

Improve your machine performance

Modicon M258

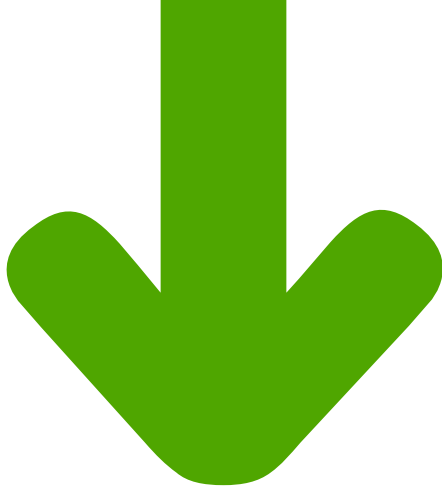
Performance Logic Controller

infoPLC.net

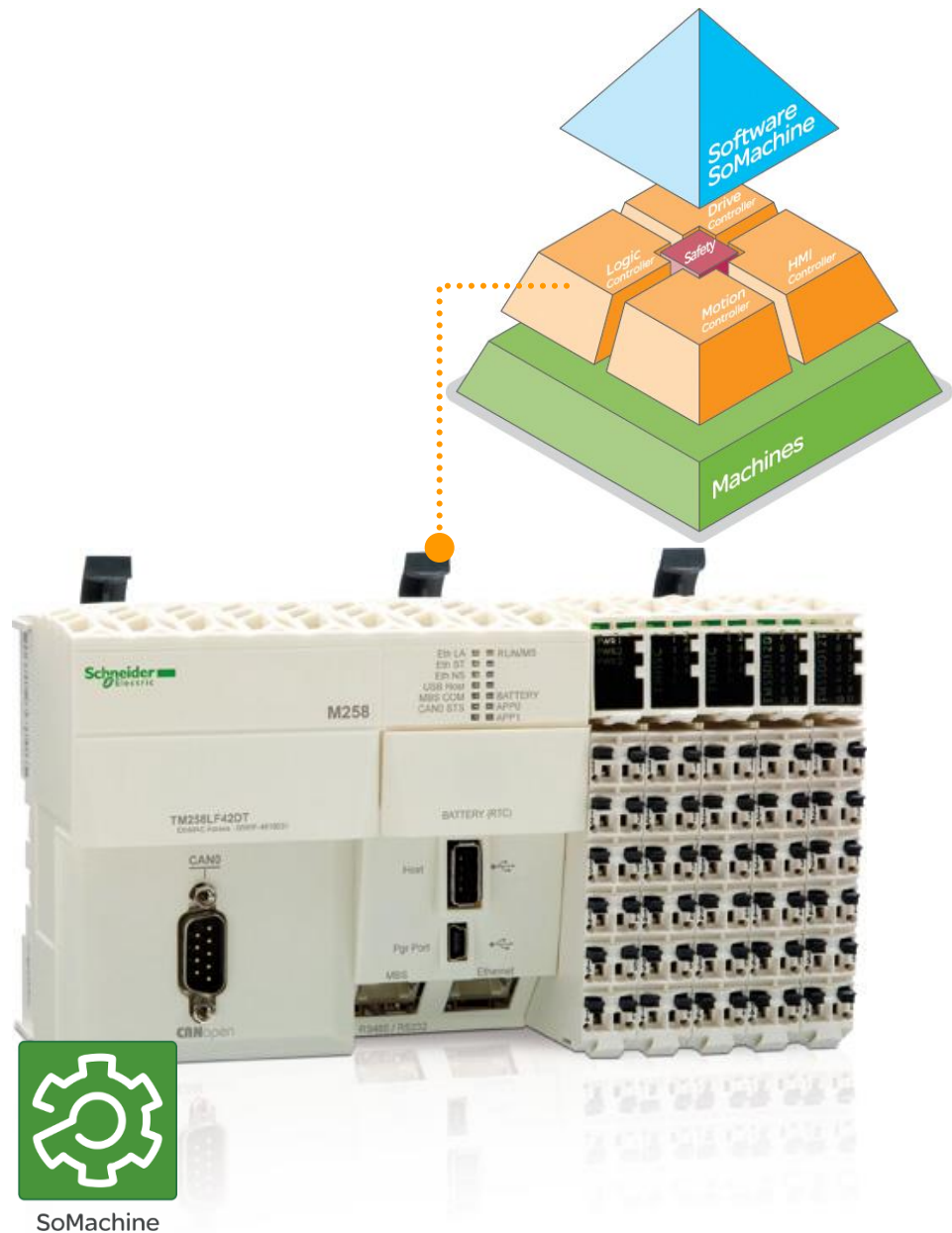
Schneider
 Electric

Are you looking
for performance
control solutions
for machines
requiring flexible
and scalable I/O





