# Equustek DLPCI/104 DF1-DH+ getting data from Allen Bradley PLC5 & SLC504 using PTC KEPServerEX

Start KEPserverEX, to create a channel, right click on connectivity then click on New Channel.

[Connected to Runtime] - KEPS	erverEX 6 Configuration				- 0	×
File Edit View Tools Runtim	e Help					
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Project	Channel Name	Driver	Connection	Sharing		Virtual N
Connectivity	1-104DH485	Allen-Bradley DF1	COM 3	No		None
	DOEIP	Allen-Bradley ControlLo	Ethernet	N/A		N/A
🖨 😩 Alarms & Events						
Add Area						
🖻 😫 Data Logger						
Add Log Group	×			_		
<						>
Ready			Default U	ser Clients: 0	Active tags: 0	of 0:

To select the driver from the drop menu, click on Allen Bradley DF1, click on Next, then type a name for the channel & click on Next.  $\times$ 

Add Channel Wizard			×
		← Add Channel Wizard	
Select the type of channel to be created:			
		Specify the identity of this object.	
ABB Totalflow	0	Name:	
Advanced Simulator Allen-Bradley Bulletin 1609 Allen-Bradley Bulletin 900 Allen-Bradley Control Logix Ethernet Allen-Bradley Control Logix Slave Ethernet		DLPCI-104/DH+	
Allen-Bradley Enternet Allen-Bradley Micro800 Ethemet Allen-Bradley Micro800 Serial Allen-Bradley Slave Ethemet Alstom Redundant Ethemet Analog Devices Aromat Ethemet			
Aromat Serial AutomationDirect DirectNet AutomationDirect EBC AutomationDirect ECOM AutomationDirect K Sequence			
	Next Cancel		<u>N</u> ext Cancel
Click on Next	×		
← Add Channel Wizard			
Limit data transmissions to one channel at a time by assigning network.	this channel to a virtual		
Virtual Network:			
None 🗸 🕼			
Specify the number of transactions to perform when a channe	l is given permission to		
communicate. Transactions per Cycle:			
1			
	Next Cancel		

Set COM port currently assigned to the DLPCI/104 in Device Manager as the COM ID, adjust the DF1 serial settings to match those previously configured for the DLPCI/104, and then proceed by clicking Next.

←

Add Channel Wizard

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Physical Medium:		
COM Port 🗸 🥑		
Specify the physical port number. COM ID: 3		
Select the communications speed of the l	lardware in bits per second.	
Baud Rate:		
Select the number of data bits per word.		
Data Bits: 8 V		
Indicate if the data parity for this commu Parity: None    (2)	nication is Odd, Even, or None.	
Specify the number of stop bits that indic	ate the end of a data transmission.	
Stop Bits:		
Select the Flow Control required by the t	arget device (for control line utilization).	
Flow Control:		
None 🗸 🕢		

Proceed by clicking Next to continue with the rest of the channel settings.  $_{\times}$ 

		×	X
÷	Add Channel Wizard	÷	Add Channel Wizard
	Choose whether or not low-level communication errors are posted to the event log. Request failures and other errors are reported regardless. Report Communication Errors:		Choose how write data is passed to the underlying communications driver when more than one write exists in the write queue. Obtimization Method:
	Enable 🔍 🥝		Write Only Latest Value for All Tags V
	Choose whether or not COM port connections are terminated when inactive. Close Idle Connection:		Specify the ratio of write operations to read operations, based on one read per configurable number of writes. Duty Cycle:
	Define the time is accordent a comparison can be insetive before being terminated		
	Idle Time to Close (s):       15		
	Next Cancel		Next Cancel
÷	Add Channel Wizard	×	
	Choose how to send invalid floating-point numbers to the client. Floating-Point Values: Replace with Zero Unmodified		
	Next Cancel		
Pro	oceed by setting Station ID to match the nod	e ado	dress number of the DLPCI/104 & click Next
÷	Add Channel Wizard		

Set a unique network ID for the local machine or converter. In KF2/KF3 configurations, set to the KF2/KF3 node address. The Station ID must not conflict with any Device ID within the channel.
Station ID (decimal): 01
Select the standard for communication on this connection. Device model can dictate protocols supported. Protocol determines master and slave ratios, update rates, sink and source behavior, and attempt limits.
Link Protocol:
Full Duplex 🗸 🔞
Enable to only accept responses for the station indicated in the Station ID field.
Ignore Responses for other Stations:
Disable V
Next Cancel

