

How to Setup MVI56-PDPMV1

Using Add-On Instruction and CIPconnect[™]



Introduction

The goal of this technical note is to allow any user to successfully achieve the complete MVI56-PDPMV1 setup.

When the user will have followed the procedure, the module will be up and running.



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Architecture

The following material was used to prepare this technical note:

- 1. Rockwell Automation:
 - 1756-A4 •
 - 1756-PA72 •
 - 1756-1756-L61 V16 •
 - 1756-ENBT •
- 2. ProSoft Technology:
 - MVI56-PDPMV1 V1.28

The following software were used to prepare this technical note:

- 1. Rockwell Automation:
 - RSLogix V16
 - RSLinx Classic V2.54
- 2. ProSoft Technology:
 - ProSoft Configuration Builder V2.1.1.9

Architecture drawing:





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Procedure

Below is the step by step procedure to establish communication between a ControlLogix and a PROFIBUS network:

A. <u>Setup of the MVI56-PDPMV1</u>

A.1. Step 1: Using RSLogix 5000 V16

Launch RSLogix 5000 by double clicking on the icon on your desktop or in the start menu:



The following windows will appear:

👫 RSLogix 50	0			
File Edit View	Search Logic C	Communications Tools	Window Help	
1	a x B B	50 (24	- <i>M</i> & & F V V Q Q	
No Controller	🛛 🗸 🔲 RUN	1 4 1	Path: AB_ETHIP-1\192.168.170.190\Backplane\0	
No Forces	DAT	- P -		
No Edits	■ 0A1	101		
Redundancy	₽^â		Favorites Alarms Bit Timer/Counter Input/Output	
Create Output En	ergize instruction			1 //



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A.1.1. Creating new project

Select File>New... in the RSLogix 5000 menu:

	👪 RSLogix 5000										
Ī	File	Edit	View	Search	Logic	Communications	Tools	Windov	v Help		
	ē	<u>N</u> ew.					C	trl+N			
	É	Open	ı				C	trl+0	_		
		<u>C</u> lose	2						Path:		
		<u>S</u> ave					C	trl+S	HE		
		Save	<u>A</u> s						\ Favo		
		New	Compo	nent				•			

Select the correct settings for your application.

For the example, it will be a 1756-L61 processor in version 16 placed in slot 0 of a 4 slots chassis:

New Controller		×
Vendor:	Allen-Bradley	
Туре:	1756-L61 ControlLogix5561 Controller 🗨	ОК
Revision:	16 💌	Cancel
	Redundancy Enabled	Help
Name:	MVI56PDPMV1	
Description:		
Chassis Type:	1756-A4 4-Slot ControlLogix Chassis	
Slot:	0 🐺 Safety Partner Slot:	
Create In:	C:\RSLogix 5000\Projects	Browse



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The following window appears:

% RSLogix 5000 - HVIS6PDPHVI [1756-161]	괴죄
Offline RUN Path (none)	
Controller Tags Controller Fault Handler Power-Up Handler Tasks MainTask Maintopt<	
Add Branch	



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A.1.2. Inserting MVI56-PDPMV1 in I/O configuration

In the I/O configuration tree branch, right click on **1756 Backplane**, **1756-Ax** and select **New Module...**:



Make sure you see the By Category tab, browse Other category and select 1756-MODULE:

Select Module			×
Module	Description		Vendor
Communications	5		
Controllers		•	
. Digital		12	
H Motion			
⊡ Other			
1756-MODL	ILE Generic 1756 Module		Allen-Bradley
	4	_	
		, 3	
1			
		Find	Add Favorite
1			
By Category	By Vendor Favorites	_ ≱	
		OK Cancel	Help
		Cancer	

Enter a name for the module, select the Data – INT comm. Format, select the slot where the CPU is installed and configure the connection parameters as explained in the user manual.



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New Module						x
Type: Parent:	1756-MODULE Generic 1756 Module Local	- Connection Pa	arameters Assembly Instance:	Size:		
Name:	PDPMV1	Input:	1	250		
Description:	A	Output:	2	248		
	_	Configuration:	4	0	.∔ . (8-bit)	
Comm Format	Data - INT	Status Input:				
Slot:	1	Status Output				
🔽 Open Mod	ule Properties	ОК	Cano	;el	Help	



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Select the RPI required for your application (for the example, we will work with 5ms) and click **OK**:

🔣 Module Properties: Local:1 (1756-MODULE 1.1) 🛛 🗙
General Connection Module Info Backplane
<u>R</u> equested Packet Interval (RPI): 5.0 = ms (0.2 - 750.0 ms)
Major Fault On Controller If Connection Fails While in Run Mode
Module Fault
Status: Offline OK Cancel Apply Help



How to Setup MVI56-PDPMV1 Using Add-On Instruction and CIPconnect[™]

A.1.3. Inserting the MVI56-PDPMV1 program

In the tree view, expand the **MainProgram** task and select the **MainRoutine** routine:



Double click on the MainRoutine routine, the routine opens:





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Right click in the line (in the blue part in the screenshot below):



Browse your computer to find the add-on instruction:

👪 Import Rung					×
Look in:	MVI56-PDP	MV1	•	🗢 🗈 💣 匪	•
Recent Places	Name A PS56PDPMV1	L_FLEX.L5X	PS56PDPMV	Date created	▼ Date ▼
Computer Network	File name: Files of type:	PS56PDPMV1_LE RSLogix 5000 XM	GACY.L5X L Files (*.L5X)	•	Import Cancel Help



How to Setup MVI56-PDPMV1 Using Add-On Instruction and CIPconnect[™]

The following window let you select tag creation, simply click **OK**:

ags [ata Types Add-On Instru Name		s Alias For	Data Tune	Description	Operation
<u>a</u> 1	Local:1:1	-		AB:1756_MOD		Use Existing
<u>a</u> ti	Local:1:0			AB:1756_MOD	 	Use Existing
Ī	MVI56PDPMV1			PDPMV1_Mod	1	Create New
	PS56PDPM\/1			PS56PDPMV1		Create New
0	1 3301 D1 M11					

RSLogix 5000 will the process the import of the Add-On Instruction:



The code needed to allow the MVI56-PDPMV1 to operate will then appear in the MainRoutine:

	(Legacy)
	PS56PDPMV1_LEGACY-
0	MVI56-PDPMV1 Add-On (Legacy)
-	PS56PDPMV1_LEGACY PS56PDPMV1
	Connection_Input Local:1:I.Data
	Connection_Output Local:1:O.Data
	MVI56PDPMV1 MVI56PDPMV1

ï



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A.1.4. Adapting the ladder logic to the application

Delete the empty rung (0) by selecting the rung and pressing the key or right click on the rung and click on **Delete Rung**:

0	e e		
	Ж	Cu <u>t</u> Rung	Ctrl+X
	e de la companya de l	Copy Rung	Ctrl+C
	ß	<u>P</u> aste	Ctrl+V
		Delete Rung	Del



How to Setup MVI56-PDPMV1 Using Add-On Instruction and CIPconnect[™]

A.1.5. Verifying and downloading ladder logic

Verify the ladder logic by clicking the **Verify Controller** button:

👫 RSLogix 5	000 - MVI56PDPMV1 [17	56-L61]* - [MainProgram ·	- MainRoutine*]	
📕 File Edit	View Search Logic Co	mmunications Tools Windov	v Help	
1	5 x B B -		• &&	
Offline	. ■ RUN	Pat	h: <none></none>	Verify Controller 🖁

The Controller Verification should result in 0 errors and 0 warnings (Error window can be tiled at the bottom of the screen or windowed):

Results	×
Verifying Controller	
Verifying routine Logic of Instruction PS56PDPMV1_FLEX	
Verifying routine Prescan of Instruction PS56PDPMV1_FLEX	
Verifying routine MainKoutine of Frogram MainFrogram	
Complete - U error(s), U warning(s)	
	Ţ
() B Erroro (Secret Depute (Watch)	_
I FIN Errors A Search Results A watch •	

Save the ladder logic:

8	RSLo	gix 5(000 - 1	4VI56PD	PMV1	[1756-L61]* - [I	MainPr	ogram -
Ħ	File	Edit	View	Search	Logic	Communications	Tools	Window
12	Ē	<u>N</u> ew.					Ct	trl+N
	🖻	<u>O</u> pen					Ct	trl+O
Off		<u>C</u> lose						h
No								
No		<u>S</u> ave					C	trl+S
Rec		Save	<u>A</u> s					

Select the **Communications>Who active** menu like below:





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Browse to the ControlLogix CPU like below, set the path as default to the project by clicking **Set Project Path** (optional) and click **Download:**



If no driver is installed, please refer to Appendix C – Configuring RSLinx – p.40.

The following message appears, click **Download**:





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RSLogix downloads the ladder logic to the ControlLoigx CPU:



Once download is finished, the following message appears, click **Yes** to run the CPU.

