

# **Schneider SoMachine M Series (Ethernet)**

Supported series: Schneider SoMachine M238/M241/M251/M258

### **HMI Setting:**

Parameters	Recommended	Options	Notes
PLC type	Schneider SoMac	chine M Series	
PLC I/F	Ethernet		Use UDP
Port no.	1740		
Source port no.	1742	1740/1742	M258: 1740 Other: 1742
User name, Passo	owrd		

PLC will randomly allocate UDP Port: 1740~1743, users can use <u>Scan\_Network</u> to get the correct port number.

## **PLC Setting:**

Schneider EcoStruxture Machine Expert software needs to cancel user restriction, there are two ways.

1. Maintenance -> User Management -> Users accounts management -> Disable

me	Monitoring	Diagnostics	Maintenance		
					Log Out
		User Management			
Maintenar	ice	llasar anna t		01	
Post Conf		Users accounts	management	Clone mar	agement
User Manag	ement	Disable	Reset to default	Exclude users rights	Include users rights
Firewall					
System Log	Files				
EIP config fil	85				
Run/Stop Co	ontroller				



### 2. Online -> Security -> Disable user rights management on device.

Machine Expert Logic Builder - Version 1.2.4 (x64)

5 Onl 4 07 47 24	Ine Debug Tools Window Help Login Alt+Fill Logout Ctr1+Fill Create boot application Download Online Change Source upload Source download to connected device Compare with target device	ston Sings	Vousization     Services     Services
Ø	Save parameters of active editor Save parameters of all devices Multiple Download Reset warm Reset cold Reset origin Reset Persistent Variables Suspend device status monitoring		
	Simulation	-	
	security		Logott current device user
	Operating Mode Advanced Configuration		Add device user Remove device user Change Password Device User
			Reset user rights management to default (M241A)
			Disable user rights management on device [M241A]

# How to import tags and scan the network:

1. Under "MAST" set POU.

Cutitled  Cutit	Priority ( 031 ): 15 Type Cyclic   Interval (e.g. t#200ms): 20 Watchdog Enable Time (e.g. t#200ms): 100
- Global	Sensitivity: 1  Add Call X Remove Call Change Call Move Up  POU  POU  Comment  POU



2. Tool tree -> Application -> Add Object -> Symbol configuration.



Select PLC\_PRG and its tag information is shown, build the project.
 [build] -> [Generate Code]

\*.xml file is generated in the directory of the project.

∕[	MyController	Task Configura	tion	Library Ma	nager Symbol con	figuration 🗙	🛚 🗙 🚷 MAST	
R	View 🖣 🎬 Build 🛛 🛱 Settings 🖲							
Char	nged symbol configuration will be transfe	erred with the next do	wnload or onli	ne change				
Syr	mbols	Access Rights Maximal Attribute Type		Туре	Members	Comme		
<u>ا</u>	🔲 📄 IoConfig_Globals							
÷.[	🔲 📄 IoConfig_Globals_Mapping							
<b>.</b>	POU							
	🐨 📝 🧳 array2D	<b>*</b>	<b>N</b>		ARRAY [04, 04] OF INT		a	
	🛛 🔽 🧳 ArrayStruct	<b>*</b>	<b>S</b>		ARRAY [04] OF DUT			
	- 🔽 🔌 StructofStruct	<b>*</b>	<b>N</b>		DUT_1		]	
	V StructString	<b>*</b>	<b>S</b>		ARRAY [04] OF STRING		abc	
	🔽 🔌 TagGVL	<b>*</b>	<b>N</b>		INT			
	🔽 🧔 TagINT	<b>*</b>	<b>*</b>		INT			
	🔽 🔌 TagString	<b>*</b>	<b>N</b>		STRING			
	📝 🔌 TagStruct	<b>*</b>	<b>N</b>		DUT			





4. In EasyBuilderPro -> [System Parameter Settings] click [New] to add Schneider SoMachine M Series driver into the device list and then click [Import Tag].