To finalize the channel settings, go ahead and click on Finish

← Add Channel Wizard

	Identification		~
	Name	DLPCI-104/DH+	
	Description		
	Driver	Allen-Bradley DF1	
	Diagnostics		
	Diagnostics Capture	Disable	
	Tag Counts		
	Static Tags	0	
	Connection Type		
	Physical Medium	COM Port	
	Shared	Yes	
	Serial Port Settings		
	COM ID	3	_
	Baud Rate	115200	_
	Data Bits	8	
	Parity	None	
	Stop Bits	1	
	Flow Control	None	
	Operational Behavior		
	Report Communication Errors	Enable	_
	Close Idle Connection	Enable	
	Idle Time to Close (s)	15	_
	Write Optimizations		
	Optimization Method	Write Only Latest Value for All Tags	
	Duty Cycle	10	
Ξ	Non-Normalized Float Handling		_
	Floating-Point Values	Unmodified	_
	Channel-Level Settings		_
	Virtual Network	None	_
	Transactions per Cycle	1	_
	Global Settings		_
	Network Mode	Load Balanced	
	Link Settings		_
	Station ID (decimal)	1	_
	Link Protocol	Full Duplex	_
	Ignore Responses for other Stations	Disable	$\checkmark$

<u>F</u>inish Cancel

To add a Device to the newly configured channel simply click on (Click to add a device).

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⊡	^	Device Name /	Model		1	D		
│□···【骰】 Connectivity		Click to add a device.						
DLPCI-104/DH+								
Click to add a device.								
🖶 📭 DLPCI-104DH485								
i								
& Aliases								
🚊 🌉 Alarms & Events								
Add Area								
🗄 📲 Data Logger	¥	<						>
Ready			Default User	Clients: 0	Active	tags: 0 of	f O	

Specify device name as PLC5, & from the drop-down menu, select PLC5 then click on Next

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	× «	- Add Device Wizard
Add Device Wizard		
Specify the identity of this object.          Name:       PLC5         PLC5       Image: I		Select the specific type of device associated with this ID. Options depend on the type of communications in use. Model: Micrologix SLC 5000 Fixed I/O SLC 5/01 SLC 5/02 SLC 5/03 SLC 5/04 SLC 5/05 PLC-5
<u>N</u> ext Cancel	I	<u>N</u> ext Cancel
Enter the node address number of the PLC5.	In o	ur setup, it is set to node 7 then click Next.
	×	×
← Add Device Wizard		← Add Device Wizard
Specify the method for determining how often tags in the device are scanned. Scan Mode:		Indicate the format of the device ID (set by the driver by default). ID Format:

<u>N</u> ext Cancel	<u>N</u> ext	Cancel

~ 📀

Provide the first updates for new tag references from stored (cached) data rather than polling devices immediately.

Respect Client-Specified Scan Rate

Initial Updates from Cache:

Disable 🗸 🕡

Octal

ID:

7

] ~ 🕜

Specify the device's driver-specific station or node.

0

Proceed with the rest of the Device settings.

	×	X
Add Device Wizard	÷	Add Device Wizard
pecify an interval, in milliseconds, to determine how long the driver waits for a response om the target device to indicate completion. equest Timeout (ms):		Automatically remove the device from the scan due to communication failures. Demote on Failure: Disable v @
indicate how many times the driver sends a communications request before considering the iquest to have failed and the device to be in error. Itempts Before Timeout:		
<u>N</u> ext Cancel		<u>N</u> ext Cancel
are the Error Checking matches the one se	t for	the DLPCI/104 during its configuration.
Add Device Wizard	×	
elect the checksum validation supported by the target device.		
<u>N</u> ext Cancel	×	
Add Device Wizard		
nable to rearrange message order with lower words first, then upper. Select No to aintain order as received (typically upper words first, then lower). wap Float Words: Enable V		
	<pre>interval, in millisconds, to determine how long the driver waits for a response on the target device to indicate completion. request Timeout (ms):</pre>	<pre>intervention of the large device to indicate completion. request time of (in) import the large device to indicate completion. request time of (in) import the large device to indicate completion is request before considering the subset for the large device to be in error. request time of (in) import the large device to be in error. import the large device to be in error to be interviewed to be error to be interviewed to be error to be interviewed to be error to be e</pre>

