# IO-Link Configuration Software Instruction Manual



Original Instructions p/n: 228876 Rev. E April 15, 2024 © Banner Engineering Corp. All rights reserved.

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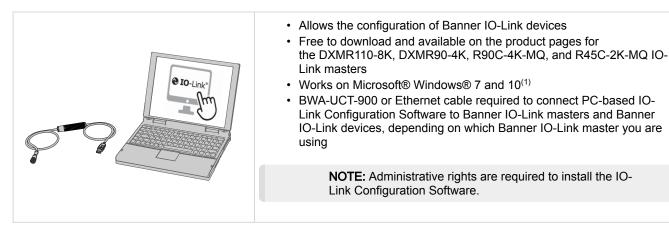
Chapter 1

Overview .....

# Software Description

.....

Software that Enables the Field Configuration of Banner IO-Link Masters and Banner IO-Link Devices



## Overview

Banner's IO-Link Configuration Software offers an easy way to configure Banner IO-Link masters and Banner IO-Link devices, offering users full control of master and device configuration. The easy-to-use software provides a variety of tools and works with the DXMR110-8K, DXMR90-4K, R90C-4K-MQ, and R45C-2K-MQ IO-Link masters.

Configure Banner IO-Link masters and Banner IO-Link devices using the free IO-Link Configuration Software, available for download at https://www.bannerengineering.com/us/en/products/software/io-link-software.html.

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<sup>&</sup>lt;sup>(1)</sup> Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries.

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# Chapter 2

# **Specifications and Requirements**

# IO-Link Configuration Software PC Requirements

#### **Operating System**

Microsoft® Windows® operating system versions 7 or 10<sup>(1)</sup>

### Hard Drive Space

120 MB

(1) Microsoft® and Windows® are registered trademarks of Microsoft® Corporation in the United States and/or other countries. USB

Available USB port

#### Screen Resolution

1366 × 768 full-color minimum

### Third-Party Software

.NET version 4.6.2 or higher

IMPORTANT: Administrative rights are required to install the IO-Link Configuration Software.

# Adapter Cable – Required for use with Serial IO-Link Masters

An adapter cable, model BWA-UCT-900, is required for use with the IO-Link Configuration Software, Banner R90C-4K-MQ, and Banner R45C-2K-MQ serial IO-Link masters. Use the adapter cable to connect Banner serial IO-Link devices to read, write, and preview device configurations.



 Connects Banner serial IO-Link masters to the PC-based IO-Link Configuration Software

## Model

Model	Adapter	Length	Connections
BWA-UCT-900	RS-485 to USB	1 m (3.28 ft)	USB and 5-pin M12 quick-disconnect connector

## BWA-UCT-900 Adapter Cable Specifications

#### Input Voltage

5 V DC from USB Type A connector

#### Certifications



## Output Voltage

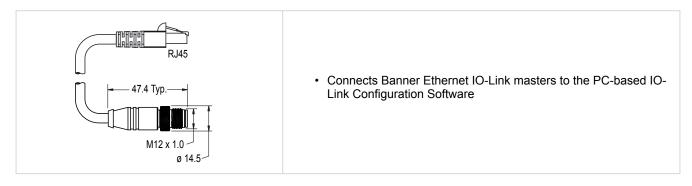
24 V DC power output for a single device transmitting at 1 Watt

#### **Operating Conditions**

-40 °C to +80 °C (-40 °F to +176 °F) 95% maximum relative humidity (non-condensing)

# Ethernet Cordset – Required for use with Ethernet IO-Link Masters

An Ethernet cordset is required for use with the IO-Link Configuration Software, Banner DXMR110-8K, and Banner DXMR90-4K IO-Link masters with an Ethernet IP interface. Use an M12 to RJ45 Ethernet cordset to connect to Banner Ethernet IO-Link masters to read, write, and preview device configurations.



#### Models

Model	Adapter	Lengths	Connections
STP-M12D-4xx	M12 D-code to RJ45 Shielded Ethernet	1.83 m (6 ft) 4.57 m (15 ft) 9.14 m (30 ft)	Ethernet and 4-pin M12 quick-disconnect connector

# FCC Part 15 Class B for Unintentional Radiators

(Part 15.105(b)) 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.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

# Industry Canada ICES-003(B)

This device complies with CAN ICES-3 (B)/NMB-3(B). 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.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

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Load an IO-Link Device IODD	. 7
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Chapter 3

# Installation Instructions

# Install the Software

IMPORTANT: Administrative rights are required to install the IO-Link Configuration Software.

- 1. Download the latest version of the software from https://www.bannerengineering.com/us/en/products/software/io-link-software.html.
- 2. Navigate to the downloaded file IOLConfigInstaller.exe.
- 3. Double-click the installer to open Banner IO-Link Configuration Software Setup.
- 4. Accept the terms in the License Agreement by selecting the checkbox.
- 5. Click Install to install the software.
- 6. Depending on the system settings, a pop-up window may appear prompting to allow the IO-Link Configuration Software to make changes to the computer. Click **Yes**.
- 7. Click **Close** to exit the installer after installation is complete.

