



Treinamentos e Manutenção
de Softwares e Hardwares

Configuração Driver MProt da Siemens

Roteiro de Apresentação

- ❑ **Configurando para CLP S7-400**
- ❑ **Configurando para CLP S7-1200**

Configurando Driver Mprot para CLP S7-400

Endereço IP

Prog_Siemens_MPROT ▶ S7-400 [CPU 414-3 PN/DP]

S7-400 [CPU 414-3 PN/DP]

UR1_0

1 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

PROFINET interface_1 [PN-IO]

General IO tags System constants Texts

General
Ethernet addresses
Time synchronization
Advanced options
Diagnostics addresses

Ethernet addresses

Interface networked with

Subnet: Not networked
Add new subnet

IP protocol

IP address: 192 . 168 . 1 . 1
Subnet mask: 255 . 255 . 255 . 0
 Use router
Router address: 0 . 0 . 0 . 0

DB de Comunicação

...s_MPROT_V15.1 ▶ S7-400 [CPU 414-3 PN/DP] ▶ Program blocks ▶ DB_Comunicacao [DB5]

Keep actual values Snapshot Copy snapshots to start values

DB_Comunicacao

	Name	Data type	Offset	Start value	Monitor value	Retain	Accessible f...
1	Static					<input type="checkbox"/>	<input type="checkbox"/>
2	Valor_String	String[20]	0.0	'Teste 400'	'Teste 400'	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Valor_Bit	Bool	22.0	True	TRUE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Valor_Real	Real	24.0	1234.567	1234.567	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Valor_Word	Word	28.0	65535	16#FFFF	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Valor_Dword	DWord	30.0	4294967295	16#FFFF_FFFF	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Valor_Int	Int	34.0	-32767	-32767	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	Valor_Dint	DInt	36.0	-2147483647	-2_147_483_647	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Valor_Byte	Byte	40.0	16#FF	16#FF	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Protocolo e Slot

Driver SIEMENS MProt (MPI/PPI/ISO-TCP) v4.0.19 (IOKit v2.0.108) X

MProt S7 Strings Setup Serial Ethernet Modem RAS

General

Default slave address: Network: Local Address:

PPI

PPI Multi Master Operation delay (ms):
Application Timeout (ms): only for write

MPI

Highest Station Address:
Profibus Speed:

ISOTCP / ISOTCP243

Extra Connections: Max Simult Req: Source TSAP (hex): Connection type:

Watchdog period (ms): Use Dest. TSAP Source Ref. (hex):
 Use default Source Ref.
 Use default TSAPs

Connect to:

Main Rack: Slot: Dest. TSAP (hex):

Backup 1 Rack: Slot: Dest. TSAP (hex):

Backup 2 Rack: Slot: Dest. TSAP (hex):

Backup 3 Rack: Slot: Dest. TSAP (hex):

OK Cancelar Aplicar

Meio Físico

Driver SIEMENS MProt (MPI/PPI/ISO-TCP) v4.0.19 (IOKit v2.0.108) [X]

MProt S7 Strings Setup Serial Ethernet Modem RAS

Physical Layer: **Ethernet** [v] Start driver OFFLINE

Timeout: ms

Connection management

Mode: [v]

Retry failed connection every seconds

Give up after failed retries

Disconnect if non-responsive for seconds

Logging Options

Log to File:

OK Cancelar Aplicar

Transporte e Número IP

Driver SIEMENS MProt (MPI/PPI/ISO-TCP) v4.0.19 (IOKit v2.0.108) [X]

MProt S7 Strings Setup Serial **Ethernet** Modem RAS

Transport: **TCP/IP** [v]

Listen for connections on port: [0]

PING before connecting

Share listen port with other processes

Timeout: [4000] ms

Interface: [All Interfaces] [v]

Retries: [1]

Use IPv6 Use SSL [SSL Settings]

Enable 'ECHO' supression

IP Filter: []

Connect to

Main IP: [192.168.1.1] Port: [102] Local port: [0]

Backup IP 1: [] Port: [102] Local port: [0]

Backup IP 2: [] Port: [0] Local port: [0]

Backup IP 3: [] Port: [0] Local port: [0]

