiofréquence et, s'il n'est pas installé et utilisé conformément aux instructions

, peut causer des interférences nuisibles aux communications radio. Cependant, il n'y a aucune garantie que des interférences ne se produiront pas dans une installation particulière. Si cet équipement cause des interférences nuisibles à la réception radio ou télévision, ce qui peut être déterminé en éteignant et en rallumant l'équipement, l'utilisateur est encouragé à essayer de corriger l'interférence par une ou plusieurs des mesures suivantes : -Réorientez ou déplacez l'antenne de réception.

-Augmenter la distance entre l'équipement et le récepteur.

-Connectez l'équipement à une prise sur un circuit différent de celui auquel le récepteur est connecté.

-Consultez le revendeur ou un technicien radio/TV expérimenté pour obtenir de l'aide. Cet équipement est conforme aux limites d'exposition aux rayonnements RSS-102 établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

Declaration of EIRP compliance

We, Star Systems International Limited, hereby to declare that product name: RFID Reader, model name: SOLARIA (HDR29000), will have professional installation or authorized service personnel to configure radio parameters of the transmitter using the software for adjusting total EIRP (36 dBm) power at local installation to ensure compliance with FCC rules, based on KDB594280. e.g. If the antenna cable at the site of installation has 12 dB loss, with a 15 dBi gain antenna, the professional installer could adjust the conducted power from the reader to 30 dBm to comply with the EIRP limit (36 dBm) stated in FCC part 15.