## Connect the Cables

For serial IO-Link masters:

- 1. With the BWA-UCT-900 adapter cable, plug the M12 connector into male connector of the IO-Link master.
- 2. Plug the USB connector of the BWA-UCT-900 into the PC.
- 3. Plug the power cable of the BWA-UCT-900 into a wall outlet.

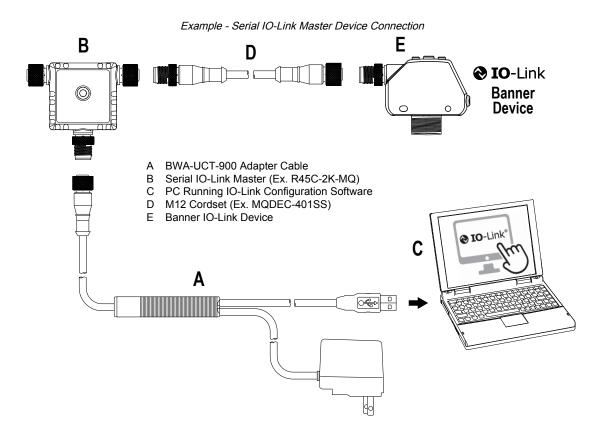
For Ethernet IO-Link masters:

- 1. With an Ethernet cordset, plug the M12 connector into the male connector of the IO-Link Master.
- 2. Plug the RJ45 connector of the Ethernet cordset into the PC.

## Connect an IO-Link Device with a Cable

To connect Banner IO-Link devices:

- 1. Connect the Banner IO-Link device or devices to the ports on the IO-Link masters using an M12 cordset.
- 2. Plug the applicable accessory into the IO-Link master:
  - a. For serial IO-Link masters: Use the BWA-UCT-900 adapter cable, and plug the female M12 connector into the male M12 communication port on the serial IO-Link master.
  - b. For Ethernet IO-Link masters: Use an Ethernet cordset, and plug the male M12 connector into the female M12 D-code Ethernet port on the Ethernet IO-Link master.
- 3. Plug the USB or RJ45 connector into the PC.



# Load an IO-Link Device IODD

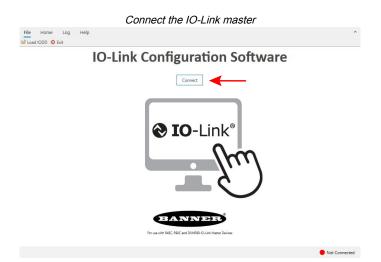
After connecting a Banner IO-Link master to a PC, use one of these methods to connect IO-Link devices to the IO-Link Configuration Software.

## Use the IODD Finder

Use the software to scan the connected device to download and install the IODD files automatically.

Use this method if there is not an IODD file already downloaded onto the PC. See "Add the IODD File Manually" on page 8.

1. Click Connect on the IO-Link Configuration Software start page.



An **IODD Not Loaded** pop-up window appears when the IO-Link device is connected successfully. 2. Select **Search for IODD(s) on IODD Finder**.

### IMPORTANT: An internet connection on the PC is required for this functionality.

	R45C-KII-IIQ (3) \$15C-M	GN-KQ (7)				
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ort Setup		Vendor	Banner Engineeri	ng Corporation		
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		Master II	Search for IODD(s) on	IODD Finder		
		FW Revis				
			Cancel			
		*Inte	rnet connection required	for search to work		

A Load Successful pop-up window appears when the IODD file is installed successfully. Click OK to close.

Vendor Info				
	Vendor	Banner Engineering Corporation		
	IO-Link Vendor ID	451		
Product Info	Load Successful	×		
	Opened IODD	file successfully for device S15C-MGN-KQ	LCOM)	
		ОК		
	Product Info	Product Info	Product Info Lead Successful X  Product Info Opened IODD file successfully for desice \$15C-MGH4Q	Product Info Load Successful X Load Successful X Load Successful X Load Successful X Load X L

## Add the IODD File Manually

- 1. Download the Banner IO-Link device IODDs manually.
  - a. Go to www.bannerengineering.com.
    - You can also go to ttps://ioddfinder.io-link.com/ to search and download device IODDs.
  - b. Search for the desired Banner IO-Link devices.
  - c. Click Product Detail.