RSLogix 5	5000	×
1	Done downloading. Change controller mode back to Remote Run?	
	Yes No	

The CPU should now be up and running and status be like below:





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A.2. Step 2: Using ProSoft Configuration Builder

Launch ProSoft Configuration Builder by double clicking on the icon on your desktop or in the start menu:



The following window appears:

Generative continue G	
Last Change: Never Last Download: Never	
<pre> # Module Information # Last Change: Never # Last Download: Never # Application Rev: # OS Rev: # Usader Rev: # Loader Rev: # MAC Address: # Configuration 2.1.0 Build 14 # Module Configuration [Module] Module Type : Module Type : Module Name : Default Module </pre>	
<pre># Module Information # Last Change: Never # Last Download: Never # Application Rev: # OS Rev: # Loader Rev: # Loader Rev: # MAC Address: # ConfigEdit Version: 2.1.0 Build 14 # Module Configuration [Module Type : Module Type : Module Name : Default Module</pre>	
<pre># Last Dumindat: Never # Application Rev: # Loader Rev: # MAC Address: # ConfigEdit Version: 2.1.0 Build 14 # Module Configuration [Module] Module Type : Module Name : Default Module</pre>	
<pre># Module Configuration [Module] Module Type : Module Name : Default Module</pre>	
Module Type : Module Name : Default Module	



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A.2.1. General module configuration

Double click on the "Default module" in the "explorer like" tree:



The following window appears; select the MVI56-PDPMV1 in the list by following the numbers:



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The following window will appear:

🕈 Untitled - ProSoft Configuration Builder								
File Edit View Project Tool	File Edit View Project Tools Help							
Default Project	N	Vame	Status	Information				
🖃 📠 Default Location	8 N	AVI56-PDPMV1	Check Ports for errors	MVI56-PDPMV1				
HIND MVI56-PDPMV1	I N	AVI56	PDM5	0.30				
		Comment	Values OK					
		PDPM	Values OK					
	8	PROFIBUS DP	Check for errors	This Section contains Profibus Configuration Information				
	L	.ast Change:	Never					
	L	ast Download:	Never					

If you expand the MVI56-PDPMV1 module in the "explorer like" window and select **MVI56-PDPMV1>MVI PDPM-V1>MVI Profibus Master DPV1**, you can see different branches:

💕 Untitled - ProSoft Configuration Builder								
File Edit	View	Project	Tools	Help				
🖃 💼 Default Project								
🗄 🔚 Default Location								
	. MVI56-PDPMV1							
	🛱 🚜 Comment							
B Module Comment								
🖃 💑 MVI PDPM-V1								
🛞 MVI Profibus Master DPV1								
	r	PROFIB	JS DP					

The default **MVI Profibus Master DPV1** settings are correct for our application as we will use the Legacy mode, we will not change it.



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A.2.2. PROFIBUS configuration

Select and double click on MVI56-PDPMV1>PROFIBUS DP, in the main window:



Click on "Configure PROFIBUS" button:

PDPMV1 PROFIBUS Master Setup	×
PROFIBUS Master - Module Communications Profibus Editor : Not started	
Select Port: Com 1 Firmware	Jpdate
Test Connection CIP Path Edit Cancel U	pdate
PROFIBUS Setup and Monitor Prohibit Master Control Configure PROFIBUS Cancel Monitor/Modify Calculate	
Processor Network Memory Map	
Export Master Config	OK



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The ProSoft configuration Builder for PROFIBUS window now opens (you can maximize the Bus Configuration 1 window if you prefer):

ProSoft Configuration Builder for PROFIB	US - MVI56-PDP	MV1					- 🗆 ×
Project View PROFIBUS Online Option To	ols Windows H	elp					
\Prosoft\GSD <<<	😽 Bus Confi	guration 1				그지	
PROFIBUS DP ⊕ ∎ PROFIBUS Master	(1) ProSoft Master						
	Bus addr	Туре	Name	Vendor	Comment		
	0 1 2 3 4 5 6	Master	ProSoft	ProSoft Technology			
	7			1	,	-	
	1						

Browse the **PROFIBUS DP** tree branch to select your PROFIBUS slaves.

If you cannot find your slave in the list please refer to

Appendix A – Importing GSD file – p.35.