<u>N</u> ext	Cancel

# When done with configuring the settings of the PLC5, click on Finish.

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#### Add Device Wizard

Identification			
Name	PLC5		
Description			
Driver	Allen-Bradley DF1		
Model	PLC-5		
Channel Assignment	DLPCI-104/DH+		
ID Format	Octal		
ID	7		
Operating Mode			
Data Collection	Enable		
Simulated	No		
Tag Counts			
Static Tags	0		
Scan Mode			
Scan Mode	Respect Client-Specified Scan Rate		
Initial Updates from Cache	Disable		
Communication Timeouts			
Request Timeout (ms)	1000		
Attempts Before Timeout	3		
Auto-Demotion			
Demote on Failure	Disable		
Protocol Settings			
Error Checking Method	BCC		
Swap Float Words	Enable		
Request Size	Large		

<u>F</u>inish Cancel

# Select the PLC5 and to add tags click on "Click to add static tags".

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<u>File Edit View Tools Runtime H</u> elp								
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⊡@ Project	^	Tag Name	Λ	Address	Data Type		Scan Rat	e
□ 【】 Connectivity		😢 Click to add a static	tag.	. Tags are not required,	but are browsable l	by OPC clients		
EQ7000EIP								
Advanced Tags								
Alarms & Events								
Add Area								
🚊 📲 Data Logger	¥	<						>
Ready					Default User	Clients: 0	Active tags: 0 (	of 0 🔡

🕺 Property Editor - DLP	CI-104/DH+.PLC5	×
Property Groups		
General	Name	IntF7
Sealing	Description	Integer file7 first 10 words
Scaling	Data Properties	
	Address	N7:0[10]
	Data Type	Default 🗸
	Client Access	Read/Write
	Scan Rate (ms)	100
	Data Type Select the format of the incoming	tag data.
	Defaults	OK Cancel Help

#### Added the first 10 words from integer file N7 of the PLC5

To Access values of these tags, click on Lunch OPC Quick Client from under Tools.



Comparing the values, it can be seen same to those read from the PLC5 using AB Rslinx.

🇞 RS 🛃 File View Communications Station DDE/OPC Security Window Help 옮 💲 🖲 Autobrowse Browsing - node 22 found E-B Workstation, LAB-D-PC -· 물· 물 Linx Gateways, Ethernet B AB\_ETH-1, Ethernet SLC504 Workstation PLC5TEST 1756-DHRI. 🗄 🏪 DPLCI-104, Data Highway Plus - - -PLC-5/80E (30): Data File N7 . 01, Workstation ± 🗐 04, SLC-5/04, SLC504 07, PLC-5/80E, PLC5TEST N7:10 22, 1756-DHRIO/B, 1756-DHRIO/C N7:20 N7:30 N7:40 

In similar steps we can add another device here, we added AB SLC5/04 which is on the same DH+ network.



<u>N</u>ext

Cancel

	×				~
÷	Add Device Wizard	←	Add Device Wizard		~
	Specify an interval, in milliseconds, to determine how long the driver waits for a response from the target device to indicate completion. Request Timeout (ms):		Automatically remove the device from the scan due to communication failu Demote on Failure: Disable V	res.	
	Indicate how many times the driver sends a communications request before considering the request to have failed and the device to be in error. Attempts Before Timeout:				
	<u>N</u> ext Cancel		<u>N</u>	ext	Cancel
~	Add Device Wizard	×			
	Select the checksum validation supported by the target device.  Error Checking Method: CRC PCC CRC Indicate whether data requests should be small or large to optimize performance and PLC memory use. Request Size: Large				
	Next	al			
÷	Add Device Wizard				
	Enable to support float access to integer files for SLC and MicroLogix. N File Float Access: Enable v @				