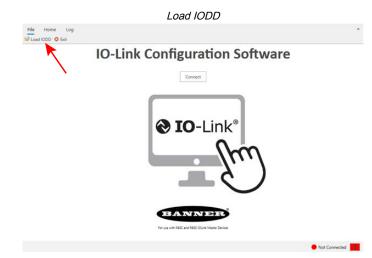
Search fo	r the Product (LM150KIQP shown)
BANNER'S CALL FOR PARTS CR	EATES A STEADY WORKFLOW AND PINPOINTS CRITICAL ISSUES. LEARN MORE.
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NARROW RESULTS Select filters below to nerrow your results	EXACT SEARCH MATCH LM150KIOP (803940) Derer Daplicement Sensor, Range 50-150 mm Input 10-30 V dc; Outputs: Analog-4-20 mA. Derer Paal-PAL Of Unit, Gauch Bosconnect Papal.
- TYPE	LIST PRICE: 996 USD I CURRENT STOCK: 0 CAD FILES I SPECIFICATIONS I LITERATURE Product Dear
PRODUCT	

d. On the product page, under **Downloads**, navigate to the IODD file and click the download button.

#### Download the IODD Files

PRODU	ICT DATA FILES	DATE	TYPE	SIZE	
¢	LM80 AND LM150 IODD FILES	4 AUG 2020	IODD FILE	1.3 M B	,* ≛ © ⊙

- 2. Extract the downloaded IODD zip file and save it to a desired location.
- Repeat this process for every Banner IO-Link device that is connected to the IO-Link master.
- 3. Open the IO-Link Configuration Software and click File > Load IODD in the upper left corner of the window.



A File Explorer window opens.

- 4. Navigate to where the IODD file was extracted to in File Explorer and click on it.
- 5. Click **Open** in File Explorer.

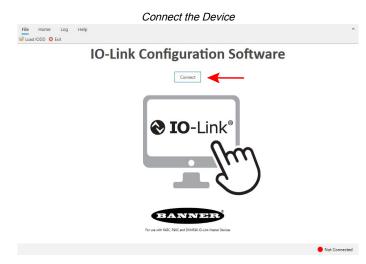
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The file explorer window closes, and the IODD file loads into the IO-Link Configuration Software.

# Connect to the Software

## Connect a Serial IO-Link Master

1. Click **Connect** on the IO-Link Configuration Software start page.



2. In the pop-up window, select Serial, and then click Connect.

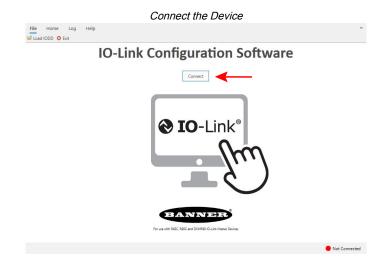
Select Serial	
File Home Log Help Load IODD 📀 Exit	^
IO-Link Configuration Software	
Connect L C X © Serial Ethenet Comm Port: COM3 - C Baud Rate: 19200 - Parity: None - Cancel Connect	
	Not Connected

The Banner IO-Link master and devices are now connected to the IO-Link Configuration Software. The connected IO-Link devices appear in new tabs within the software window, and the status in the bottom right corner now reads as **Connected**.

Central         Vendar         Banner Engineering Corporation           Port Setup         Vendar         631           Product Info         Product Name         PMSC           Description         2 Port IOL Master Iswee bannerengineering com/io-link§           Revision         17           Master ID         219585           PV Mexiston         32	
Vendar         Banner Engineering Corporation           IQ-Link Vendor ID         431           Product Info         21           Product Info         2 Port IOL Master (www.bannerengineering.com/io-link)           Revision         17           Master ID         21955	
IO-Link Vendor ID 451  Product Info Product Info Product Name Product	
Product Name         R45C           Description         2 Port IOL Master (iwww.bannerengineering.com/io-link)           Revision         17           Master (D         21955	
Description 2 Port IOL Master (Invenbannerengineering.com/io-link)     Revision 17     Master ID 21955	
Description 2 Port IOL Master (Invenbannerengineering.com/io-link)     Revision 17     Master ID 21955	
Revision 17 Master ID 219585	
FW Revision 32	

## Connect an Ethernet IO-Link Master

1. Click **Connect** on the IO-Link Configuration Software start page.

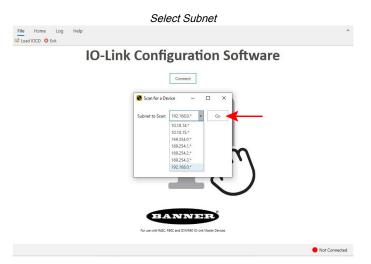


2. In the Connect window, select Ethernet, and click Scan.

IO-Link Configuration Software	File Home Log	Help		
Cancel Cancel Cancel		IO-Lin	k Configuration Software	
			ConnetL Sare San PAda: Pert S Carrent Carrent Carrent Carrent	

When the scan is complete, a new pop-up window appears.

3. In the new pop-up window, select the subnet the IO-Link master is connected to from the drop-down menu, and click **Go**.



The model number and the IP addresses of the connected Ethernet IO-Link masters are displayed.