Drag & Drop slaves to the PROFIBUS network:

💇 ProSoft Configuration Builder for PROFIBUS - MVI56-PDPMV1 - [Bus Configurat	ion 1]
Yroject View PROFIBUS Online Option Tools Windows Help	
🖬 🖨 🖪 📥 🕖	
\Prosoft\GSD <<	
PROFIBUS DP	
📄 💼 🗀 1/0 👘 🚺 Master 🍂	
📄 💼 Gateway 💦 👘 🛄 🔜	
🗈 💼 Schneider Electric GmbH	
🖻 💼 ProLinx Comm Gateways Inc. 🚽 🔤 👘	
🗄 🚽 ProLinx Profibus Slave	
🗄 🧰 ProSoft Technology, Inc.	
📄 🕀 💼 Drives	
🗈 💼 Controller	
🖬 💼 General	
🗄 🗄 PROFIBUS Master	



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The slave now appears in the PROFIBUS layer:



NOTE: Default slave address for the first slave is 3, if you need to change it, please refer to **Appendix B – Changing PROFIBUS slave address – p.38**

Expand the Slave in the tree view; this shows you the list of supported slots for the slave:





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Drag & Drop desired slots in the slots window:



For the example, I selected 100 input words and 100 outputs words ($6 \times 16W + 4W = 100W$).

Slave: (3) ProLinx Profibus Slave	Device path: PROFIBUS DP\Ga	teway\ProLinx Comm Gate	ways Inc.\ProLinx Profib	ius S.,
Slot	CFG data	Order number/ designation	Input address	Output address	
0	0x5F	16 Words Input	031		
1	0x5F	16 Words Input	3263		
2	0x5F	16 Words Input	6495		
3	0x5F	16 Words Input	96127		
4	0x5F	16 Words Input	128159		
5	0x5F	16 Words Input	160191		
6	0x53	4 Words Input	192199		
7	0x6F	16 Words Output		031	
8	0x6F	16 Words Output		3263	
9	0x6F	16 Words Output		6495	
10	0x6F	16 Words Output		96127	
11	0x6F	16 Words Output		128159	
12	0x6F	16 Words Output		160191	
13	0x63	4 Words Output		192199	



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Close the ProSoft Configuration Builder for PROFIBUS using the menu **Project>Exit**:



Save the configuration as requested:

ProSoft Co	onfiguratio	on Builder for Pl	ROFIBUS X
?	Close proje Save proje	ect: MVI56-PDPM\ ct changes?	/1.xml
	Yes	No	Cancel

Go back to the main window by dicking the **OK** button:

PDPMV1 PROFIBUS Master Setup	×
PROFIBUS Master - Module Communications Profibus Editor : Terminated : Project Changed : Project	
Select Port: Com 1 Firmware Update	
Test Connection CIP Path Edit Cancel Update	
PROFIBUS Setup and Monitor Prohibit Master Control Configure PROFIBUS PROFIBUS PROFIBUS PROFIBUS: F1434774 Module: 8F74FC6D	
Cancel Monitor/Modify Calculate Processor Network Memory Map	
Export Master Config OK	



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A.2.3. Download the configuration to the module

Right click on the MVI56-PDPMV1 module in the tree view and select: **Download from PC to Device**



In the window that appeared, select **1756-ENBT**:

Download files from PC to module	×
STEP 1: Select Port Com 1 Use Defa Com 1 Use Defa Com 1 CIP Path Edit Test Connection STEP 2: Transfer Files	
DOWNLOAD Abort Cancel OK	

Click on CIP Path Edit:

Download files from PC to module		×
STEP 1: Select Port 1756-ENBT	t:192.168.0.100,p	:1,s:0
Use Default IP Address 🗖	CIP Path Edit	Test Connection
STEP 2: Transfer Files		
DOWNLOAD Abort	Cancel	OK



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In the CIPconnectTM Path Editor, enter the correct parameters to address the MVI56-PDPMV1 module in the ControlLogix rack.

Click on Construct CIP Path:

lo	Source Module	Source Module IP Address	Source Module Node Address	Destination Module	Destination Module Slot Number
1	1756-ENBT	192.168.170.195		MVI56-Module	· 1

You should see the module address path in the CIP path bar. Click **OK** to go back to the download files from PC to module window:

TRear	nect Dath Editor				×
		nect [™] PA ⁻	TH EDIT	OR	ProSoft*
No	Source Module	Source Module IP Address	Source Module Node Address	Destination Module	Destination Module Slot Number
1	1756-ENBT	192.168.170.195		MVI56-Module	· 1
t:192	.168.170.195,p:1,s:1		1	1	
		Add Rack	Delete Rack	Construct CIP Path	
		ОК	Cance	el	



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Click **DOWNLOAD** to actually download configuration to the MVI56-PDPMV1 module.