<u>N</u> ext	Cancel

#### Add Device Wizard

-	Identification		1
	Name	SLC504	
	Description		
	Driver	Allen-Bradley DF1	
	Model	SLC 5/04	
	Channel Assignment	DLPCI-104/DH+	
	ID Format	Octal	
	ID	4	
-	Operating Mode	· · · · · · · · · · · · · · · · · · ·	
	Data Collection	Enable	
	Simulated	No	
-	Tag Counts		
	Static Tags	0	
-	Scan Mode	· · · · · · · · · · · · · · · · · · ·	
	Scan Mode	Respect Client-Specified Scan Rate	
	Initial Updates from Cache	Disable	
-	Communication Timeouts		
	Request Timeout (ms)	1000	
	Attempts Before Timeout	3	
-	Auto-Demotion	· · · · · · · · · · · · · · · · · · ·	
	Demote on Failure	Disable	
-	Protocol Settings	· · · · · · · · · · · · · · · · · · ·	
	Error Checking Method	BCC	
	Request Size	Large	
		<b>F</b> achla	

		<u> </u>	Cancel	
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Project	Tag Name	/ Address	Data Type	Scan Rate
☆ 「罰) Connectivity	🔁 Click to add a	static tag. Tags are not required,	but are browsable by OPC cl	lients.
PLC5				
SLC504				
DLPCI-104DH485				
Advanced Tags				
🚊 🏭 Alarms & Events				
Add Area 🔻	<			>
Ready			Default User Clients:	0 Active tags: 0 of 0

Property Editor - DLPCI-1	04/DH+.SLC504					3	×
Property Groups		n					
Construction of the second sec	Name			IntF7W	10s		_
General	Description			Integer	file 7 first 10	words	_
Scaling	Data Proper	ties					-
	Address			N7:0[10]	1		_
	Data Type			Default			
	Client Access			Read/M	lrite		-
	Scan Rate (me	1		100	nice -		_
	Joan Mate (ins	7		100			-
	Address						
	Defaults			ок	Cancel	Help	
(Connected to Runtime] - KEPServerEX	6 Configuration					;	×
File Edit View Tools Runtime Help							
🗋 💕 🗟 🛃 Event Log	> 🕌 🗈 🗈	L 🗙 🔛					
Project     Re Launch OPC Quict	Client Tag Name		Address		Data Type	Scan Rate	
	ility IntE7W	10s	N7:0[10]		Word Array	100	
Alarms & Events							
Add Area	~ <						>
Launch the OPC Quick Client.					Default User Clients: (	Active tags: 0 of 0	
QC OPC Quick Client - Untitled *							<u> </u>
File Edit View Tools Help							
	1 <b>v</b>						
	1 A	,	Data Tara	Malara		Transformer	
DLPCI-104/DH+System	DI PCI-104/DE	A SLC504 IntE	Word Array	1 1008 3006	5994 0 0 0 0 0 0 0 0	16:27:58.480	Quality   U   Good 1
DLPCI-104/DH+.PLC5Statistics	CIP CIP 104/DI	14.500504.000	Word Anay	[ 1990, 3990,	3354, 0, 0, 0, 0, 0, 0, 0, 0]	10.27.36.460	0000 1
DLPCI-104/DH+.PLC5System							
DLPCI-104/DH+.SLC504							
DLPCI-104/DH+.SLC504Statisti	CS .						
DLPCI-104/DH4:52C3043ystem	ionSeri						
DLPCI-104DH485Statistics							
DLPCI-104DH485System	~						
<	>						
Date Time	Event						^
2024-03-21     4:27:58 PM	Added 6 items to aroup '	EO7000EIP. Svste	:m'.				×
Ready							Item Count: 227
Here Also can be show	vn that tao val	ues are s	ame as i	those re	ad in Relin	y from the	SI C 504
	vii tilat tag val		anne as				SLC304.
Carster - [KSWno - 1]		Monday.	11sts				
물 위 문 🐻	Station DDE/OPC Sect	unity window	нер				
Autobrowse Refresh	Not Browsing						
E							
🗄 🚠 Linx Gateways, Ethernet				U			
	01	04	07	22			
AB_ETHIP-1, Ethernet	Workstation	n SLC504	PLC5TEST	1/56-DHR			
DPLCI-104, Data Highway P	Ius SLC-5/	04 (24): Data Fil	e N7				
	·	0 1	2	3	4 5 6	7 8	9 ^
07 PLC-5/80F PLC5TEST	N7:0	1998 3	996 5994	0	0 0	0 0	0 0
	DHRIO/C	0 1060 2	0 0	0	0 0	0 0	0 0
	N7:30	0	0 0	3333	0 0 6	654 0	0 0