4. Select the IP address of the IO-Link master to connect to, and click Confirm.

Select I	P Address and Model Number
File Home Log Help	· · · · · · · · · · · · · · · · · · ·
IO-Link	Configuration Software
	Connect
	Scan for a Device - C X
	Subnet to Scan: 192.168.0.*  Go 192.168.0.3 - DWMR110-8K
	192.166.0.10 - DXMR90-4K
	Confirm
	BANNER
	For use with MASC, R9OC and DIX/R9O ID-Link Master Devices
	Not Connected

The pop-up window closes, and the IP address of the connected IO-Link master auto-fills in the Connect window. 5. Click **Connect** to connect to the IO-Link master.

	Connect Ethernet	
File Home Log Help		^
IO-Link	Configuration Software	
	Connect	
	Serial Eternet Serial Eternet Pade: 1900603 Pade: 1900603 Connect Connect Connect Connect Connect Connect Connect Connect Connect Connect Connect Connect Connect Connect Connect Conn	
		Not Connected

The Banner IO-Link master and devices are now connected to the IO-Link Configuration Software. The connected IO-Link devices appear in new tabs within the software window, and the status in the bottom right corner now reads as **Connected**.

IR110-8K	LE550KQP (1)		
eneral	- Vendor Info		
ort Setup		Vendor	Banner Engineering Corporation
		IO-Link Vendor ID	451
	Product Info		
		Product Name	DXMR110-8K
		Description	8 Port ICL Master (www.bannerengineering.com)
		Revision	0
		Master ID	814332
		FW Revision	1029

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## Chapter 4

**Configuration Instructions** 

# Read and Change the Banner IO-Link Device Configuration

1. Select the device tab in the software window, and click **Parameters** in the left menu.

**Parameters** is used to read and change the Banner IO-Link device configuration. After clicking on **Parameters**, the Parameters pane opens within the device tab.

			Paramet	ers			
File Home	Log Help						^
R45C K50 Pro FF	F/PB LE550KQP						
Generic Process Data Parameters	Read Params	te Params					
	Drag a column header h	tere to group by that column					Q
<b>•</b>	Parameters	Command Name	R/W	Val	Cmd State	Units	
					USB: R	45C (	Connected

2. Click Read Params to read the current configuration of the connected Banner IO-Link device.

		Re	ead Param	s		
File Home	Log Help					
R45C K50 Pro F	F/PB LE550KQP	•				
Generic Process Data Parameters	Read Params Write Para	ms				
	Parameters					Q
	Command Name	R/W	Val	Cmd State	Units	
	Parameters: Custom Ani	mation Settings				
	Parameters: Custom Cole	or 1 Configuration				
	Parameters: Custom Cole	or 2 Configuration				
	Parameters: Device Access Locks					
	Parameters: Executable	Commands				
	Parameters: Operation N	lode				
	▶ Parameters: Output Sett	ings				
	Parameters: State 1 Para	meters				
	▶ Parameters: State 2 Para	meters				
	Parameters: State 3 Para	meters				
	▶ Parameters: State 4 Para	meters				
	Parameters: Touch Settin	igs				

USB: R45C Connected

This displays the current IO-Link configuration information in the Parameters pane, along with all of the device's available settings.

- 3. If desired, make any changes to the Banner IO-Link device's configuration in this pane using the available settings.
- 4. If changes were made to the settings, write the changes to the device by clicking Write Params.

		И	/rite Param	S		
File Home	Log Help					
R45C LE550KQF	P K50 Pro FF/PB					
Generic Process Data Parameters	Read Params Write Params	•	-			
	Parameters +					Q
	Command Name	R/W	Val	Cmd State	Units	
	Parameters: Custom Anima	ation Settings				
	Parameters: Custom Color	1 Configuration				
	Parameters: Custom Color	2 Configuration				
	Parameters: Device Access	Locks	/			
	Parameters: Executable Co	mmands				
	A Parameters: Operation Mo	de	<b>∠</b>			
	Operation Mode	rw	Demo			
	A Parameters: Output Setting	gs				
	Output Settings.Output St	rw	Normally Closed			
	Output Settings.Off Delay		Leading Edge	K		
	Output Settings.Off Delay	rw	0			
	Parameters: State 1 P	eters		N		
	Parameters: State 2 P	eters				
	Parameters: State 3 P	eters				*
					USB: R45C	Connecte

## Process Data

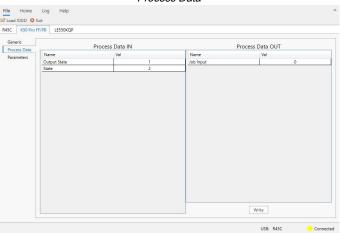
Process data refers to the information that the device reads and transmits to the master, such as the distance reading on a laser measurement sensor.

Process data can also refer to information that is transmitted to the device from the master, such as messages sent to a tower light indicating which color segments should be illuminated.