Download files from PC to module		X
		_
		-
STEP 1: Select Port 1756-ENBT	t:192.168.170.195,p:1,s:1	_
Use Default IP Address 🗖	CIP Path Edit Test Connection	١
STEP 2: Transfer Files		
DOWNLOAD Abort	Cancel OK	

The following states appear successively; click **OK** when the module running:

×
-
lion

The configuration of the module using ProSoft configuration Builder is now finished.

You can save your project and close ProSoft configuration Builder.



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A.3. Step 3: Verifying communication

A.3.1. On PROFIBUS using the ProSoft Configuration Builder

Open your project in ProSoft Configuration Builder and double click on **PROFIBUS DP**:



In the windows that appeared, click on **Configure PROFIBUS**:

PDPMV1 PROFIBUS Master Setup	X
PROFIBUS Master - Module Communications Profibus Editor : Not started	
Salart Date 1756 ENRT	
t:192.168.170.195,p:1,s:1	
Test Connection CIP Path Edit Cancel Update	
PROFIBUS Setup and Monitor Prohibit Master Control PROFIBUS:	
Configure PROFIBUS Module:	
Cancel Monitor/Modify Calculate	
Processor Network Memory Map	
Export Master Config OK	



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Select the menu **Online>Monitor/Modify**:



Wait for few seconds to allow the connection to establish.

Once established, you should see a bar graph going right and left, the PROFIBUS slaves should have a coloured border (see screenshot below):

🥳 Bus Config	juration 1			<u> </u>
(1) ProSoft Master	(3) ProLinx			
	-	1	(
Bus addr	Туре	Name	Vendor	Comment 🔺
0				
1	Master	ProSoft	ProSoft Technology	
2				
3	Slave	ProLinx Profibus Slave	ProLinx Comm Gateways	
4				
5				
6				
				_

Red means the communication is in error. Green means communication is running.



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Double click on the slave you want to monitor and check the values in inputs and outputs:

Module name	Address	Format	Value	Status	
16 Words Input	031	Hex		Fault	70
16 Words Input	3263	Hex		Fault	
16 Words Input	6495	Hex		Fault	
16 Words Input	96127	Hex		Fault	
16 Words Input	128159	Hex		Fault	
16 Words Input	160191	Hex		Fault	
4 Words Input	192199	Hex		Fault	
lutput	Åddrass	Format	Value	Statue	
lutput Module name 16 Words Dutnut	Address 0.31	Format Hex	Value	Status Fault	
lutput Module name 16 Words Output 16 Words Output	Address 031 32. 63	Format Hex Hex	Value	Status Fault Fault	
lutput Module name 16 Words Output 16 Words Output 16 Words Output	Address 031 3263 6495	Format Hex Hex Hex	Value	Status Fault Fault Fault	
lutput Module name 16 Words Output 16 Words Output 16 Words Output 16 Words Output	Address 031 3263 6495 96127	Format Hex Hex Hex Hex	Value	Status Fault Fault Fault Fault	
lutput Module name 16 Words Output 16 Words Output 16 Words Output 16 Words Output	Address 031 3263 6495 96127 128159	Format Hex Hex Hex Hex Hex	Value 	Status Fault Fault Fault Fault Fault	
lulput Module name 16 Words Dutput 16 Words Dutput 16 Words Dutput 16 Words Dutput 16 Words Dutput 16 Words Dutput	Address 031 3263 6495 96127 128159 1160191	Format Hex Hex Hex Hex Hex Hex	Value	Status Fault Fault Fault Fault Fault Fault	
lutput Module name 16 Words Dutput 16 Words Dutput 16 Words Dutput 16 Words Dutput 16 Words Dutput 16 Words Dutput 4 Words Dutput	Address 031 3263 6495 96127 128159 160191 192199	Format Hex Hex Hex Hex Hex Hex Hex Hex	Value 	Status Fauk Fauk Fauk Fauk Fauk Fauk Fauk	
Iulput Module name 16 Words Output 16 Words Output 16 Words Output 16 Words Output 16 Words Output 16 Words Output 4 Words Output	Address 031 3263 96127 128159 160191 192199	Format Hex Hex Hex Hex Hex Hex Hex	Value	Status Fauk Fauk Fauk Fauk Fauk Fauk Fauk	

