

Converting from J1939R to the J1939R/B router.

Document Code: TN-Convert-J1939R-into-J1939R/B Date: January 29, 2024 Revision: 1.00

How to Contact Us

Asia Pacific

Regional Office +60.3.7941.2888 support.ap@prosoft-technology.com

North Asia (China, Hong Kong) +86.21.5187.7337 support.ap@prosoft-technology.com Europe/Middle East/Africa Regional Office

+33.(0)5.34.36.87.20 support.emea@prosoft-technology.com

Latin America Regional Office +52.222.264.1814 support.la@prosoft-technology.com North America Corporate Office +1.661.716.5100 support@prosoft-technology.com



Purpose of Tech Note:

The purpose of this Tech Note is to show how to migrate from a J1939R router to the J1939R/B router. Discuss the differences between the units and provide the steps necessary for the new gateway to use the old configuration for a seamless migration.

The J1939R/B has all the functionalities as its predecessor, additionally it supports the following: Modbus protocol, Device Level Ring (DLR) and CIP originator for EtherNet/IP applications.

The hardware and power consumption are quite different, please look at the below screen capture where the functionalities and hardware specifications are highlighted.

A-J1939R vs A-J1939R/B



A-J1939R

- The J1939 Router enables data exchange between SAE J1939 devices and Logix controller via EtherNet/IP.
 - Direct-to-Tag Technology
 - Generates Logix Tags and UDTs in L5X
 - Built-Packet Analyzer
 - PGN browsing and Auto Scaling to Engineering units

Hardware Specification:

- Dimensions: 101.0 x 22.5 x 120.0 mm
- Power: Input 10 28V DC
- Current: 70mA@24v
- Power Consumption: 1.7W
- J1939 Connector: 5-way terminal, 5.08mm pitch

Support A-J1939R functionalities

+ Added features:

- Modbus TCP Client/Server
- Modbus RTU Client/Server
- EtherNet/IP Originator
- Device Level Ring (DLR)
- Network Time Protocol (NTP)

Hardware Specification:

- Dimensions: 116.0 x 34.0 x 151.0 mm
- Power: Input 10 32V DC
- Current: 85mA @ 24V
- Power Consumption: 2.2W (Max)
- J1939 Connector: 5-way terminal 5.08mm pitch



Steps on how to use the configuration from the old J1939R to the new J1939R/B

There are two ways to convert the configuration from a J1939R to the J1939R/B gateway. The first is by exporting the configuration and the second is via a saved project, we will go in detail on both.

A - Exporting the configuration

1) Save your configuration by exporting from Slate application.



2) Give a name to the .spx file





3) Import the Saved configuration onto a new project by going to the Device Tab



4) Choose the saved filed and select to Open the file.

Device Impo	ort/Export File			×
🔥 > This	s PC > DATA (D:) > Temp Folder for Conf	iguration	v Ö v	Search Temp Folder for Conf
New folde	r			::: - [] ?
^	Name	Date modified	Туре	Size
	J1939 Router - Test 2.spx	1/26/2024 11:33 AM	SPX File	2 KB
ts	📋 J1939 Router -Test Config.spx	1/26/2024 11:13 AM	SPX File	1 KB
nts				
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) - 010EL Y				
File na	me: J1939 Router - Test 2.spx		~ 5	Slate Device Export (*.spx) 🛛 🗸 🗸
	-		[Open Cancel



5) Add the J1939R/B to the project

Image	Device Name	Description	^
Ð	IP Point Hart Out	HART Single Channel Output Communication Module	
	J1939 Router	SAE J1939 to Logix Communication Module	
	J1939 Router/B	SAE J1939 Ethernet Communication Module - Series B	
	Modbus Router	Modbus to Logix Communication Module	
	Modbus Router 485	Modbus 485 to Logix Communication Module	
	Modbus Router/B	Modbus Router - Series B	~

6) Right-click on the recently added module and select the import from Series A option.

□···· J1939Router (J1939 Router)				
⊒ I J1939RB01 (J193		Configuration		
🔤 🔑 Configuration		Consideration		
	8	Connection Path		
	11	Go Online		
	Ŧ	Download		
4		Upload		
	\checkmark	Verify Configuration		
	ŋ	Сору		
	[≁	Export		
	X	Delete		
	→]	Import from Series A		
	3	Generate Logix L5X 🛛 🗟		
	[≁	Export PGN Details		
	[→	Export Modbus Summary CSV		
	[→	Export Modbus Expanded CSV		



7) Press Ok button at the following Prompt

Select Source Device			
J1939Router	~		
Ok			
	Device J1939Router Ok Cancel		

8) A successful import will show Import Done as displayed below, the configuration parameter from the old router will be now available in the new product.



B – Converting using a Saved project1) Open the previously Saved J1939R project (example Test B)

	his PC → DATA (D:) → Temp Folder	for Configuration	5 V	🔎 Search Temp Fold	der for Conf
rganize 🔻 🛛 New fol	der			== -	
🗊 3D Objects 🔷 🔨	Name	Date modified	Туре	Size	
Desktop	5 TEST A.spj	1/26/2024 11:29 AM	Aparian Slate	2 KB	
🔮 Documents	S Test B.spj	1/26/2024 1:10 PM	Aparian Slate	10 KB	
🖶 Downloads					
👌 Music					
E Pictures					
Videos					
监 OS (C:)					
DATA (D:)					
쿶 dgonzalez (\\BFl					
- Drivek (\\neft lo					
Network					



2) Add the J1939R/B to the project

Image	Device Name	Description	^
Ð	IP Point Hart Out	HART Single Channel Output Communication Module	
	J1939 Router	SAE J1939 to Logix Communication Module	
U	J1939 Router/B	SAE J1939 Ethernet Communication Module - Series B	
	Modbus Router	Modbus to Logix Communication Module	
.	Modbus Router 485	Modbus 485 to Logix Communication Module	
	Modbus Router/B	Modbus Router - Series B	~

3) Right-click on the recently added module and select the import from Series A option.

J1939Router (J193	outer)	
Configuration	۶	Configuration
	ര	Connection Path
	41	Go Online
	÷.	Download
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	\checkmark	Verify Configuration
	ŋ	Сору
	[≁	Export
	X	Delete
	→]	Import from Series A
-	3	Generate Logix L5X 🛛 😽
	[≁	Export PGN Details
	[→	Export Modbus Summary CSV
	[→	Export Modbus Expanded CSV



4) Press Ok button at the following Prompt

Select Source Device				
Select Device	J1939Router	~		
I	Ok Cancel			

5) A successful import will show Import Done as display below, the configuration parameter from the old router will be now available for downloading to the J1939R/B.