				Systen	n Parar	meter Se	ttings	6			
Printer/	Backup Se	erver	Tim	ie Sync./DST		e-Mail		Recipes	Ce	ellular D	Data Network
Device	Mode	l Ge	neral	System S	etting	tting Security Non-ASCII F		I Fonts	Fonts Extended Men		
Device list	::								<u>W</u>	hat's my	<u>IP ?</u>
No.		Name		Location	Device	e type	Interfa	ace	I/F Prot	tocol	Station no.
Local	HMI	Local HN	11	Local	eMT30	70 (800	-		-		0
Local	PLC 4	Schneide	er SoM	Local	Schnei	ider SoM	Ethern	net (IP=1	UDP		1

5. Import successful dialog.



Note: **[Get Tag Info]** The obtained address may be incomplete, it is recommended to use the **[Import Tags]** function.



# 6. Click [Scan Network] in the driver settings.

Device type :	Schneider SoMachine M Series (Ethernet)	•
	Device ID : 286, V.3.80, SOMACHINE_M_SERIES_ETHERNET.c30	
I/F∶	Ethernet	<u></u>
* Support off-line si	mulation on HMI (use LB-12358).	
IP :	192.168.1.111, Port=1740 Settings	
	Use UDP (User Datagram Protocol )	_
	IP Address Settings	
	IP address : 192 . 168 . 1 . 111 Scan Network	
	Portno.: 1/40	
		_
_		
	Timeout (sec) : 5.0 v Turn around delay (ms) : 0	
	Source port no. : 1740	
	The number of resending commands : 0	~
	OK Cancel	

#### 7. Adapter Select.

255,255,255,240
30 255.255.252.0

**Note:** Confirm whether the PLC and PC network settings are the same. If the settings are different, the network may not be scanned successfully



Network	Connection D	etails	×
Network Connection <u>D</u> etails:			
Property	Value		^
Connection-specific DN			
Description	Intel(R) 82579LM	Gigabit Network Co	u
Physical Address	00-0C-26-A1-C2-B	9	
DHCP Enabled	No		
IPv4 Address	192.168.1.130		
IPv4 Subnet Mask	255.255.252.0		
IPv4 Default Gateway	192.168.1.254		
IPv4 DNS Servers	168.95.1.1		
	8.8.8.8		
IPv4 WINS Server			
NetBIOS over Tcpip En	Yes		
IPv6 Address	2001:b030:2030:7	700::1844	
Lease Obtained	2021年1月14日_	上午 08:57:32	
Lease Expires	2021年1月15日_	上午 01:27:32	
Link-local IPv6 Address	fe80::5cb8:7dd9:3	300e:c0a3%12	
IPv6 Default Gateway	fe80::7e5a:1cff.fe	6d:4c18%12	~
<		>	
		Close	

8. The devices scanned on the network will be listed, select the device you want to connect and click ok.

		QtCodesysScanNe	twork	×
Device Name cMT-4901 cMT-47C6 cMT-DDC8 cMT-5315 M241CEC24	IP address 192.168.3.93 192.168.2.133 192.168.2.189 192.168.2.35 192.168.1.144		Device Name: M241CEC24T_U @0080F40BD5F Target Name: TM241CEC24T_U Target Verdor: Schneider Electric Source Port: 1740	Scan Network
			ОК	Cancel



9. After confirming the communication parameters, click ok.

IP Address Settings
IP address : 192 . 168 . 1 . 144 Scan Network Port no. : 1740
Timeout (sec) : 5.0 v Turn around delay (ms) : 0 Source port no. : 1740 The number of resending commands : 0 v
OK Cancel