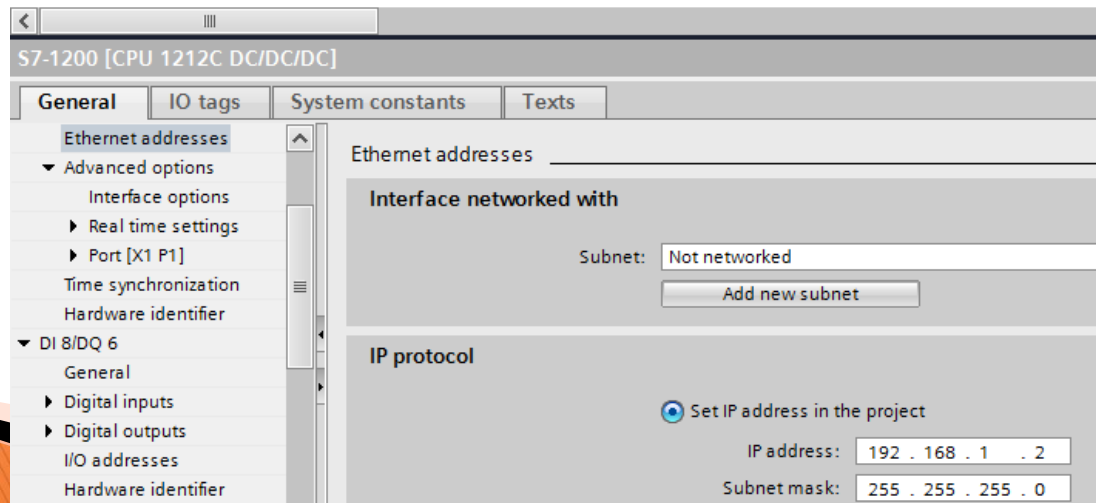
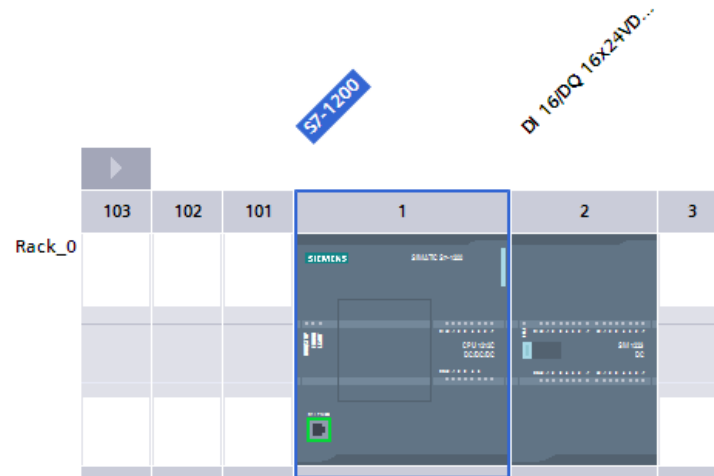
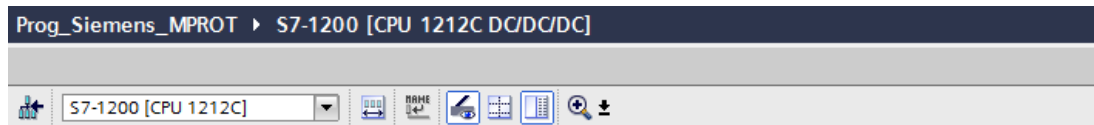
[OK] [Cancelar] [Aplicar]

Tags de Comunicação

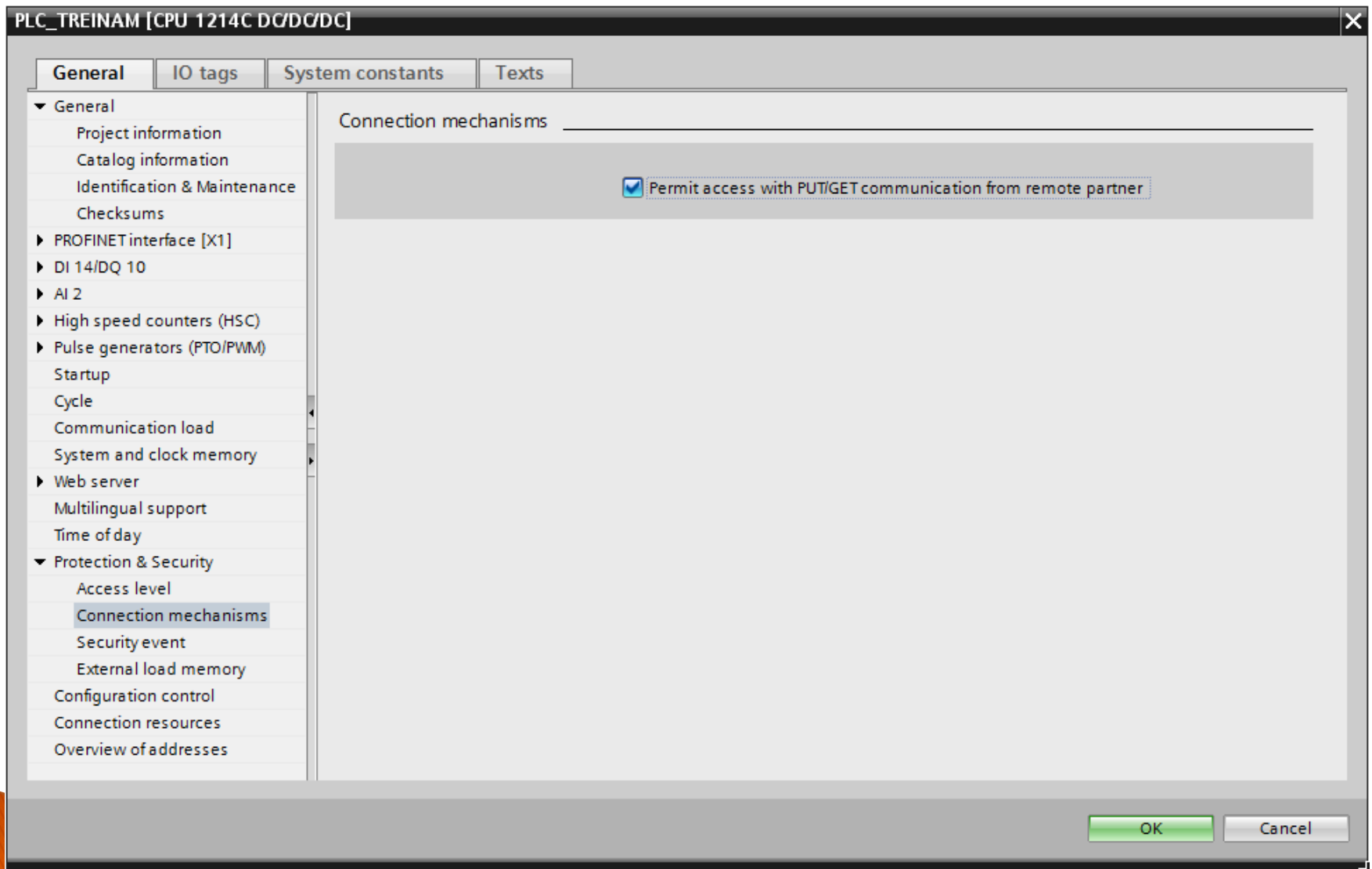
Nome	Dispo...	Item	P1/N1...	P2/N2...	P3/N3...	P4/N4...	Ta...	Var...	Valor	Qualid...	Estampa de tempo	Valor (sem escala)
MProt400			0	0	0	0						
• Valor_String	0	DB5.DBS1[20]	0	0	0	0		1000	A Teste 400	192	21/06/2020 09:41:21,866	A Teste 400
• Valor_Bit	0	DB5.DBX22.0	0	0	0	0		1000	9 1	192	21/06/2020 09:41:21,898	9 1
• Valor_Bit_Param			0	109	5	0		1000	9 20	192	21/06/2020 09:41:21,898	9 20
• Valor_Real	0	DB5.DBF24	0	0	0	0		1000	9 1234,567	192	21/06/2020 09:41:21,898	9 1234,567
• Valor_Real_Param			0	709	5	24		1000	9 1234,567	192	21/06/2020 09:41:21,898	9 1234,567
• Valor_Word	0	DB5.DBW28	0	0	0	0		1000	9 65535	192	21/06/2020 09:41:21,898	9 65535
• Valor_Word_Param			0	309	5	28		1000	9 65535	192	21/06/2020 09:41:21,898	9 65535
• Valor_DWord	0	DB5.DBD30	0	0	0	0		1000	9 4294967295	192	21/06/2020 09:41:21,898	9 4294967295
• Valor_DWord_Param			0	509	5	30		1000	9 4294967295	192	21/06/2020 09:41:21,898	9 4294967295
• Valor_Int	0	DB5.DBI34	0	0	0	0		1000	9 -32767	192	21/06/2020 09:41:21,898	9 -32767
• Valor_Int_Param			0	409	5	34		1000	9 -32767	192	21/06/2020 09:41:21,898	9 -32767
• Valor_Dint	0	DB5.DBLI36	0	0	0	0		1000	9 -2147483647	192	21/06/2020 09:41:21,898	9 -2147483647
• Valor_Dint_Param			0	609	5	36		1000	9 -2147483647	192	21/06/2020 09:41:21,898	9 -2147483647
• Valor_Byte	0	DB5.DBB40	0	0	0	0		1000	9 255	192	21/06/2020 09:41:21,898	9 255
• Valor_Byte_Param			0	209	5	40		1000	9 255	192	21/06/2020 09:41:21,898	9 255

