

# Technical Note



## Migrating from the MVI46-MCM to the PLX31-EIP-MBS/4

Document Code: TN-PLX31EIPMBS\_Migrating from MVI46-MCM\_01-1906



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**MVI46-MCM\_01-1906**

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**Revision:** 1

## Important Note

The use of the PLX31-EIP-MBS/4 module requires an EtherNet/IP connection back to the SLC.

A SLC 5/05 is required when making this connection, it's the only SLC that offers EtherNet/IP.

## Configuration

The configuration of the MVI46-MCM is stored in the Data Files within the .RSS file.

The configuration of the PLX31-EIP-MBS/4 is done using the ProSoft Configuration Builder (PCB) software.

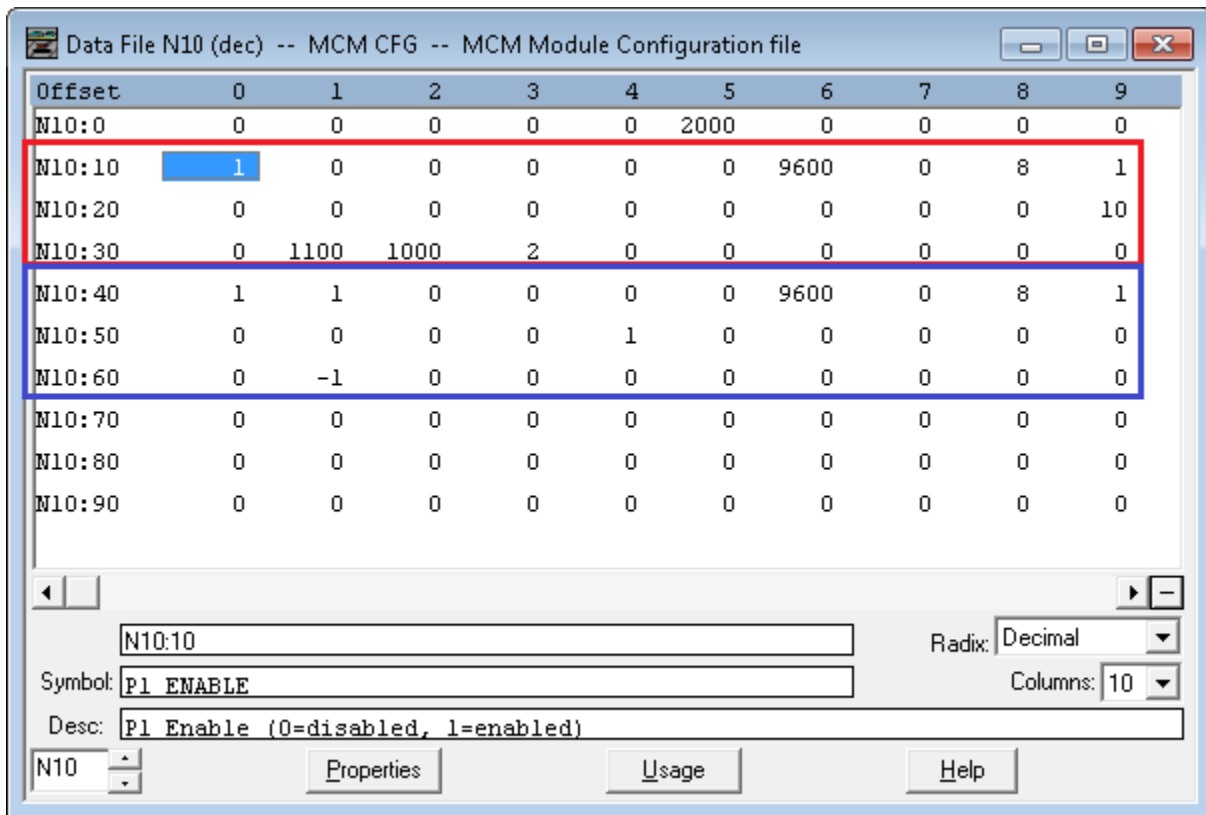
Download Link: <https://www.prosoft-technology.com/Products/ProSoft-Software/ProSoft-Configuration-Builder>

YouTube link to PLX31-EIP-MBS/4 training video:  
[https://www.youtube.com/watch?v=7\\_pOhn45OdA&t=7s](https://www.youtube.com/watch?v=7_pOhn45OdA&t=7s)

## Configuring your port

The MVI46-MCM port configuration, going off the defaults are stored in the N10 data files.