# Support Device Type:

Data type	EasyBuilder data format	Memo
Bool	bit	
Byte	16-bit BCD, Hex, Binary, Unsigned	8-bit
SInt	16-bit BCD, Hex, Binary, Signed	8-bit
USInt	16-bit BCD, Hex, Binary, Unsigned	8-bit
Word	16-bit BCD, Hex, Binary, Unsigned	16-bit
Int	16-bit BCD, Hex, Binary, Signed	16-bit
UInt	16-bit BCD, Hex, Binary, Unsigned	16-bit
DWord	32-bit BCD, Hex, Binary, Unsigned	32-bit
DInt	32-bit BCD, Hex, Binary, Signed	32-bit
Real	32-bit Float	32-bit
UDInt	32-bit BCD, Hex, Binary, Unsigned	32-bit
TIME	32-bit BCD, Hex, Binary, Unsigned	32-bit
TIME_OF_DAY	32-bit BCD, Hex, Binary, Unsigned	32-bit
DATE	32-bit BCD, Hex, Binary, Unsigned	32-bit
DATE_AND_TIME	32-bit BCD, Hex, Binary, Unsigned	32-bit
LInt	64-bit Signed	64-bit
ULInt	64-bit Unsigned	64-bit
LWord	64-bit Unsigned	64-bit
Double	64-bit Float	64-bit

PLC Connection Gui					
Data type	Data type EasyBuilder data format				
String	Word array for ASCII input and display	Length=word			

Note1: String length must be set identical to the length in software.

Note2: EasyBuilderPro V6.03.02 or later supports 64 bits data type (cMT Series only),

but please note that the address limit range is 48 bits in maximum.

Note3: Tag name does not support more than 80 char.

**Note4:** EasyBuilderPro V6.09.01.514 and later versions support communication with MachineExpert 2.2.

**Note5:** Support UTF8 Encoding for STRING.



## How to use subnet mask 255.255.0.0 communication

1. Confirm that the subnet mask of the network environment is 255.255.0.0 (PC,HMI / PLC)

Internet Protocol Version 4 (TCP/IPv4) Properties ? ×							
General	_						
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.							
ODtain an IP address automatically	O Obtain an IP address automatically						
• Use the following IP address:							
<u>I</u> P address: 192 . 168 . 1 . 130							
Subnet mask: 255 . 255 . 0 . 0							
Default gateway: 192 . 168 . 1 . 254							
Obtain DNS server address automatically	Obtain DNS server address automatically						
• Use the following DNS server addresses:	-						
Preferred DNS server: 168 . 95 . 1 . 1							
Alternate DNS server: 8 . 8 . 8 . 8							
Validate settings upon exit							
OK Cancel							

2. Source port no. set 1740.

IP Address Settings	
IP address : Port no. :	192 , 168 , 1 , 143 1740
Timeout (sec) :	5.0 v Turn around delay (ms) : 0
	Source port no. :
	OK Cancel



### EasyAccess2.0 PassThrough:

How to use [Schneider Somachine] -> [Machine Expert] for EasyAccess 2.0 PassThough.

1. Use Nodename via NAT (Remote TCP), enter the actual PLC IP address and Port 1105 of the NAT Address

Connection Mode:	NAT Address/Port			
Nodename via NAT (Remote TCP)	~	192.168.1.246	/ 1105	

2. Click the refresh button.

Connection Mode:		NAT Address/Po	rt	0	
Nodename via NAT (Remote TCP)	$\sim$	192.168.1.246	/ 1105		)

3. After reading the device list, click the device on the list.

I Hyc	ontroller x							
Communicati	on Settings Applications	Files Log PL	C settings Services 🗯 🛛	/O Mapping Task De	ployment Users an	d Groups Access R	lights OPC UA Server Configuration	n Status 🕕 Information
* 8	🖹 🗙 🖈 🖈							
Consect.	Controller	Projectilane	IP_Addson ^	TimeSinceBoot	Nodelfane	Project&uthor	FW_Version	
428	🔀 Weinlek-Contex-e				cMT-DP9A		¥3.5.10.30	
428	3 TM241CBC24T_U	20201021	192.168.1.144	028 21h 02m 43r	TM241CBC24T	1000	¥4.0.5.11	
2	1 TM241C24R	Text-Tecnobi	192.168.1.246	00h 20m 50s	TM241C24R	Alberto Ventu	V5.0.8.4	

4. Select the machine found, enter nodename, online => login

## Wiring Diagram:

