

LOGO! ..0BA7 in master/master operation

Preparing basic devices

This example uses two LOGO! basic devices which are both configured as master. One master functions as server, the other as client.

Set the "Normal" operating mode in both devices and assign the IP addresses. In the example, the IP address 172.16.202.14 and the subnet mask 255.255.255.0 is used for the server device and the IP address 172.16.202.2 and the subnet mask 255.255.255.0 is used for the client device. To set the IP address and the subnet mask on other devices, select the item "Network; IP address" in the menu.

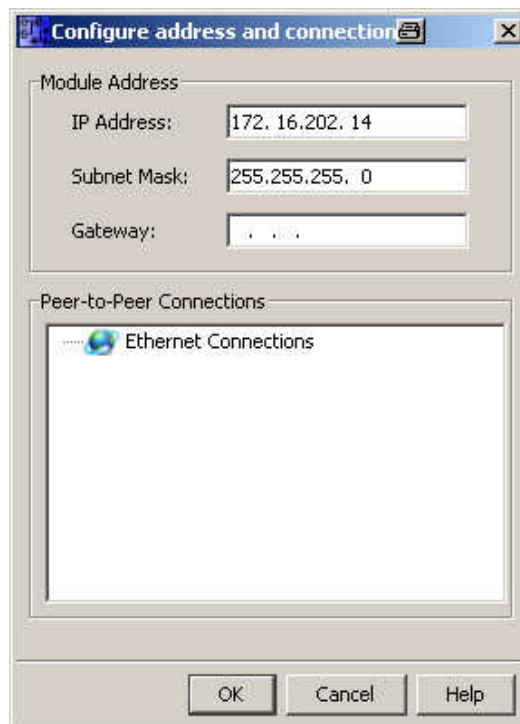


Note:

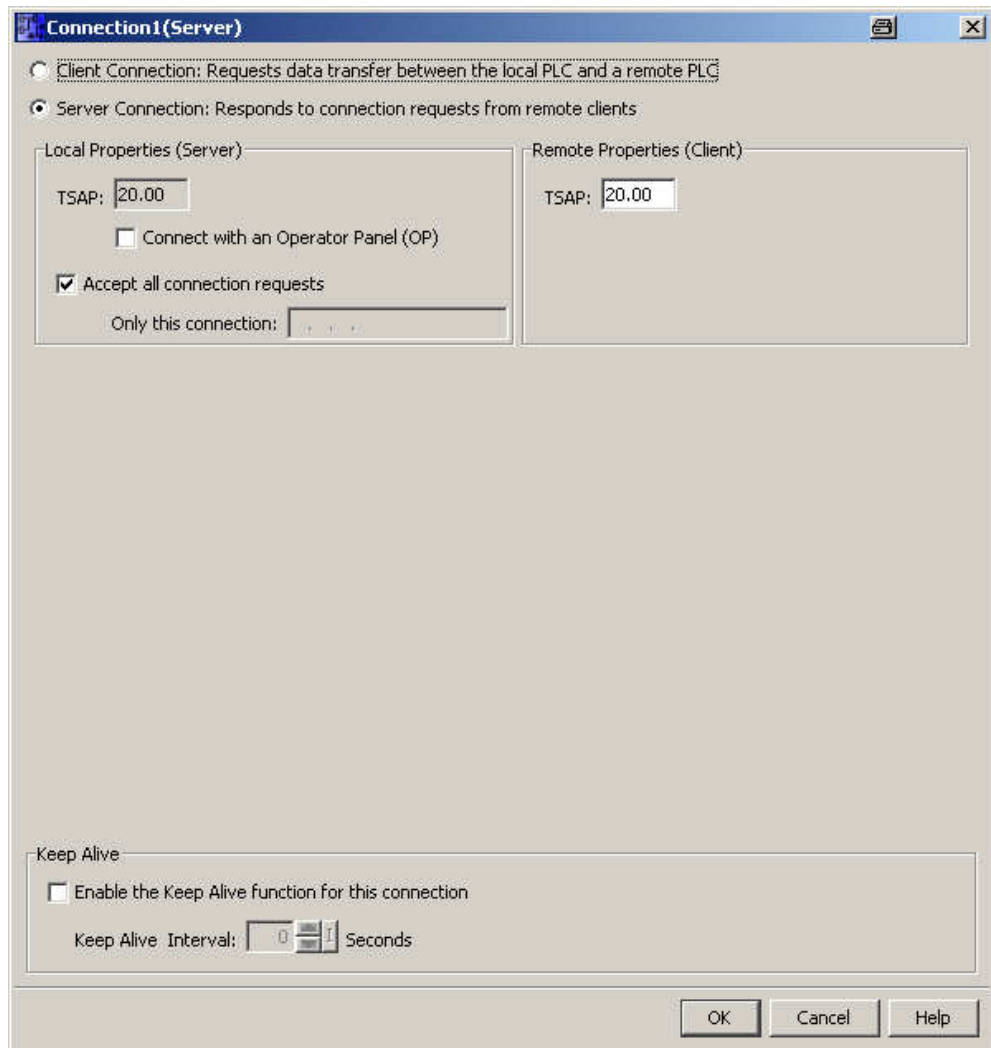
The Ethernet adapter of the PC must be set so that it can communicate with the controllers. This means the IP addresses and the subnet masks must be assigned so that all devices are located in the same network. The IP address 172.16.202.20 and the subnet mask 255.255.255.0 is used for the PC in the example. You set these addresses in the TCP/IP properties of the network connection.