N10:0 – N10:37 is Port 1, N10:30 – N10:67 is Port 2.

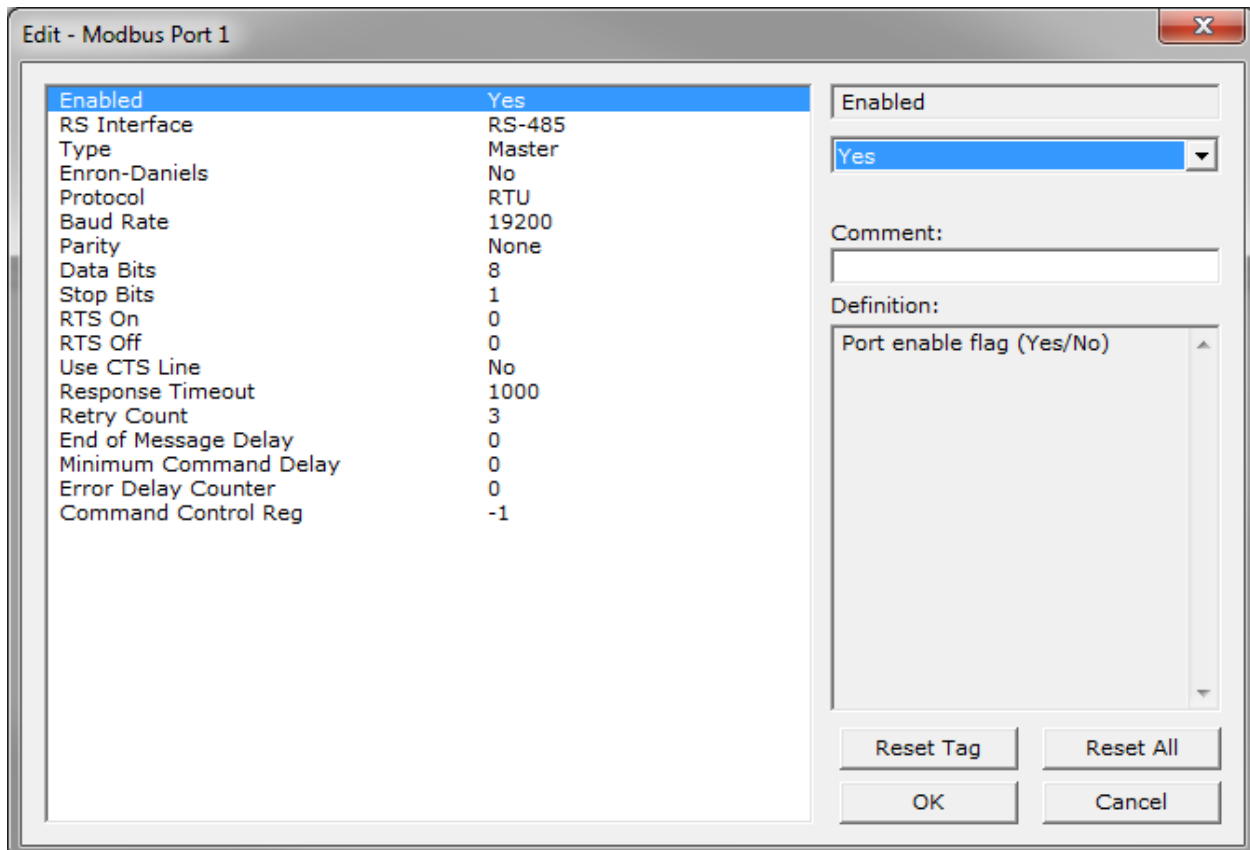


Offset	0	1	2	3	4	5	6	7	8	9
N10:0	0	0	0	0	0	2000	0	0	0	0
N10:10	1	0	0	0	0	0	9600	0	8	1
N10:20	0	0	0	0	0	0	0	0	0	10
N10:30	0	1100	1000	2	0	0	0	0	0	0
N10:40	1	1	0	0	0	0	9600	0	8	1
N10:50	0	0	0	0	1	0	0	0	0	0
N10:60	0	-1	0	0	0	0	0	0	0	0
N10:70	0	0	0	0	0	0	0	0	0	0
N10:80	0	0	0	0	0	0	0	0	0	0
N10:90	0	0	0	0	0	0	0	0	0	0

N10:10      Radix: Decimal  
 Symbol: P1 ENABLE      Columns: 10  
 Desc: P1 Enable (0=disabled, 1=enabled)

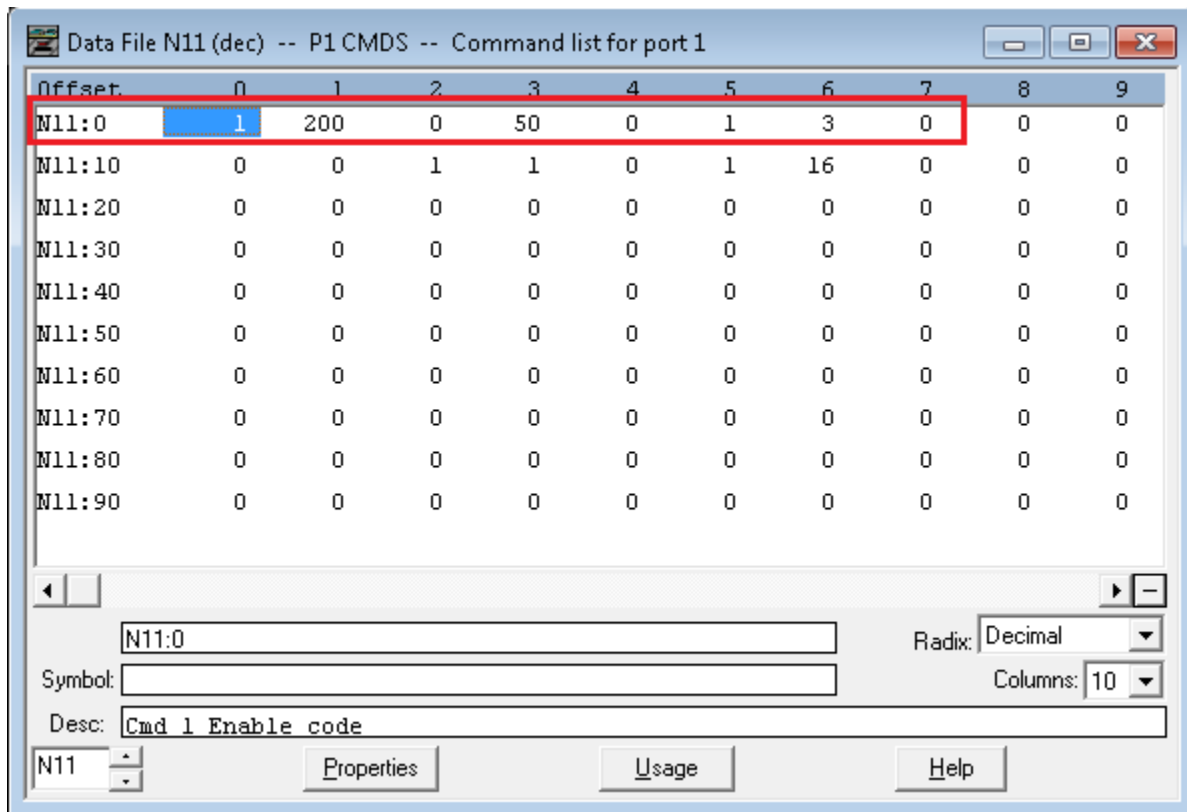
N10      Properties      Usage      Help

The PLX31-EIP-MBS/4 will be setup in the ProSoft Configuration Builder.