In the screenshot below, the ProLinx PROFIBUS slave module was actually connected to the MVI56-PDPMV1 module and communication was working fine:

vlodule name	Address	Format	Value	Status	
16 Words Input	031	Hex	0x00;0x00;0x00;0x00;0x00	ОК	-17
16 Words Input	3263	Hex	0x00;0x00;0x00;0x00;0x00	OK	
6 Words Input	6495	Hex	0x00;0x00;0x00;0x00;0x00	OK	
6 Words Input	96127	Hex	0x00;0x00;0x00;0x00;0x00	OK	
6 Words Input	128159	Hex	0x00;0x00;0x00;0x00;0x00	OK	
6 Words Input	160191	Hex	0x00;0x00;0x00;0x00;0x00	OK	
Words Input	192199	Hex	0x00;0x00;0x00;0x00;0x00	OK	
utput		F			
utput Module name	Address	Format	Value	Status	
utput fodule name 6 Words Dutput	Address 031	Format Hex	Value 0x01;0x02;0x03;0x04;0x05	Status OK	
utput Adule name 6 Words Output 6 Words Output 6 Words Output	Address 031 3263	Format Hex Hex	Value 0x01,0x02,0x03,0x04,0x05 0x21,0x22,0x23,0x24,0x25	Status OK OK	
utput fodule name 6 Words Output 6 Words Output 6 Words Output 6 Words Output	Address 031 3263 6495 96122	Format Hex Hex Hex	Value Value 0x01;0x02;0x03;0x04;0x05 0x21;0x22;0x23;0x24;0x25 0x41;0x42;0x43;0x44;0x45 0x41;0x42;0x43;0x44;0x45	Status OK OK OK	
ulput Addule name 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput	Address 031 3263 6495 96127 128159	Format Hex Hex Hex Hex Hex	Value 0x01:0x02;0x03:0x04;0x05 0x21:0x22;0x23:0x24;0x25 0x41:0x42;0x43:0x44;0x45 0x61:0x62;0x63:0x64;0x40	Status OK OK OK OK	
utput fodule name 6 Words Output 6 Words Output 6 Words Output 6 Words Output 6 Words Output 6 Words Output	Address 031 3263 6495 96127 128159 100.191	Format Hex Hex Hex Hex Hex Hex	Value 0x01;0x02;0x03;0x04;0x05 0x1;0x22;0x23;0x24;0x25 0x41;0x42;0x43;0x45 0x61;0x62;0x63;0x64;0x00 0x00;0x00;0x00;0x00;0x00 0x00;0x00;0x00;0x00;0x00	Status OK OK	
Volue name 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput 8 Words Dutput 10 Words Dutput	Address 031 3263 6495 96127 128159 160191 192.199	Format Hex Hex Hex Hex Hex Hex	Value	Status OK OK OK OK OK OK	
Volue name 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput 6 Words Dutput 1 Words Dutput	Address 031 3263 6495 96127 128159 160191 192199	Format Hex Hex Hex Hex Hex Hex Hex	Value 0x01,0x02,0x03,0x04,0x05 0x21,0x22,0x23,0x24,0x25 0x41,0x42,0x43,0x44,0x45 0x61,0x62,0x63,0x44,0x45 0x61,0x62,0x63,0x64,0x40 0x00,0x00,0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00 0x00,0x00,0x00 0x00,0x00 0x00,0x00,0x00 0x00,0x00 0x00,0x00 0x00,0x00 0x00,0x00 0x00,0x00 0x00 0x00,0x00 0x00 0x00,0x00 0x00 0x0	Status OK OK OK OK OK OK	
utput Aodule name 6 Words Output 6 Words Output 6 Words Output 6 Words Output 6 Words Output 1 Words Output	Address 031 3263 6495 96127 128159 160191 192199	Format Hex Hex Hex Hex Hex Hex Hex	Value 0x01,0x02,0x03,0x04,0x05 0x21,0x22,0x23,0x24,0x25 0x41,0x42,0x43,0x44,0x45 0x61,0x62,0x63,0x64,0x40 0x00,0x00,0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x00,0x00 0x00,0x00,0x00 0x00,0x00 0x00,0x00,0x00 0x00,0x00,0x00 0x0 0x	Status OK OK OK OK OK OK OK	



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A.3.2. Starting MVI56-PDPMV1 communication

The MVI56-PDPMV1 checks that his configuration and the configuration in the ControlLogix matches using CRC method, it then starts communication.

In order to check the CRC, the ladder logic has to copy the CRC values coming from the MVI56-PDPMV1 module in Local:x:I.Data[204] to Local:x:I.Data[207] to the module in Local:x:O.Data[204] to Local:x:O.Data[207].