Configurando Driver Mprot CLP S7-1200

Endereço IP



Permite Put / Get (Depende Firmware)



DB de Comunicação

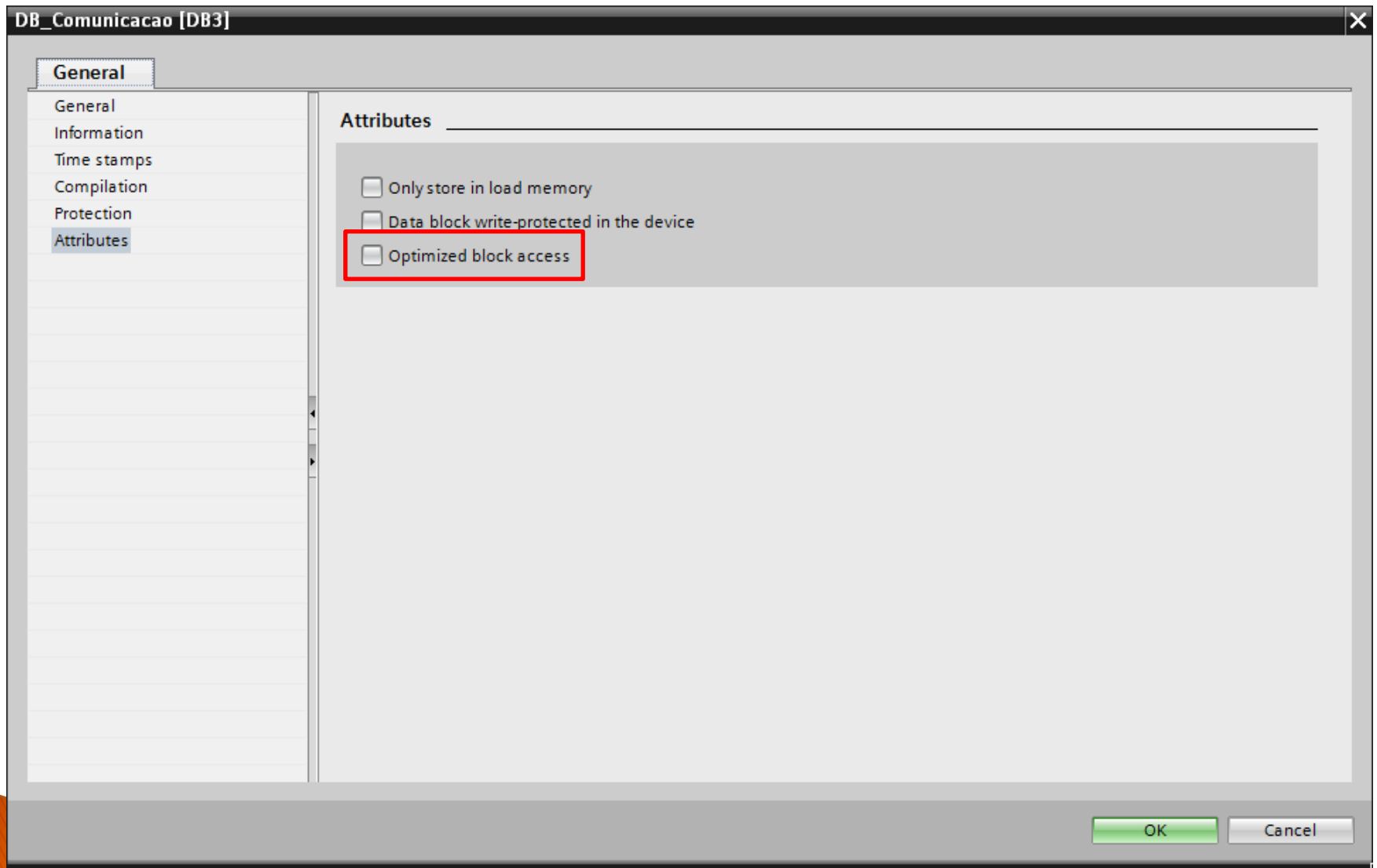
...ROT_V15.1 ▶ S7-1200 [CPU 1212C DC/DC/DC] ▶ Program blocks ▶ DB_Comunicacao [DB3]

Keep actual values Snapshot Copy snapshots to start values

DB_Comunicacao

	Name	Data type	Offset	Start value	Monitor value	Retain	Acc...
1	Static					<input type="checkbox"/>	
2	Valor_String	String[20]	0.0	'Teste 1200'	'Teste 1200'	<input type="checkbox"/>	
3	Valor_Bit	Bool	22.0	True	TRUE	<input type="checkbox"/>	
4	Valor_Real	Real	24.0	1234.567	1234.567	<input type="checkbox"/>	
5	Valor_Word	Word	28.0	65535	16#FFFF	<input type="checkbox"/>	
6	Valor_Dword	DWord	30.0	4294967295	16#FFFF_FFFF	<input type="checkbox"/>	
7	Valor_Int	Int	34.0	-32767	-32767	<input type="checkbox"/>	
8	Valor_DInt	DInt	36.0	-2147483647	-2_147_483_647	<input type="checkbox"/>	
9	Valor_Byte	Byte	40.0	16#FF	16#FF	<input type="checkbox"/>	
10	Valor_DataHora	DTL	42.0	DTL#2020-06-...	DTL#2020-06-21-08:51:32	<input type="checkbox"/>	

Não pode ser DB Otimizado



Protocolo e Slot

Driver SIEMENS MProt (MPI/PPI/ISO-TCP) v4.0.19 (IOKit v2.0.108) [X]

MProt | S7 Strings | Setup | Serial | Ethernet | Modem | RAS

General

Default slave address: [] Network: **ISOTCP** Local Address: [0]

PPI

PPI Multi Master Operation delay (ms): [0]

Application Timeout (ms): [0] only for write

MPI

Highest Station Address: [31]

Profibus Speed: [187kbps]

ISOTCP / ISOTCP243

Extra Connections: [0] Max Simult Req: [100] Source TSAP (hex): [0100] Connection type: [PG]

Watchdog period (ms): [5000] Use Dest. TSAP Source Ref. (hex): [0001]

Use default Source Ref. Use default TSAPs

Connect to:

Main Rack: 0 Slot: 1 Dest. TSAP (hex): [4D57]