Improve your machine performance with the Modicon M258 logic controller

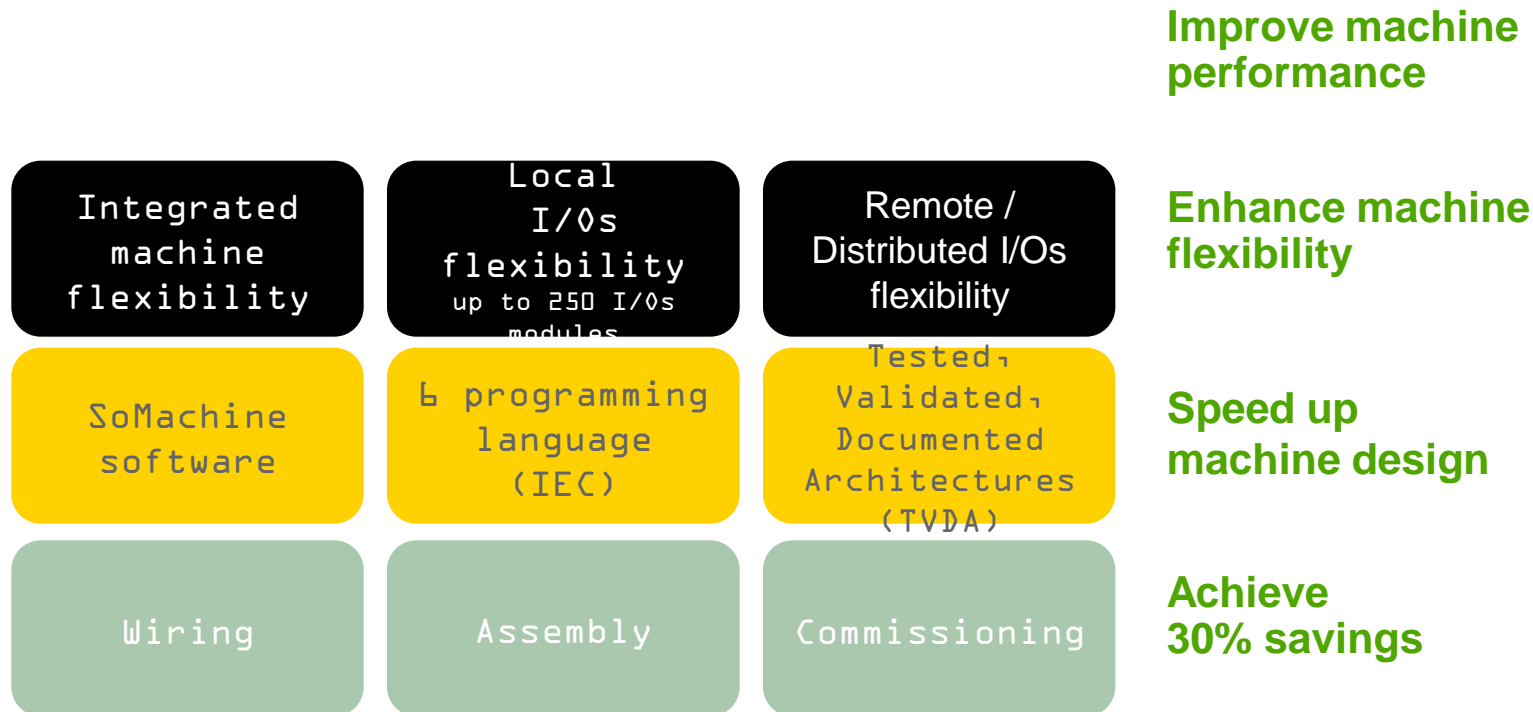


Improve your machine performance while reducing your wiring & assembly costs

- The Modicon™ M258 Logic Controller is a **compact, high-performance, and fully expandable PLC**.
- With features such as **speed control, counting, axis control, and communication functions**, the Modicon M258 Logic Controller is developed specifically for machine builders (OEMs) in the packaging, conveying/storage, textile, and woodworking machine industries

Imagine what total flexibility can do for your business...

- With the Modicon M258 logic controller:

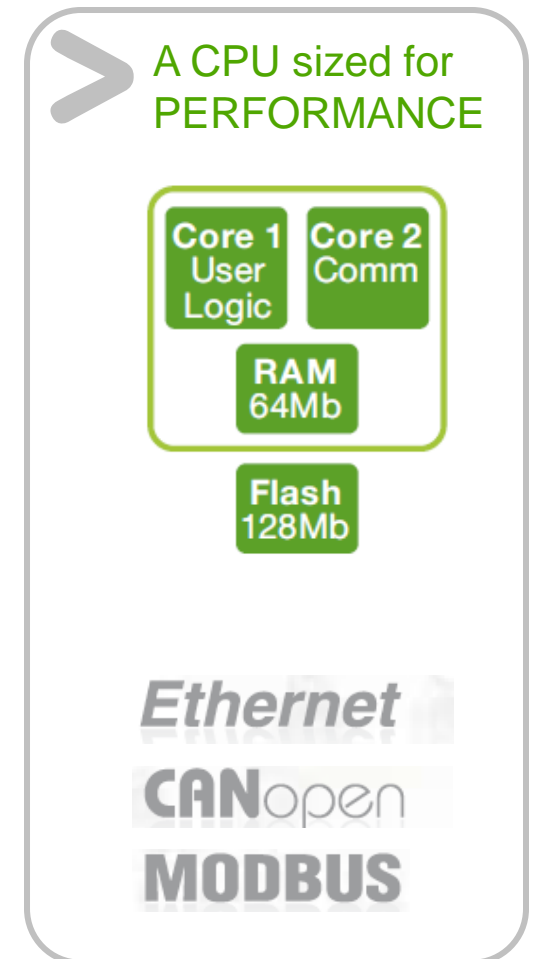


**Why select
the Modicon
M258 logic
controller**



Improve your machine performance with a high-performance PLC

- Improve your machine performance...
 - Basic processing time: 22 ns/Inst
 - Programme memory: 128 K instructions