Cyclic and acyclic process data can be transferred between an IO-Link master and an IO-Link device. By clicking **Process Data** in the left menu, the user is able to view the live process data of the Banner IO-Link device connected to the IO-Link master.

Process Data IN is data that is sent from the IO-Link device to the IO-Link master.

Process Data OUT is data that is sent from the IO-Link master to the IO-Link device.



#### Process Data

# Read and Change the Banner IO-Link Master Port Configuration

The IO-Link Configuration Software has a special tab for configuring the port settings on the IO-Link master. To access, click on the IO-Link master tab and select **PortSetup**.

IO-I ink Master Port Setup

ieneral ortSetup	Param Name	Port 1	Port 2	Port 3	Port 4
	Port Mode	IOL AUTOSTART	IOL AUTOSTART	IOL AUTOSTART	IOL AUTOSTART
T	Port Cycle Time	0 \$	0 \$	DEACTIVATE IOL Manual	0 🗘
	Vendor ID	451	451	IOL AUTOSTART DI C/Q	451
1	Device ID	393220	327681	DO C/Q	659470
	Discrete Ch 1 (pin4)				
	Input Type Output Type Invert Input				
	Input Type Output Type Invert Input Diag mode	Digital Input 🔻	Disabled •	Disabled •	Disabled
	Input Type Output Type Invert Input Diag mode Discrete Ch 2 (pin2)	Digital Input • Normal •	Disabled • Diagnostic Input •	Disabled * Diagnostic Input *	Disabled •

The operating mode can be configured for any port on the IO-Link master. The following modes can be used:

#### Deactivated

Use deactivated mode for any unused IO-link master ports if a device is not connected.

### IO-Link Manual

The IO-Link master only connects IO-Link devices that have a certain vendor ID and device ID (1: IOL\_MANUAL).

#### **IO-Link Autostart**

The IO-Link master connects to every connected IO-Link device (2: IOL AUTOSTART).

#### **Digital Input**

The IO-Link port functions as a standard digital input (3: DI C/Q).

#### **Digital Output**

The IO-Link port functions as a standard digital output (4: DO\_C/Q).

When the backup function of the IO-Link master is used, the IO-Link master automatically provides the saved parameters to the new device after replacement. This makes IO-Link device replacement seamless in IO-Link applications. Another common industry term for this function is *data storage mode*.

#### . Backup+Restore Mode

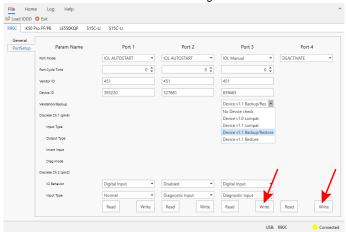
If a port on the IO-Link master is set to Backup+Restore, then the new device added to the IO-Link port takes in the same device configuration as the device that was just replaced, as the IO-Link master had stored the last configuration change by a backup (3: Type compatible Device V1.1, Backup + Restore).

#### . Restore

If the port on the IO-Link master port is set to Restore, then the new device takes in the configuration according the settings saved in the master at the time of the last backup. Because possible configuration changes were not saved in the master, a different behavior from the previous one before the replacement may occur (4: Type compatible Device V1.1, Restore).

Make changes to the ports' settings by selecting the drop-down menus for each port. To read the current configuration of each port, select the applicable **Read** button. After making the desired changes to the port settings, select the applicable **Write** button.

#### Write Port Settings



# Save and Load IO-Link Master Port Setup and IO-Link Device Parameters

Users can save and load IO-Link master port setup and IO-Link device parameters.

These configurations can be saved to a PLC for later use, or can be emailed to others in different locations for rapid configuration of IO-Link masters and IO-Link devices. To save IO-Link master port configurations, IO-Link device configurations, or both, users can configure the IO-Link master port set up and IO-link devices as required.

## Save Port Setup and Parameters

To save a configuration:

- 1. Ensure that the configurations are written to the IO-Link master and IO-Link devices:
  - a. Click Write on all of the ports in the port setup tab.
  - b. Click Write Params on the IO-Link device configurations tabs.
- 2. Click Save Config.

ile Home	Device Log Help					
Load IODD 🖢	Load Config 💾 Save Config 🙁 Exit					
KMR90-4K K	50 Pro FF/PB (4)					
Generic						
Generic Process Data	Read Params Write Param					
Process Data Parameters	Read Params Write Param					
Parameters	· · · · · · · · · · · · · · · · · · ·					
	Parameters *					Q
	Command Name	R/W	Val	Cmd State	Units	
	Parameters: Device Access Loci	ks				2
	Parameters: Executable Comma	de				
	<ul> <li>Farameters: Executable Comm.</li> </ul>	anos				
	Parameters: Operation Mode					
	Operation Mode	rw	Demo	*		
	A Parameters: Output Settings					
	Output Settings.Output State	rw.	Normally Open			
	Output Settings.Off Delay Type	DW.	Leading Edge			
	Output Settings.Off Delay (ms)	rw	0		ms	
	A Parameters: State 1 Parameters	5				
	State 1 Parameters.Animation	04	Steady			
	State 1 Parameters Animation		CCW			
	State 1 Parameters Animation		Flash			
	State 1 Parameters.Animation	rw	Custom			
	State 1 Parameters-Vibration F	rw	Off			
	State 1 Parameters.Off Delay T	rw	Leading Edge			
	State 1 Parameters.Off Delay (	rw	0		ms	
	State 1 Parameters.Static Sequ	rw	0			
	State 1 Parameters.Sequence	rw	LED1			
	State 1 Parameters.Color 1	rw	Green			P