## Master Command Configuration

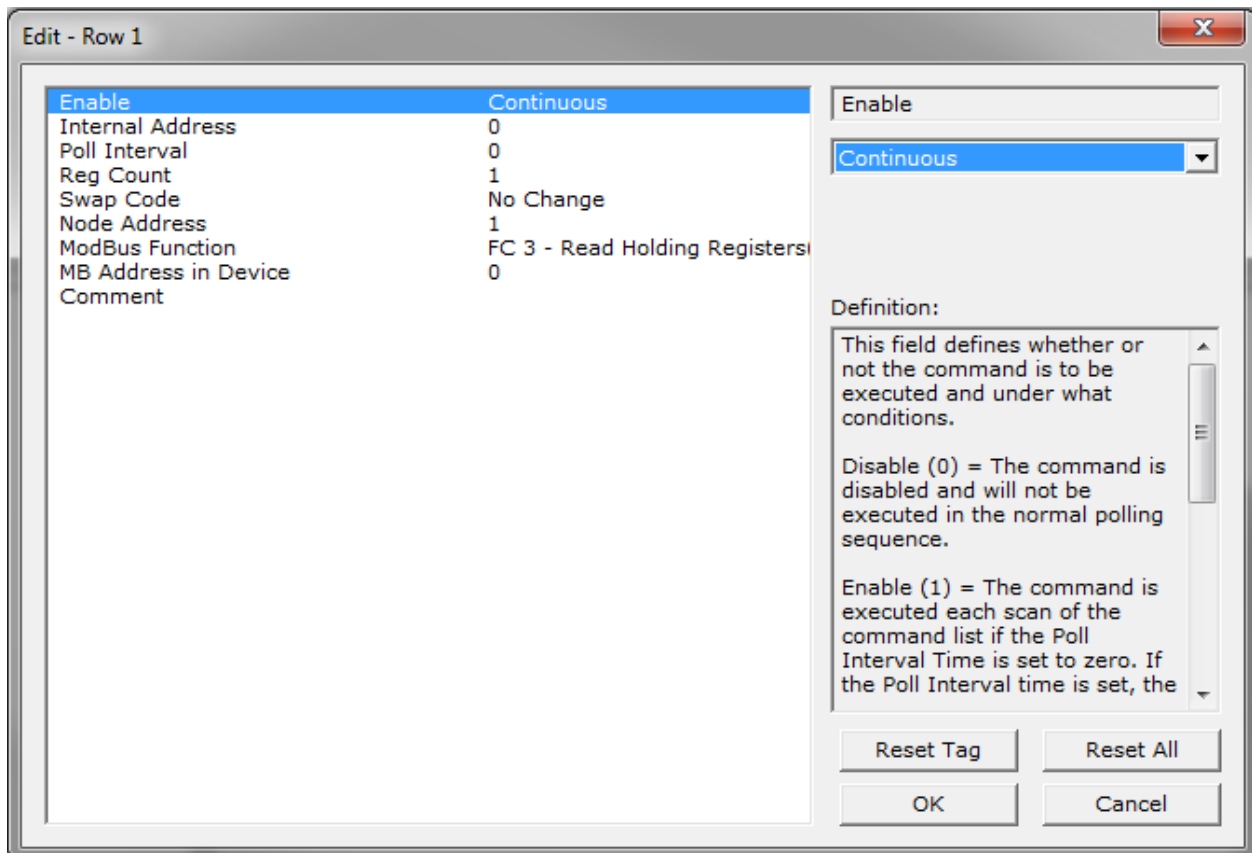
The MVI46-MCM uses N11 (Port 1) and N12 (Port 2) to setup the commands.