 - RAM: 64 Mb
 - Flash memory: 128 Mb
 - 8 embedded high-speed counters (200 kHz each)
 - Capacity to manage up to 2400 I/Os
 - More than 45,000 Boolean instructions per ms
- ... & openness
 - Embedded serial link and Ethernet port on all references
 - Embedded CANopen master depending on the reference



Improve your machine performance with embedded communication...

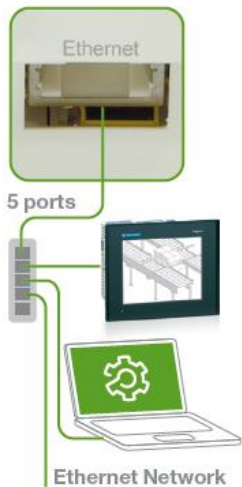
1

Embedded Ethernet: Performance and openness

> 10/100 Mb

Available protocols:

- Ethernet IP device
- Ethernet TCP Modbus
- SoMachine protocol
- +
• FTP server embedded
- Web server embedded



2

Embedded CANopen Master

> Flexibility for your distributed architectures:

- Up to 63 slaves
- Up to 1 Mb
- > Speed up machine design:
 - CANopen configurator in SoMachine software
 - PLCopen motion libraries



3

Embedded serial line

> Openness thanks to two standard protocols:

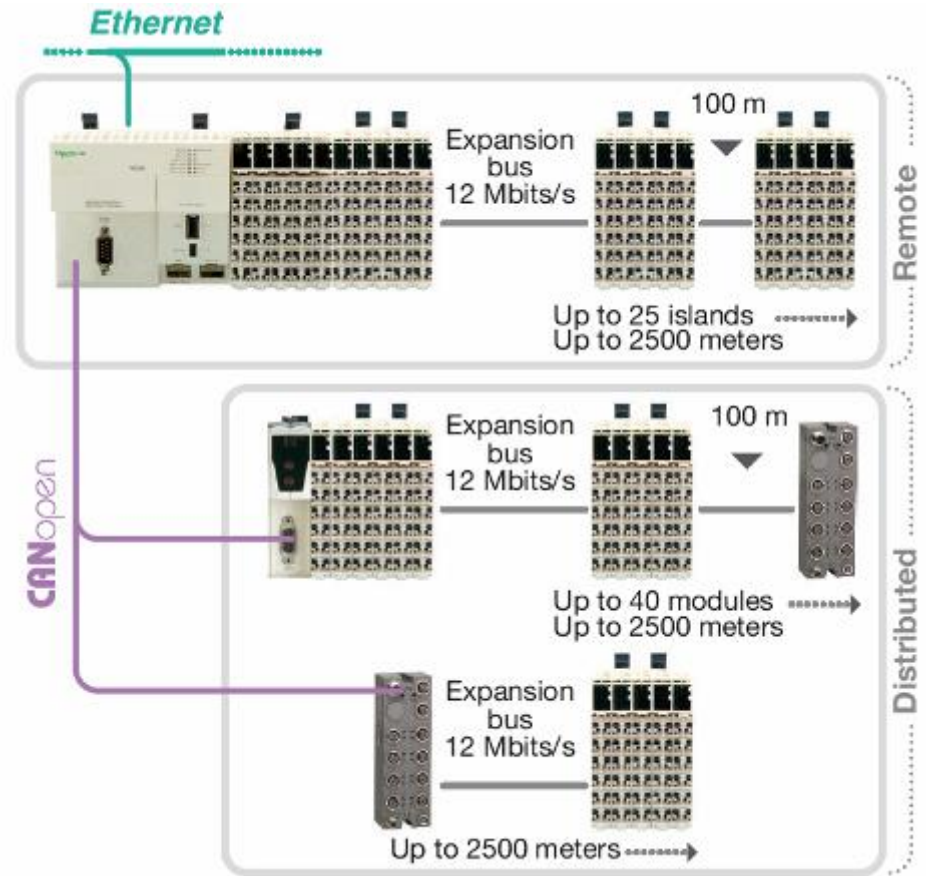
- Modbus Master/slave
- Character RS232 or RS485
- > Data Terminal Equipment (DTE: printer, bar code scanner...)
- > Cordset for Data Communication Equipment (DCE: modem, converter...)