IO-Link Master: DXMR90-4K 🥚 Connected

A Save As pop-up window appears.

3. Name and save the configuration file to the PC.

→ 🕆 📙 → This PC → Downloads → 234457 (2)	✓ ひ Search 234457 (2)	م (
Organize 👻 New folder		
This PC	^ Name ^	Date mod
3D Objects	le550.config	4/4/2024 1
Desktop	Light demo mode.config	4/4/2024 1
Documents	port and device settings.config	3/25/2024
Downloads	port settings.config	3/25/2024 3/1/2024 4
Music	Sick.config	3/1/2024 4 3/1/2024 4
Fictures	sicks.config	3/1/2024 4
Videos	T30R 4-20 Negative.config	3/1/2024 1
Local Disk (C:)	T30R config.config	3/1/2024 1
<ul> <li>Anno 11 August Anno 11 Council Anno</li> </ul>		
<ul> <li>Management of the second s</li></ul>		
· Name of Space (Strength on other Strength of Strengt		
	✓ <	
File name: K50 and IO-link Master configuration		
Save as type: IO Link Config Files (*.config)		

After clicking Save, a Save Config pop-up window appears.

- 4. Select one or more of the following options:
  - Save IO-Link Master Port Setup
  - · Save IO-Link Device Parameters



5. After selections are made, click Confirm.

The configuration file is saved, and can now be loaded into other IO-Link masters and devices.

NOTE: The same IO-Link masters and devices that were previously configured and saved must be used.

## Load Port Setup and Parameters

To load a saved configuration:

- 1. Open a new instance of the Banner IO-Link Configuration Software.
- 2. Read the current IO-Link master and IO-Link device configurations:
  - a. Click **Read** on each port in the port setup tab.
  - b. Click Read Params in each of the IO-Link device tabs.
- 3. Click Load Config.

			Load Config	1		
File Home	Device Log Help		Ū			
Load IODD	Load Config 💾 Save Config	8 Exit				
DXMR90-4K	K50 Pro FF,					
Generic Process Data Parameters	Read Params Write Pa	arams				
	Parameters *					Q
	Command Name	R/W	Val	Cmd State	Units	
	Parameters: Custom A	inimation Settings				
	Parameters: Custom C	Color 1 Configuration				
	▶ Parameters: Custom C	olor 2 Configuration				
	Parameters: Device Ac	cess Locks				
	Parameters: Executable	le Commands				
	▲ Parameters: Operation	n Mode				
	Operation Mode	rw	Advanced			
	Parameters: Output Se	ettings				
	Parameters: State 1 Pa	arameters				
	Parameters: State 2 Pa	arameters				
	▶ Parameters: State 3 Pa	arameters				
	Parameters: State 4 Pa	arameters				
	Parameters: Touch Set	ttings				
				10	-Link Master: DXMR90-4K	Connecter

An **Open** pop-up window appears.

4. Navigate to where the configuration file is saved on the PC and open the file.

→	34457 (2)	✓ ♂ ≤	earch 234457 (2)	P
Drganize 🔻 New folder			E= • 🔲	0
Attachments	^	Name	Date modified	Ŧ
Documents		K50 and IO-Link Master Configuration	.co 4/4/2024 2:12 PM	(
Pictures		le550.config	4/4/2024 11:01 AM	(
This PC		Light demo mode.config	4/4/2024 11:11 AM	C
3D Objects		port and device settings.config	3/25/2024 1:32 PM	C
		port settings.config	3/25/2024 1:30 PM	0
Desktop		Sick.config	3/1/2024 4:26 PM	(
Documents		sick3.config	3/1/2024 4:29 PM	0
🕹 Downloads		sickconfig2.config	3/1/2024 4:25 PM	0
Music		T30R 4-20 Negative.config	3/1/2024 1:04 PM	C
Pictures		T30R config.config	3/1/2024 12:43 PM	0
Videos		📄 test file.config	4/4/2024 1:53 PM	C
Local Disk (C:)		test.config	4/4/2024 2:06 PM	C
sfoley (\\hq-fileserver01\home) (H:)				
-				
🛫 Marketing (\\hq-marketing) (M:)				
ProductMgmt_Marketing (\\sx-silex\WirelessF		<		

After clicking Open, a Load Config pop-up window appears.