Offset	0	1	2	3	4	5	6	7	8	9
N11:0	1	200	0	50	0	1	3	0	0	0
N11:10	0	0	1	1	0	1	16	0	0	0
N11:20	0	0	0	0	0	0	0	0	0	0
N11:30	0	0	0	0	0	0	0	0	0	0
N11:40	0	0	0	0	0	0	0	0	0	0
N11:50	0	0	0	0	0	0	0	0	0	0
N11:60	0	0	0	0	0	0	0	0	0	0
N11:70	0	0	0	0	0	0	0	0	0	0
N11:80	0	0	0	0	0	0	0	0	0	0
N11:90	0	0	0	0	0	0	0	0	0	0

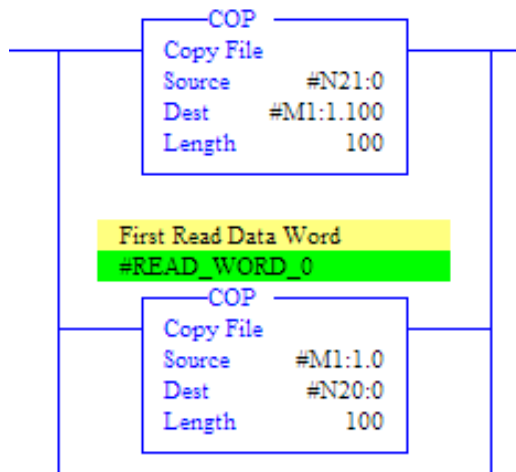
Symbol:  Radix:  Columns:   
 Desc:

The PLX31-EIP-MBS uses the ProSoft Configuration Builder, under the Commands section.

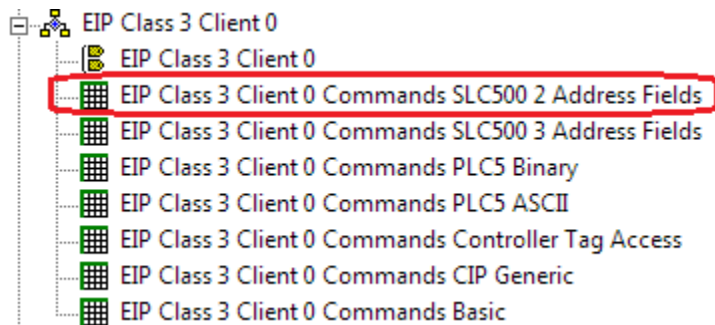


## Replacing backplane transfers with EtherNet/IP

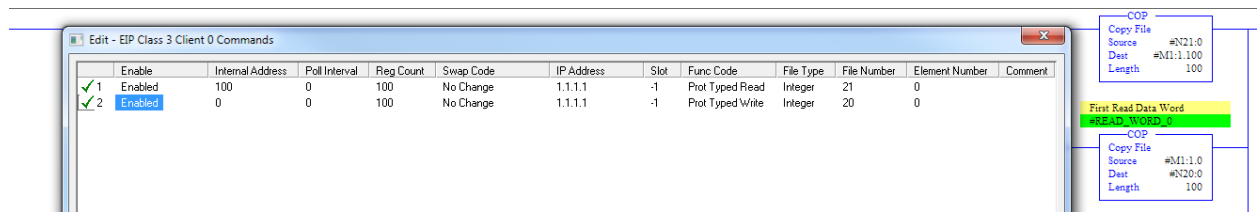
You will want to identify the ladder logic in the SLC program that is responsible for transferring Modbus application data to-and-from the MVI46-MCM module. Both input and output is handled through the M1 table:



However, with the PLX gateway being a standalone unit, data transfer with the PLC program would have to be handled differently. You can recreate similar behavior with the EtherNet/IP Commands, and specifically, the Class 3 Client, SLC500 2 Address Field commands:



The offset into the M1 table servers as the Internal Address location within the ProSoft's memory database. Therefore, to recreate the backplane transfers shown above with Class 3 Client SLC500 2 Address Field commands, they could be configured as:



The Internal Address matches the offset into the M1 table. The Reg Count matches the Length of the COP command. Read/Write perspective is from the PLX gateway, so the Prot Typed Read command is for moving data into the PLX gateway. Therefore, the N table reference matches the first COP command which was moving data into the MVI46-MCM module. The Prot Typed Write command moves data into the PLC program and so uses the same N20 reference.

After configuring the Modbus RTU commands identically on both products, and then configuring equivalent EtherNet/IP Class 3 Client commands as shown above, the PLX3x-EIP-MBS/4 gateway should function essentially as a drop-in replacement for the MVI46-MCM module.