...whilst reducing size & costs

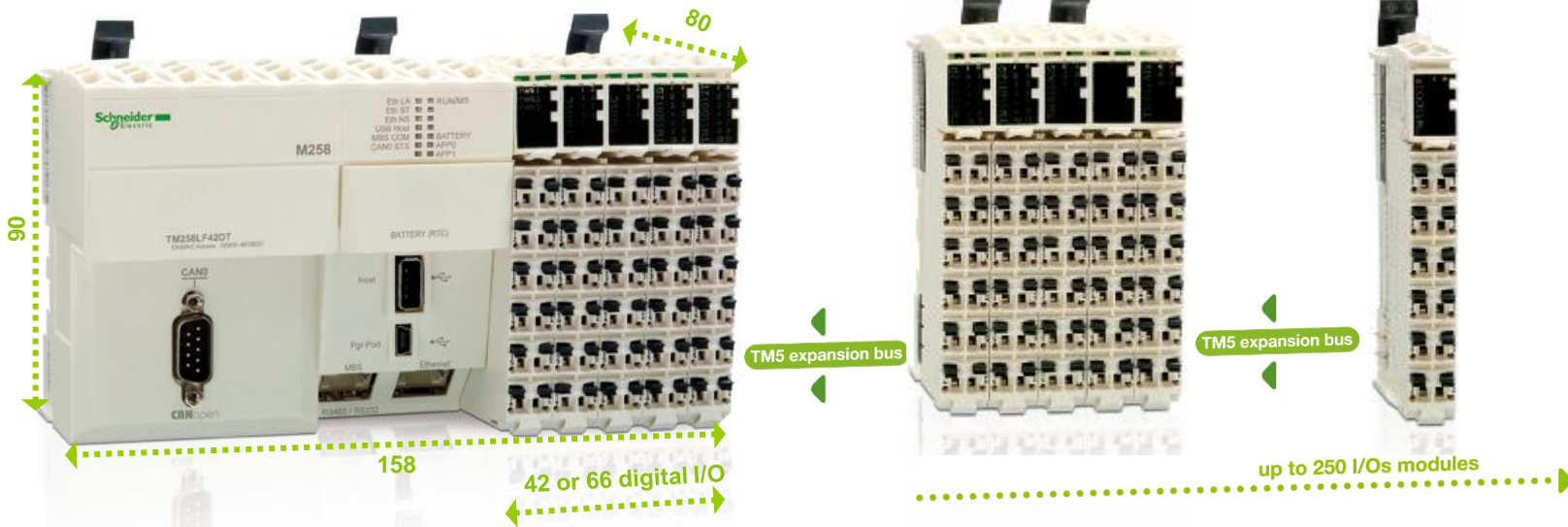
Enhance your machine flexibility

- In association with our **Modicon™ TM5 and TM7 modular I/O systems**, the Modicon M258 offers a **maximum flexibility** and provides **total design freedom** by allowing:
 - **local**,
 - **remote** or
 - **distributed** automation architectures...
- ... with the same I/O modules & a total transparency with SoMachine software



Local flexibility

The cost of a compact controller / the flexibility of a modular controller



+ I/O expansions

> Compact I/O modules:

- Low cost
- High density

> Slice I/O modules:

- Modularity from 2 to 12 channels

> Removable

terminal blocks

> Spring terminals

> Hot swap

> Compact I/O modules

- From 20 to 42 I/Os digital and / or analog

> Saving space

- 62.5 mm long

> Slice I/O modules

- From 2 to 12 I/Os digital, analog, expert

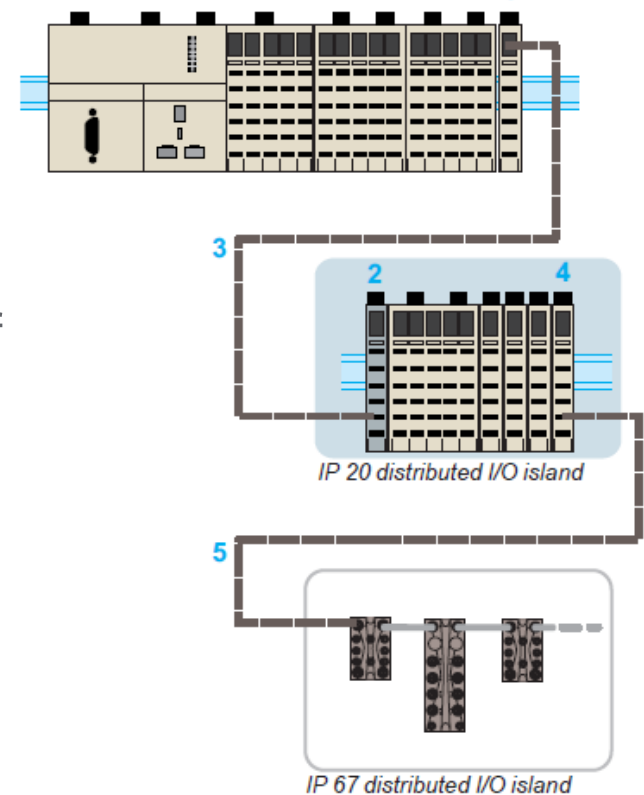
> Saving space

- 12.5 mm long

Remote flexibility

Remote I/O synchronized with local I/O

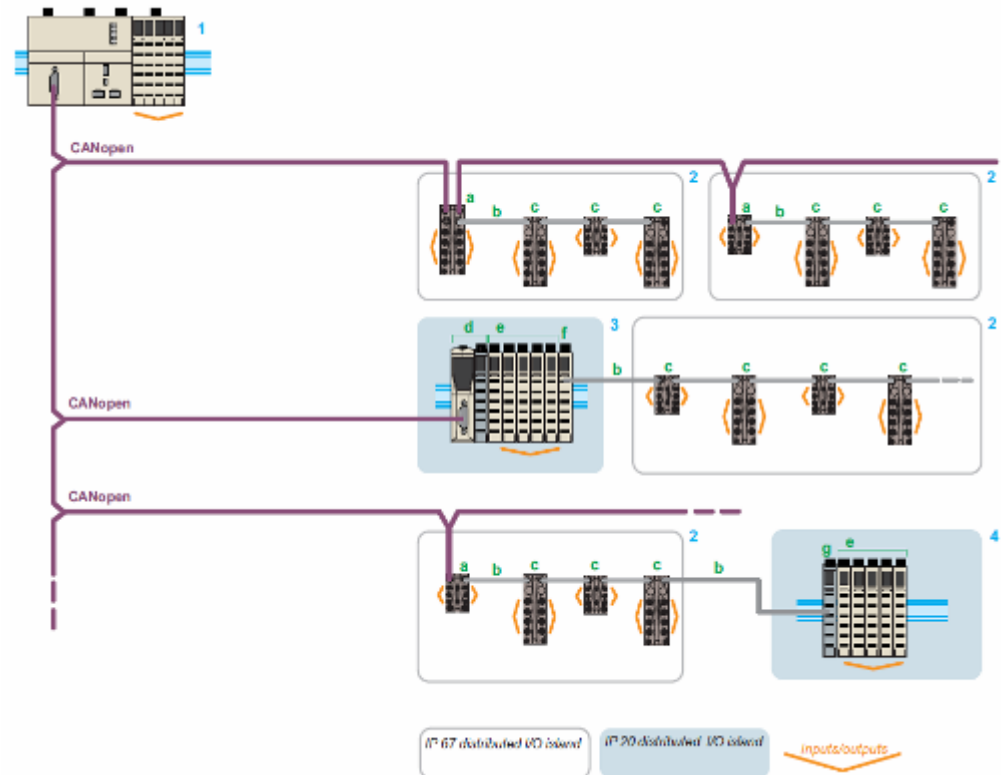
- Due to its backplane bus management, the Modicon TM5/TM7 system can be used to control I/O remotely.
- The maximum distance between two remote islands is 100 m and the maximum number of islands is 25, i.e. a total distance of up to 2500 m
- **Synchronization of all data acquisition**, since all the expansion modules are on the same backplane bus.



Distributed flexibility

To match accurately the topology of the machine & reduce wiring costs

- The Modicon TM5 (IP20) and Modicon TM7 (IP67) modular I/O systems enable the connection of distributed I/O islands (sensors & actuators) that are distributed over machines via the CANopen fieldbus
- Flexible and scalable I/O configuration



Integrated machine flexibility

For evolutive configurations

- **High-speed counting:**

- 8 integrated high-speed counters at 200 kHz each
- A complete range of counting expansion modules

- **Inverter control**

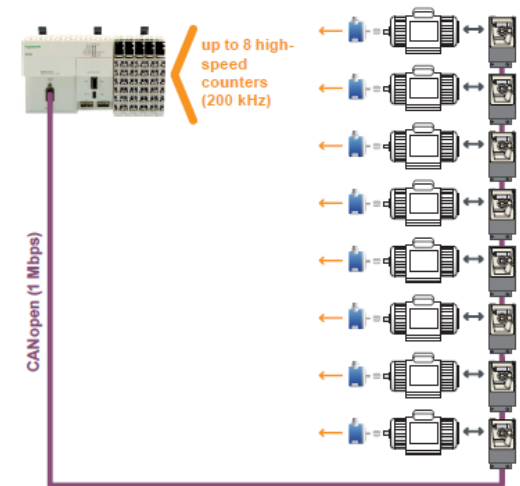
- Through built-in Modbus serial line
- Through built-in CANopen Master

- **Positioning**

- Through built-in CANopen Master and PLCopen function blocks

- **Temperature control**

- Through a wide range of temperature modules and integrated regulation function blocks



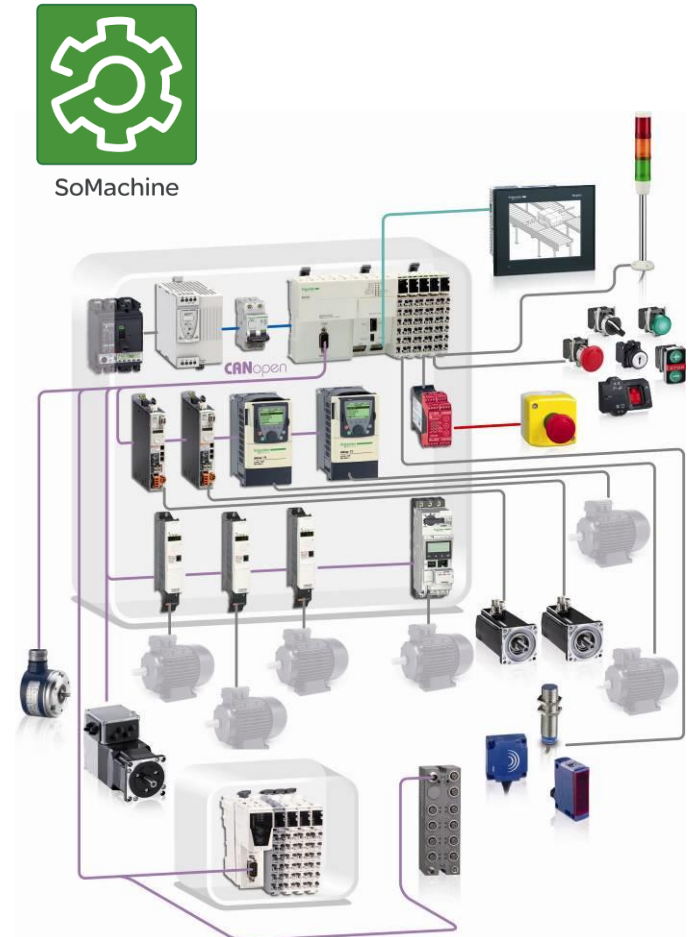
Speed up machine design with SoMachine software suite

- SoMachine™ software:

- 6 Programming Languages (IEC 61131-3)
- Function blocks
- Tested, Validated, Documented (TVD) architectures included
- Maximize operation and reduce maintenance
- Diagnosis through transparency and remote access

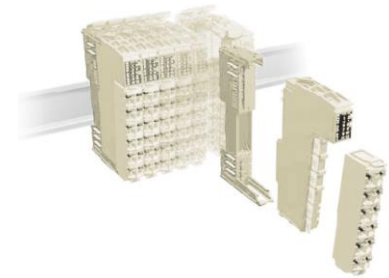
- Two standard USB ports:

- Mini-USB B port for SoMachine programming software
- USB-A port for memory key for programme, firmware, data files transfer speed: 480 Mbits/s



With the Modicon M258

- > **Improve your machine performance** by using an open and high-performance PLC
- > **Enhance maximum flexibility** with local, remote & distributed automation architectures possibilities
- > **Speed up machine design** by using only one software, ready-to-use TVD architectures and ready-to-use Function Blocks



Save **30%**
in assembly,
wiring and
commissioning
time



Modicon

M258

**logic controller
selection guide**

Modicon M258 motion controller compact bases

Power supply	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC
Ethernet (1)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)
CANopen Master	-	-	1 (Sub-D9)	1 (Sub-D9)	1 (Sub-D9)	1 (Sub-D9)
Serial link	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)
USB Ports (USB A - USB mini-B)	1-1	1-1	1-1	1-1	1-1	1-1
PCI slots (2)	0	2	0	2	2	2
Digital inputs	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	38/24 VDC - 8/200 kHz
Digital outputs	16 Trans 0.5A	16 Trans 0.5A	16 Trans 0.5A	4 trans 0.5A / 12 Relays	16 Trans 0.5A	28 Trans 0.5A
Analog inputs	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V	-	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V	4 Inputs / 0-20mA / 4-20mA / -10V/+10V
Max. number of expansions	250	250	250	250	250	250
References	TM258LD42DT	TM258LD42DT4L	TM258LF42DT	TM258LF42DR	TM258LF42DT4L	TM258LF66DT4L

(1) TCP Modbus - Ethernet-IP Device - Server Web/FTP

(2) Optional Communication modules:

1 (RS232): TM5PCRS2 / 1 (RS485): TM5PCRS4

Expansion modules

Compact I/O expansion modules

Power supply	24 VDC	24 VDC	24 VDC	24 VDC
Digital in	12 Inputs - 24 VDC	24 Inputs - 24 VDC	24 Inputs - 24 VDC	12 Inputs - 24 VDC
Digital and relays outputs	8 Outputs - Trans 0.5A	12 Relays outputs - 0.5A	18 Outputs - Trans 0.5A	6 Outputs - Trans 0.5A
Analog inputs	-	-	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V
Analog outputs	-	-	-	2 Outputs / 0-20mA / -10V/+10V
References	TM5C12D8T	TM5C24D12R	TM5C24D18T	TM5C12D6T6L

Digital I/O expansion modules

Number of digital inputs and/or outputs	2 Channels	4 Channels	6 Channels	8 Channels	12 Channels	8 Inputs / 4 Outputs
Connections	Removable spring terminal block					
24 VDC sink/source inputs	TM5SDI2D	TM5SDI4D	TM5SDI6D	-	TM5SDI12D	-
100-240 VAC inputs	TM5SDI2A	TM5SDI4A	-	-	-	-
100-120 VAC inputs	-	-	TM5SDI6U	-	-	-
0.5A Source transistor outputs	TM5SDO2T	TM5SDO4T	TM5SDO6T	-	TM5SDO12T	-
2A Source transistor outputs	-	TM5SDO4TA	-	TM5SDO8TA	-	-
30VDC/230VAC relay outputs + 5A relay	TM5SDO2R	TM5SDO4R	-	-	-	-
24 VDC sink/source inputs + 0.5A relay outputs	-	-	-	-	-	TM5SDM12DT
100-240 VAC outputs 1.0 A coded 3 wires (1 A)	TM5SDO2S	-	-	-	-	-

Analog expansion modules

Number of digital inputs and/or outputs	2 Inputs	4 Inputs	6 Inputs	2 Outputs	4 Outputs
Connections	Removable spring terminal block				
±10V/0-20mA/4-20mA inputs - 12 bits	TM5SAI2L	TM5SAI4L	-	-	-
±10V/0-20mA/4-20mA inputs - 16 bits	TM5SAI2H	TM5SAI4H	-	-	-
±10V/0-20mA outputs - 12 bits	-	-	-	TM5SAO2L	TM5SAO4L
±10V/0-20mA outputs - 16 bits	-	-	-	TM5SAO2H	TM5SAO4H
J/K/S/N thermo-couple inputs – 16 bits	TM5SAI2TH	-	TM5SAI6TH	-	-
PT100/1000 inputs - 16 bits	TM5SAI2PH	TM5SAI4PH	-	-	-

Expert modules

Number of digital inputs and/or outputs	1 Channel / 100 kHz	1 Channel / 250 kHz	1 Channel / SSI 1 Mb	2 Channels / 100 kHz	2 Channels / 50 kHz
Event counting interval measurement	-	-	-	-	TM5SDI2DF
2 x 24V DC auxiliary inputs 24V DC encoder power supply	TM5SE1IC01024	-	-	TM5SE2ICO1024	-
2 x 24V DC auxiliary inputs 5V DC encoder power supply	-	TM5SE1I02505	TM5SE1SC10005	-	-

Make the most of your energy