By default, the CRC are not copied from the Inputs to the Outputs (see below):

-MVI56PDPMV1	{}	{}		PDPMV1_Module
H-MVI56PDPMV1.Output	{}	{}	Decimal	SINT[1536]
H-MVI56PDPMV1.Input	{}	{}	Decimal	SINT[1536]
H-MVI56PDPMV1.BP	{}	{}		PDPMV1_backpl
H-MVI56PDPMV1.Status	{}	{}		PDPMV1_Status
How The American State For the American	{}	{}		PDPMV1_Commanc
HT=MVI56PDPMV1.Mailbox	{}	{}		PDPMV1_Mailbox
-MVI56PDPMV1.CRC	{}	{}		PDPMV1_CRC_S
-MVI56PDPMV1.CRC.In	{}	{}		PDPMV1_CRC
H-MVI56PDPMV1.CRC.In.ProfibusCRC	-247249036		Decimal	DINT
	205288467		Decimal	DINT
-MVI56PDPMV1.CRC.Out	{}	{}		PDPMV1_CRC
HVI56PDPMV1.CRC.Out.ProfibusCRC	0		Decimal	DINT
	0		Decimal	DINT
	{}	{}		PDPMV1_MBCon
±-MVI56PDPMV1.Util	{}	{}		PDPMV1_Util



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Navigate to MVI56PDPMV1.MailboxCommand.SynchCRC and set a value of "1".

-MVI56PDPMV1	{}	{}		PDPMV1_Module
H-MVI56PDPMV1.0utput	{}	{}	Decimal	SINT[1536]
H-MVI56PDPMV1.Input	{}	{}	Decimal	SINT[1536]
H-MVI56PDPMV1.BP	{}	{}		PDPMV1_backpl
H-MVI56PDPMV1.Status	{}	{}		PDPMV1_Status
-MVI56PDPMV1.MailboxCommand	{}	{}		PDPMV1_Commanc
	0		Decimal	BOOL
	0		Decimal	BOOL
-MVI56PDPMV1.MailboxCommand.ClearMode	0		Decimal	BOOL
	1		Decimal	BOOL
	0		Decimal	BOOL
	0		Decimal	BOOL

Note: In the current implementation of the Add-On Instruction, you will have to manually reset the value to "0".

You can see now that the CRC values match from Inputs to Outputs:

-MVI56PDPMV1	{}	{}		PDPMV1_Module
+-MVI56PDPMV1.Output	{}	{}	Decimal	SINT[1536]
HT=MVI56PDPMV1.Input	{}	{}	Decimal	SINT[1536]
HVI56PDPMV1.BP	{}	{}		PDPMV1_backpl
HVI56PDPMV1.Status	{}	{}		PDPMV1_Status
HVI56PDPMV1.MailboxCommand	{}	{}		PDPMV1_Commanc
HVI56PDPMV1.Mailbox	{}	{}		PDPMV1_Mailbox
-MVI56PDPMV1.CRC	{}	{}		PDPMV1_CRC_S
-MVI56PDPMV1.CRC.In	{}	{}		PDPMV1_CRC
HVI56PDPMV1.CRC.In.ProfibusCRC	-247249036		Decimal	DINT
HVI56PDPMV1.CRC.In.ModuleCRC	205288467		Decimal	DINT
-MVI56PDPMV1.CRC.Out	{}	{}		PDPMV1_CRC
HVI56PDPMV1.CRC.Out.ProfibusCRC	-247249036		Decimal	DINT
HVI56PDPMV1.CRC.Out.ModuleCRC	205288467		Decimal	DINT
■-MVI56PDPMV1.MailboxControl	{}	{}		PDPMV1_MBCon
±-MVI56PDPMV1.Util	{}	{}		PDPMV1_Util



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B. <u>APPENDIX</u>

B.1. Appendix A – Importing GSD files

In the ProSoft Configuration Builder for PROFIBUS tool, select the following menu: **Tools>Install new GS*-file...**



Browse your computer to the directory where you placed your products' GS* files then click **Open**:

😽 Select GSD fil	e for installat	ion					×
() - ()	→ PROFIBUS E	OP ▼ GSD ▼ ET200M	- IM153-1	- 🗸 🚺	Search		
🕒 Organize 👻	Views	 New Folder 					0
Favorite Links Documents Recent Places Locktop			Na	ime 🔺 👻 Date siem801d.gsd		▼ Size	.
More »			_				
Folders	CPU416-3_V4 CPU417-4 CPU417-4_V4 EM277 ET200M - IM1 IM308-C PPX505-6870 S5-95U SIMOTION CC	53-1 53-2					
	File name:	siem801d.gsd		<u>-</u>	GD*-Files (* Open	.gs*) Can	cel