Creating a program for the server device

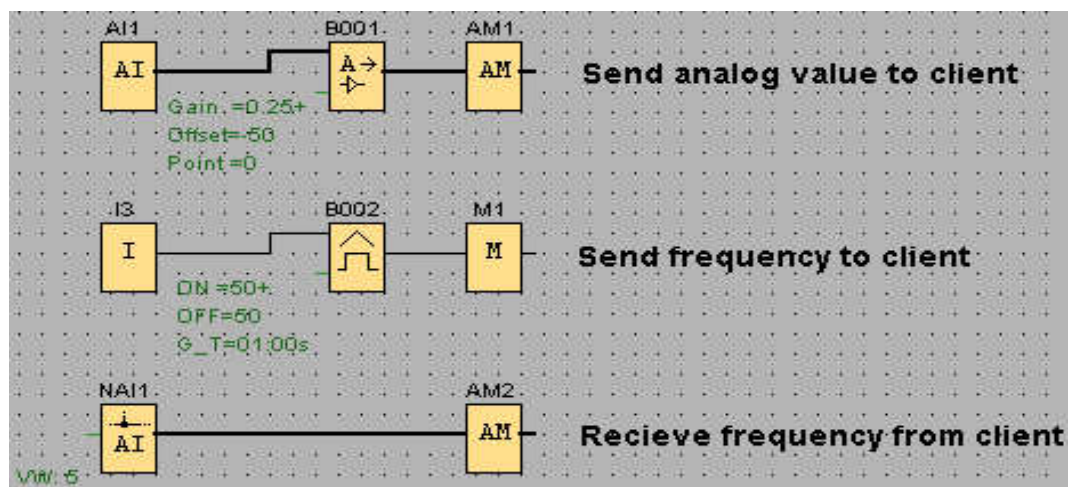
Start by opening a new program. Select "Tools; Ethernet connections..." to create a connection. First you assign the IP address and the subnet mask of the server.