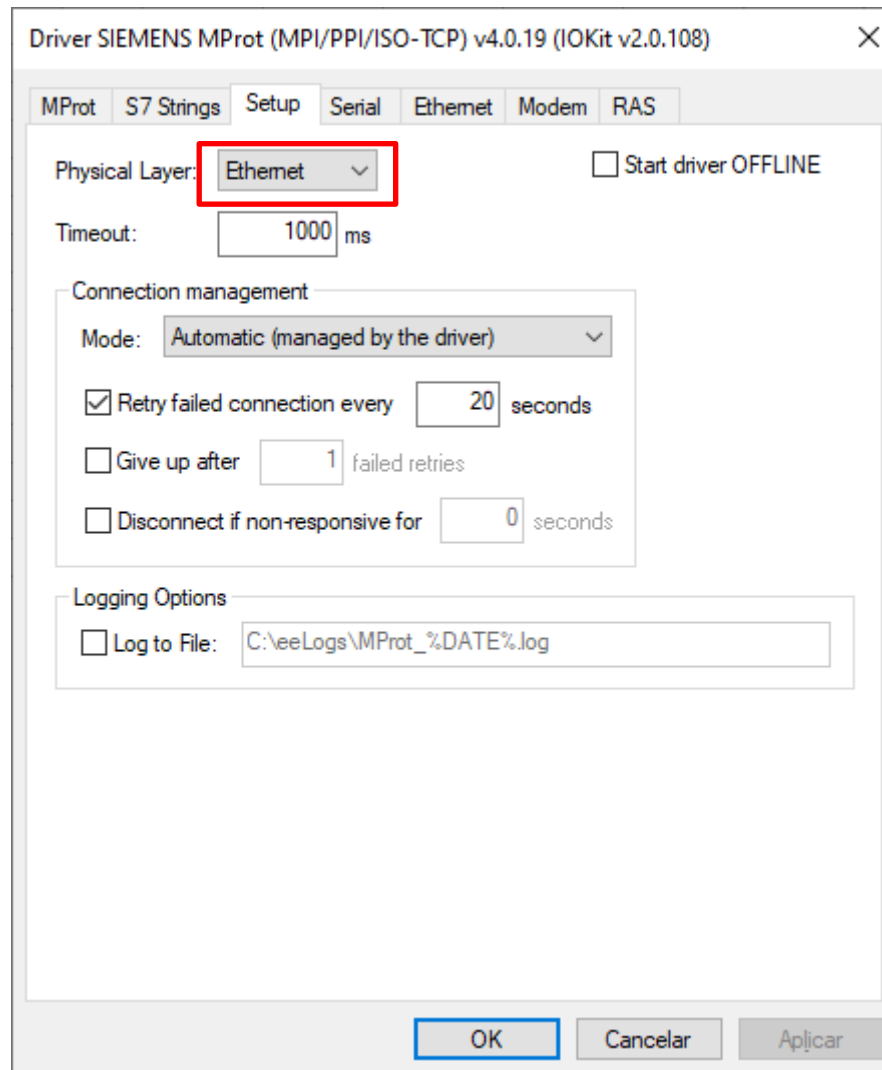
Backup 1 Rack: [0] Slot: [2] Dest. TSAP (hex): [4D57]

Backup 2 Rack: [0] Slot: [2] Dest. TSAP (hex): [4D57]

Backup 3 Rack: [0] Slot: [2] Dest. TSAP (hex): [4D57]

[OK] [Cancelar] [Aplicar]

Meio Físico



Transporte e Número IP

Driver SIEMENS MProt (MPI/PPI/ISO-TCP) v4.0.19 (IOKit v2.0.108) [X]

MProt S7 Strings Setup Serial **Ethernet** Modem RAS

Transport: **TCP/IP** [v]

Listen for connections on port: 0

PING before connecting

Share listen port with other processes

Timeout: 4000 ms

Interface: (All Interfaces) [v]

Retries: 1

Use IPv6 Use SSL [SSL Settings]

Enable 'ECHO' supression

IP Filter: []

Connect to

<input type="checkbox"/> Main IP: 192.168.1.2	Port: 102	<input type="checkbox"/> Local port: 0
<input type="checkbox"/> Backup IP 1: []	Port: 102	<input type="checkbox"/> Local port: 0
<input type="checkbox"/> Backup IP 2: []	Port: 0	<input type="checkbox"/> Local port: 0
<input type="checkbox"/> Backup IP 3: []	Port: 0	<input type="checkbox"/> Local port: 0