- 5. Select one or more of the following options:
  - · Save IO-Link Master Port Setup
  - Save IO-Link Device Parameters

📎 Load Config			×
Please sele	ect data to l	oad	
Save IO-Link Maste			
And a second sec			
Save IO-Link Device	e Parameter	5	

6. After selections are made, click Confirm.

A Configuration Successfully Loaded pop-up window appears.

7. Click **OK** to close.

Configuration Successfully Loaded Pop-Up Window



- 8. Ensure the newly loaded configuration is written to the IO-Link master and IO-Link devices:
  - a. Click Write on all of the ports in the port setup tab.
  - b. Click Write Params on the IO-Link device configurations tabs.

The saved configuration is now successfully loaded onto the IO-Link master and IO-Link devices.

## **Discrete Channel Visualization and Control**

Setting Discrete Ch 1 (pin2), Discrete Ch 2 (pin4), or both to discrete inputs in Port Setup causes an LED status icon to display on the corresponding Input Status:

- On is signified by a green icon
- Off is signified by a red icon

Click Read to see the current discrete Input Status.

/R110-8K								
eneral ort Setup	Param Name	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	
	Port Mode	DI C/Q 👻	IOL AUTOSTART 👻	IOL AUTOSTART 🔻	IOL AUTOSTART 👻	IOL AUTOSTART 👻	IOL AUTOSTART	
	Port Cycle Time	0 \$	0 \$	0 \$	0 \$	0 \$	0 \$	
	Vendor ID	0	0	0	0	0	0	
	Device ID	0	0	0	0	0	0	
	Validation/Backup Discrete Ch 1 (pin4) Input Type Input Status	Transistor 👻						
	Discrete Ch 1 (pind) Input Type Input Status Output Type Trigger Output Invert Input	Inverted						
	Disorete Ch 1 (pin4) Input Type Input Status Output Type Trigger Output Invert Input Diag mode	• ←						
	Discrete Ch 1 (pind) Input Type Input Status Output Type Trigger Output Invert Input	Inverted	Digital Input •	Digital Input •	Disabled •	Disabled •	Disabled •	
	Discrete Ch 1 (pind) Input Type Input Status Output Type Trigger Output Invert Input Diag mode Discrete Ch 2 (pin2)	Inverted	Digital Input *	Digital Input •	Disabled •	Disabled •	Disabled •	
	Discrete Ch 1 (pin4) Input Type Input Status Output Type Trigger Output Invert Input Diag mode Discrete Ch 2 (pin2) IO Behavior	Inverted	Digital Input •	Digital Input •	Disabled •	Disabled •	Disabled •	
	Discrete Ch 1 (pin4) Input Type Input Status Output Type Trigger Output Invert Input Diag mode Discrete Ch 2 (pin2) IO Behavior Trigger Output	Inverted Diagnostic Digital Input						

Setting Discrete Ch 1 (pin2), Discrete Ch 2 (pin4), or both to discrete outputs in the Port Setup allows for the manual configuration of those discrete outputs. To turn them on, select **Trigger Output**, and then click **Write**.

XMR110-8K	K50 Pro FF/PB (4)									
General	Param Name	Port 1		Port 2	Port 3	Port 4		Port 5		Port 6
Port Setup	Port Mode	DO C/Q			DI C/Q -	IOL Manual	*	IOL Manual	*	IOL AUTOSTART
	Port Cycle Time		0 \$	0 \$	0 \$		0 \$		0 \$	
	Vendor ID	0		0	0	451		0		0
	Device ID	0		0	0	393220		0		0
	Validation/Backup									
	Discrete Ch 1 (pin4)				Electromechanical 🔻	Device v1.1 Backup/R	estore 🔻	No Device che	ck 🔻	
	Discrete Ch 1 (pin4)	PNP	-		Electromechanical	Device v1.1 Backup/K	estore 🔻	No Device che	ck 🔻	
	Discrete Ch 1 (pin4) Input Type Input Status Output Type Trigger Output	-	•		•	Device v1.1 Backup/K	estore ¥	No Device che	ck 💌	
	Discrete Ch 1 (pin4) Input Type Input Status Output Type Trigger Output Invert Input	-	_	Digital Input *	Inverted	Device v1.1 Backup/H	estore 🔻	No Device che	ck v	Disabled
	Discrete Ch 1 (pin4) Input Type Input Status Output Type Trigger Output Invert Input Diag mode Discrete Ch 2 (pin2) ID Behavior	Digital Outpu	_	Digital Input •	Inverted Diagnostic					Disabled

# Change the IP Address on the DXMR90-4K and DXMR110-8K IO-Link Masters

1. Click Device > IP Settings.

		Navigating to Device > IP Settings	
File Home	Device Log Help		
IP Settings			
General	Vendor Info		
Port Setup		Vendor	Bar
		IO-Link Vendor ID	45
	Product Info		
		Product Name	DX
		Description	8 P
		Revision	0
		Master ID	81-
		FW Revision	10

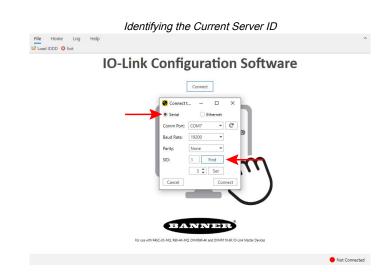
- 2. In the pop-up window, select Static IP, DHCP, or Follow DXM XML Settings from the drop-down menu.
- 3. Enter the desired IP address settings, and click Change IP Settings.

IP Settings	-		×
Static II	p	•	
New IP Address:	192.168.0	).4	
Subnet:	255.255.2	255.0	
Gateway:	0.0.0.0		

# Change the Server ID on the R90C-4K-MQ and R45C-2K-MQ IO-Link Masters

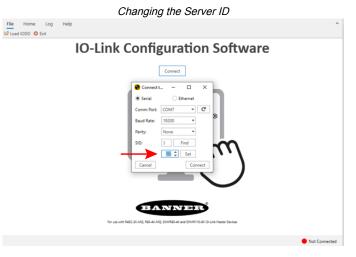
Connect the R45C-2K-MQ or R90C-4K-MQ to the PC, and then to the IO-Link Configuration Software (see "Connect the Cables" on page 6 and "Connect to the Software" on page 9). A pop-up window appears after clicking "Connect."

- 1. Select Serial.
- 2. Click Find.

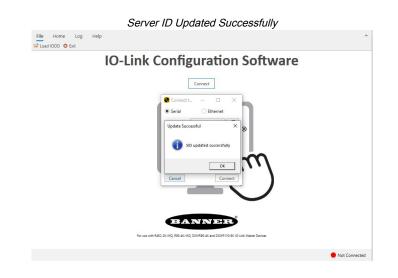


The software displays the current server ID of the connected IO-Link master.

- 3. Change the server ID of the IO-Link master by using the up and down arrows.
- 4. Click Set to apply the new server ID to the IO-Link master.



A pop-up window displays that the server ID change was implemented successfully. Click OK to close.



## 

Chapter 5

# Accessories

# **IO-Link Hardware**

	4-Pin T	hreaded M12 RS-485	to USB Adapter Cordset, with Wall Plug	
Model	Length	Style	Dimensions	Pinout (Female)
BWA-UCT-900	1 m (3.28 ft)	Straight	OL OF	2 - 4 $1 - 3$ $1 = Brown$ $2 = White$ $3 = Blue$ $4 = Black$

4-pin M12 D-code to RJ45 Shielded Ethernet					
Model	Length	Style	Dimensions	Pinout (Male)	
STP-M12D-406	1.83 m (6 ft)				
STP-M12D-415	4.57 m (15 ft)				
STP-M12D-430	9.14 m (30 ft)	Straight	HIL X 1.0 Ø 14.5	1 = White/Orange 2 = Orange 3 = White/Blue 6 = Blue 2 $1$ 1 = White/Orange 2 = White/Blue 3 = Orange 4 = Blue	

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IO-Link Configuration Software Release Notes	
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# Chapter 6

# **Product Support and Maintenance**

## Maintenance

Maintenance tasks include updating the IO-Link Configuration Software as new versions become available.

## Update the Software

The current version of the IO-Link Configuration Software is available for download from https://www.bannerengineering.com/us/en/products/part.811445.html.

When connected to a network, if a IO-Link Configuration Software update is available, a red icon displays in the bottom right corner of the IO-Link Configuration Software. Click this icon to update the software to the latest version.

# **IO-Link Configuration Software Release Notes**

Version	Devices	General
2.1.7	Added support for saving, loading, and sending IO-Link master port settings and IO-Link device configurations.	Users can now save IO-Link master and IO-Link device configurations to their PC, and load these configurations to new devices. Users can also send these configurations to others.
2.1.0	Added functionality for discrete channel status and control in Port Setup tab.	Users can now visualize discrete inputs and trigger discrete outputs in the port setup tab.
2.0.37	Added support for setting the server ID on serial IO-Link masters R90-4K-MQ and R45C-2K-MQ.	IODD Finder API support for automatic searching and downloading of IODDs.
2.0.29	Added support for DXMR110-8K IO-Link Master, Ethernet connectivity, and IP addressing functionality.	DXMR90-4K and DXMR110-8K can connect via Ethernet, and IP addressing functionality added.
2.0.7	Added support for DXMR90-4K IO-Link Master.	Can now connect multiple devices and configure multiple ports.
1.0.16	Supports R45C and R90C IO-Link Master devices.	Initial release.

# Contact Us

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For worldwide locations and local representatives, visit www.bannerengineering.com.

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