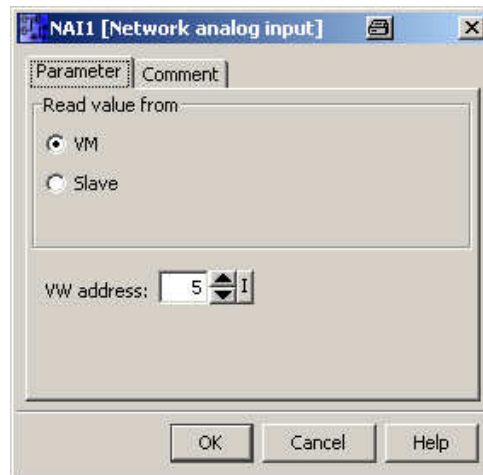
Then you create the new connection with a right-click on "Ethernet Connections" and "Add connection". You then configure the properties of the connection.



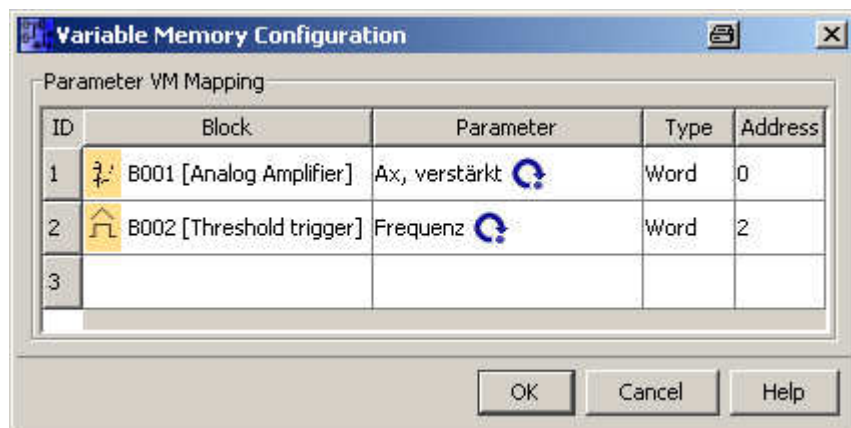
Then you create the program. In this example the value of analog input AI1 and the frequency at I3 is written to the client. An input frequency is read by the client at the same time.



Configure the properties of the analog network input. The value is read in from the variables. The VW address is 5; it is defined in the client connection.

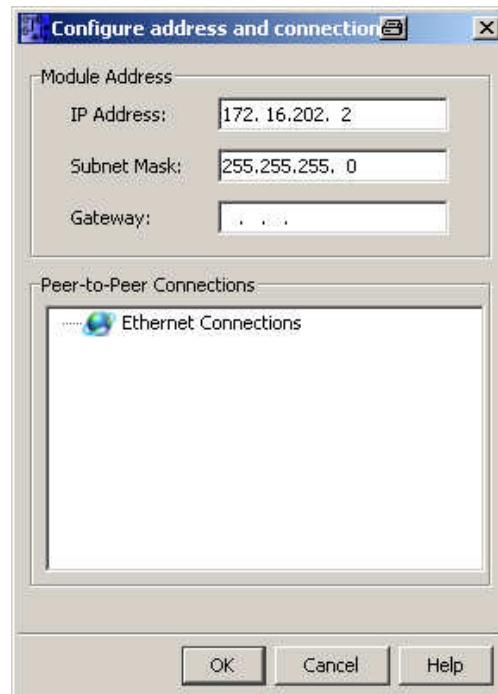


Now edit the VM assignment. Select "Tools; Parameter VM Mapping". Enter the parameters in the table you want to transmit to the client along with the address in which these are made available.