The following message will appear, select Yes or No depending on your needs:



How to Setup MVI56-PDPMV1 Using Add-On Instruction and CIPconnectTM

Bitmaps for GS*-file	\times
Are there any pictures for GS*-file?	
Yes No	



How to Setup MVI56-PDPMV1 Using Add-On Instruction and CIPconnect[™]

If you selected Yes, select the corresponding picture in the next window:

<u> S</u> elect bitmap	file / files for	installation						×
00 🕨	▼ PROFIBUS D	P ▼ GSD ▼ ET200M	- IM15	53-1 🔻	· 🛃 Se	arch		
🕒 Organize 🔻	Views 🔻	New Folder						0
Favorite Links				Name 🔺	- Date mo	dified 🚽 Type	-	•
Documents				im 153_1	ln.bmp			
Perent Places								
Mere N								
More >>								
Folders			~					
	CPI 1416-2							
	CPU416-2 V4		_					
	CPU416-2PCI							
	CPU416-3							
	CPU416-3_V4							
i i i i i i i i i i i i i i i i i i i	CPU417-4							
<u> </u>	CPU417-4_V4							
	EM277							
	ET200M - IM15	53-1						
	FT200M - TM15	:3-7	-					
	File name:	m153_1n.bmp			•	Bitmaps (*.bm	ip)	•
						Open	Can	
						Open		

If multiple images are available, repeat the operation as required.

The GS* file has been imported in the ProSoft Configuration Builder for PCB. It is available in the PROFIBUS slaves list as below:





How to Setup MVI56-PDPMV1 Using Add-On Instruction and CIPconnect[™]

B.2. Appendix B – Changing PROFIBUS slave address

By default, the ProSoft Configuration Builder for PROFIBUS defines node slave address. You can change it to agree with your application as described below.

In the ProSoft Configuration builder for PROFIBUS, double click on the slave you want to change the node address to:



Select the node address you planned to use for this particular slave in **PROFIBUS address** then click **OK**:

3	Slave propert	ies - ProLinx Profibus Slave		×
C	Common Parar	neter assignment		
			GS* fil	e: pgwa05a5.gsd
	Module — —		PROFIBILIS address:	
	Vendor:	ProLinx Comm Gatewa		2
	Family path:	Gateway		4 -
	Model name:	ProLinu Profibula Slava	Activate Slave 🗖	
	Model name.	FIGLINX FIGHDUS SIAVE	Watchdog 🗖	∠
	Slave name:	ProLinx Profibus Slave	Maximum baud rate: 1	2000 kBit/sec
			Sync / freeze property SYNC FREEZE	Group assignment
	Comment:			
				<u> </u>
				Y
	OK			Cancel Help

The slave's node address as been changed.



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You have to download the configuration to the module.



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B.3. Appendix C – Configuring RSLinx

Start RSLinx Classic from the start menu

Start>All programs>Rockwell Software>RSLinx>RSLinx Classic



Select the menu Communication>Configure Drivers...:

🗞 R	💫 RSLinx Classic Professional								
File	Edit	View	Communications	Station	DDE/OPC	Security	Window	Help	
2	윪	\$	RSWho						
			Configure Drivers						
			Configure Shortcuts						

Choose the needed driver in the **Available Driver Types** list (to connect to the CPU using Ethernet, EtherNet/IP Driver is a good choice) then click on **Add New...**:



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Choose a name for the driver (the default one is correct one):



Select the way you want to connect to the CPU then click **OK**:

Con	figure driver: AB_ETHIP-1			? ×
Et	nerNet/IP Settings			
	Browse Local Subnet	C Browse Remote Subnet		
1	Description		IP Address	- I
	Windows Default Intel(R) WiFi Link 5100 AGN		unknown	
	Broadcom NetXtreme 57xx Gigat	oit Controller	192.168.170.16	
_		OK Cancel	Apply Help	,

The driver is now installed and running, click close to go back to RSLinx Classic:

Configure Drivers		<u>? ×</u>
Available Driver Types:		Close
EtherNet/IP Driver	Add New	Help
Configured Drivers:		
Name and Description	Status	
AB_ETHIP-1 A-B Ethernet RUNNING	Running	Configure
		Startup
		Start
		Stop
		Delete



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Exit RSLinx and go back to RSLogix, your driver would be available and you should be able to connect to the CPU.

For further information feel free to contact **ProSoft Technology Technical Support** at one of the following addresses:

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