OK Cancelar Aplicar

Tags de Comunicação

Nome	Dispo...	Item	P1/N1...	P2/N2...	P3/N3...	P4/N4...	Ta...	Var...	Valor	Qualid...	Estampa de tempo	Valor (sem escala)
MProt1200			0	0	0	0						
• Valor_String	0	DB3.DBS1[20]	0	0	0	0		1000	A Teste 1200	192	21/06/2020 09:27:07,353	A Teste 1200
• Valor_Bit	0	DB3.DBX22.0	0	0	0	0		1000	9 1	192	21/06/2020 09:27:07,369	9 1
• Valor_Bit_Param			0	109	3	22		1000	9 1	192	21/06/2020 09:27:07,369	9 1
• Valor_Real	0	DB3.DBF24	0	0	0	0		1000	9 1234,567	192	21/06/2020 09:27:07,369	9 1234,567
• Valor_Real_Param			0	709	3	24		1000	9 1234,567	192	21/06/2020 09:27:07,369	9 1234,567
• Valor_Word	0	DB3.DBW28	0	0	0	0		1000	9 65535	192	21/06/2020 09:27:07,369	9 65535
• Valor_Word_Param			0	309	3	28		1000	9 65535	192	21/06/2020 09:27:07,369	9 65535
• Valor_DWord	0	DB3.DBD30	0	0	0	0		1000	9 4294967295	192	21/06/2020 09:27:07,369	9 4294967295
• Valor_DWord_Param			0	509	3	30		1000	9 4294967295	192	21/06/2020 09:27:07,369	9 4294967295
• Valor_Int	0	DB3.DBI34	0	0	0	0		1000	9 -32767	192	21/06/2020 09:27:07,369	9 -32767
• Valor_Int_Param			0	409	3	34		1000	9 -32767	192	21/06/2020 09:27:07,369	9 -32767
• Valor_Dint	0	DB3.DLI36	0	0	0	0		1000	9 -2147483647	192	21/06/2020 09:27:07,369	9 -2147483647
• Valor_Dint_Param			0	609	3	36		1000	9 -2147483647	192	21/06/2020 09:27:07,369	9 -2147483647
• Valor_Byte	0	DB3.DBB40	0	0	0	0		1000	9 255	192	21/06/2020 09:27:07,369	9 255
• Valor_Byte_Param			0	209	3	40		1000	9 255	192	21/06/2020 09:27:07,369	9 255
• DataHora			0	209	3	42	10	1000		192	21/06/2020 09:27:07,369	
• Ano_Byte1							0	9	7	192		9 7
• Ano_Byte2							1	9	228	192		9 228
• Mes							2	9	6	192		9 6
• Dia							3	9	21	192		9 21
• TimeZone							4	9	1	192		9 1
• Hora							5	9	8	192		9 8
• Minuto							6	9	51	192		9 51
• Segundo							7	9	32	192		9 32
• MiliSegundo_Byte1							8	9	0	192		9 0
• MiliSegundo_Byte2							9	9	0	192		9 0

Duas Maneiras de Mapeamento

- ❑ A primeira maneira é escrever o endereço de forma semelhante a usada na Siemens.
- ❑ A segunda maneira é usar os parâmetros B1/N1, B2/N2, B3/N3 e B4/N4.

Forma Semelhante a Siemens

□ Inteiro

- DB3.DI28 ou DB3.DBI28 ou invés de DB3.DBW28

□ Duplo Inteiro

- DB3.DLI30 ou DB3.DBLI30 ao invés de DB3.DBD30

□ Real

- DB3.DF24 ou DB3.DBF24 ao invés de DB3.DBD30

Data e Hora

- ❑ Leitura é feita em bloco de bytes;
- ❑ O ano é calculado da seguinte forma:
 $\text{Byte_1} * 256 + \text{Byte_2};$
- ❑ $7 * 256 + 224 = 2016;$
- ❑ Esse algoritmo pode ser usado para calcular os milissegundos se necessário.

Aplicação Exemplo

Aplicação E3 Viewer - Teste de Comunicação Com Driver MPROT

S7-1200	S7-400
Valor String: <input type="text" value="Teste 1200"/>	Valor String: <input type="text" value="Teste 400"/>
<input type="text" value="Valor Bit em 1"/>	<input type="text" value="Valor Bit em 1"/>
Valor Real: <input type="text" value="1234,567"/>	Valor Real: <input type="text" value="1234,567"/>
Valor DInt: <input type="text" value="-2.147.483.647"/>	Valor DInt: <input type="text" value="-2.147.483.647"/>
Valor Int: <input type="text" value="-32.767"/>	Valor Int: <input type="text" value="-32.767"/>
Valor DWord: <input type="text" value="4.294.967.295"/>	Valor DWord: <input type="text" value="4.294.967.295"/>
Valor Word: <input type="text" value="65.535"/>	Valor Word: <input type="text" value="65.535"/>
Valor Byte: <input type="text" value="255"/>	Valor Byte: <input type="text" value="255"/>
Data e Hora: <input type="text" value="21/06/2020 08:51:32"/>	

Obrigado



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