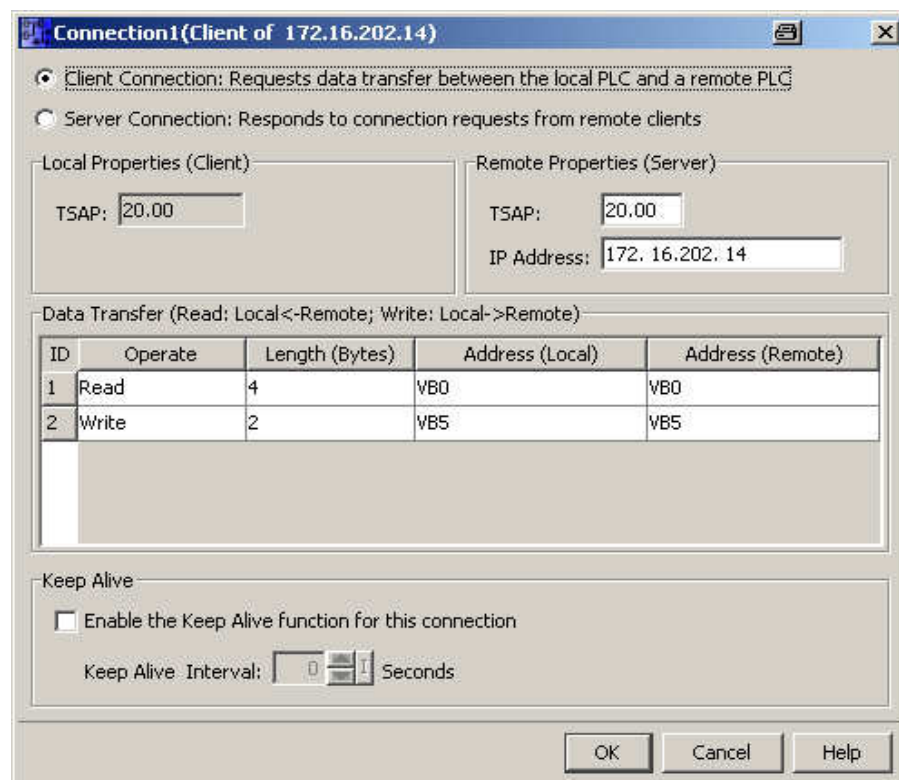


Creating a program for the client device

Open a new program. Select "Tools; Ethernet connections..." to create a connection. First you assign the IP address and the subnet mask of the client.

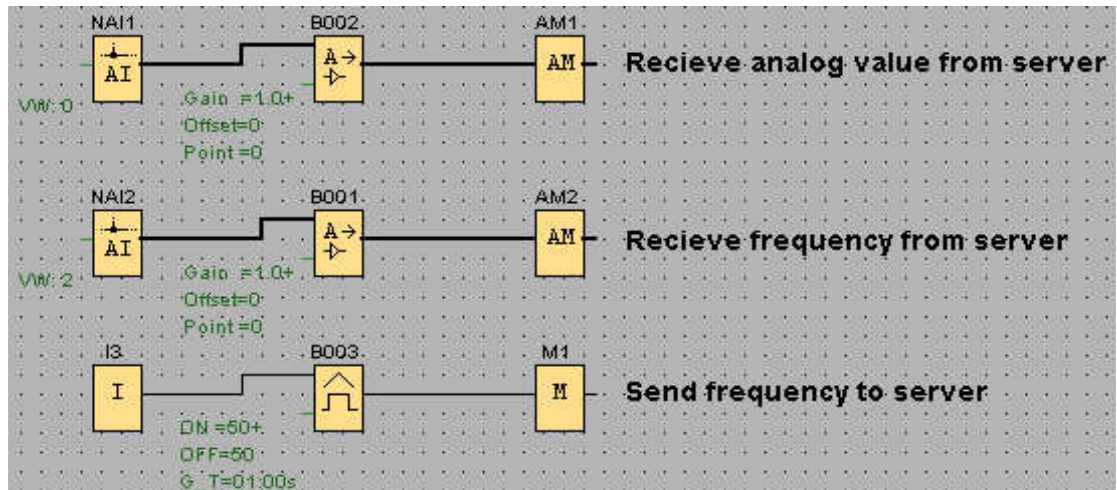


Then you create the new connection with a right-click on "Ethernet Connections" and "Add connection". You then configure the properties of the connection.

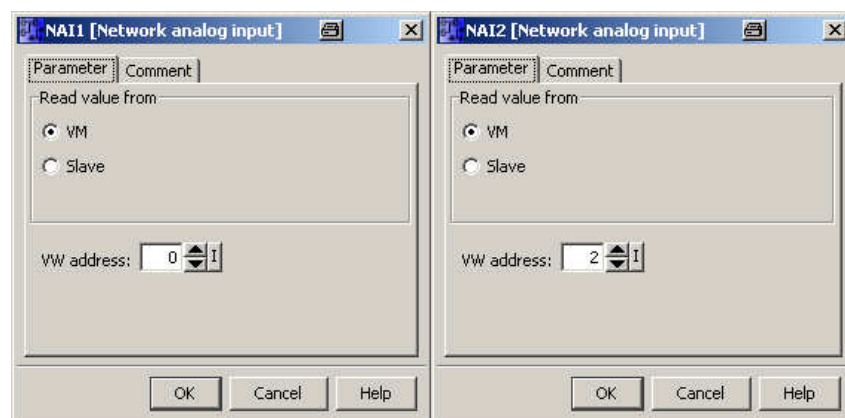


In the table for data transfer you specify how many data (length) are to be sent or received from the server, which local and remote addresses they have or should have.
In the example 4 bytes (2 words; VW 0 and VW 2) are read by the server and 2 bytes (1 word; VW 5) is written to the server.

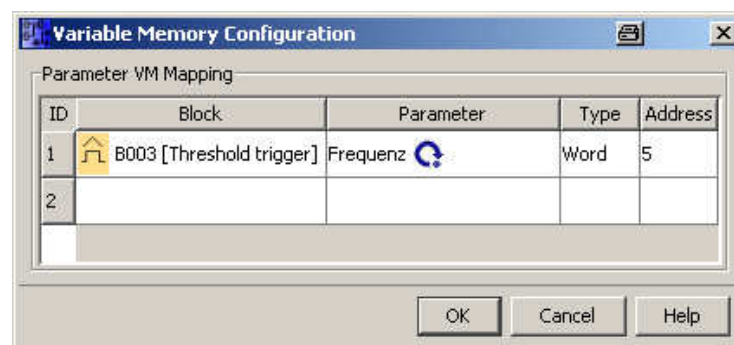
Create the following program by receiving the analog value and the input frequency from the server and by sending an input frequency to the server.



Parameterize the analog network inputs to receive the values. Enter the local addresses which you have assigned in the table for data transfer.



Now create the parameter VM assignment. You specified in the table for data transfer that the input frequency is written to VW 5 of the server.



Data transmission

During the reading process, data are read from the remote server and saved in the local basic module. During the writing process, data from the local basic module are written to the remote server. You can save data at any location in the local basic module and save them on the remote server by entering values in the **Address (Local)** and **Address (Remote)** columns.

The following tables include a description of the restrictions for the area and the local address in case of client connections.

Reading requirements:

Local address		Remote address	
Address type	Range	Address type	Range
VB	0 to 850	VB	0 to 0xFFFF
		DB.DBB	DB[0 to
		MB	0xFFFF].DBB[0xFFFFFFFF]
		IB	0 to 0xFFFF
		QB	0 to 0xFFFF



Note:

Address type:

- VB: Variable byte
- DB.DBB: Data block byte
- MB: Flag byte
- IB: Input byte
- QB: Output byte

Local address + data length – 1 ≤ 850

Write requirements:

Local address		Remote address	
Address type	Range	Address type	Range
VB	0 to 850	VB	0 to 0xFFFF
MB	0 to 3	DB.DBB	DB[0 to
IB	0 to 2	MB	0xFFFF].DBB[0xFFFFFFFF]
QB	0 to 1	IB	0 to 0xFFFF
		QB	0 to 0xFFFF



Note:

Local address + data length – 1 ≤ Max. value of local address type
In the LOGO! basic module, MB, IB and QB are read-only.

Example for reading/writing of digital inputs, outputs and bit memories

Connection1 (Client of 172.16.202.14)

☒ Client Connection: Requests data transfer between the local PLC and a remote PLC
☐ Server Connection: Responds to connection requests from remote clients

Local Properties (Client)
 TSAP: 20.00

Remote Properties (Server)
 TSAP: 20.00
 IP Address: 172.16.202.14

Data Transfer (Read: Local<-Remote; Write: Local->Remote)

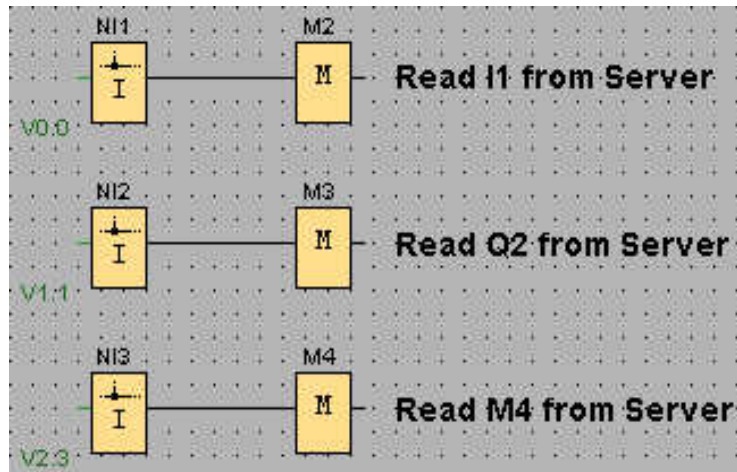
ID	Operate	Length (Bytes)	Address (Local)	Address (Remote)
1	Read	1	VB0	IB0
2	Read	1	VB1	QB0
3	Read	1	VB2	MB0
4	Write	1	IB0	VB0
5	Write	1	QB0	VB1
6	Write	1	MB0	VB2

Keep Alive
☐ Enable the Keep Alive function for this connection
 Keep Alive Interval: 0 Seconds

OK Cancel Help

- Line 1: The inputs I1 to I8 of the server are read by the client and saved in variable byte 0.
- Line 2: The outputs Q1 to Q8 of the server are read by the client and saved in variable byte 1.
- Line 3: The flags M1 to M8 of the server are read by the client and saved in variable byte 2.
- Line 4: The inputs I1 to I8 of the client are written to the variable byte 0 of the server.
- Line 5: The outputs Q1 to Q8 of the client are written to the variable byte 1 of the server.
- Line 6: The flags M1 to M8 of the client are written to the variable byte 2 of the server.

To use the data in the control program, use the network inputs.



The following table shows how the read-in data are available in a variable byte:

Input, output, bit memory		Variable
IB/QB/MB 0	I/Q/M 1	V X.0
	I/Q/M 2	V X.1
	I/Q/M 3	V X.2
	I/Q/M 4	V X.3
	I/Q/M 5	V X.4
	I/Q/M 6	V X.5
	I/Q/M 7	V X.6
	I/Q/M 8	V X.7
IB/QB/MB 1	I/Q/M 9	V Y.0
	I/Q/M 10	V Y.1
	I/Q/M 11	V Y.2
	I/Q/M 12	V Y.3
	I/Q/M 13	V Y.4
	I/Q/M 14	V Y.5
	I/Q/M 15	V Y.6
	I/Q/M 16	V Y.7
IB/MB 2	I/M 17	V Z.0
	I/M 18	V Z.1
	I/M 19	V Z.2
	I/M 20	V Z.3
	I/M 21	V Z.4
	I/M 22	V Z.5
	I/M 23	V Z.6
	I/M 24	V Z.7
...		...