CMZ

Company profile

SYSTEMS & SOLUTIONS FOR MOTION CONTROL

CMZ SINCE 1976
CMZ has been designing and making programmable controllers for industrial automation since 1976

Today CMZ offers a complete range of standard products for automation:
- IEC61131 axis controllers
- Drives and motors
- I/O modules
- HMI.

Besides the production of standard systems, CMZ is organized to develop dedicated projects being certified as a Research Laboratory co-operating with University of Padua, Italy.

45 years of experience within automation have allowed axis control expertise to be refined and some dedicated software packages have been created for dedicated special applications and specific sectors: real configurable applications for motion control providing all the characteristics of an automated machine.

- 1976 origins
- 73 employees
- 9,4 millions consolidated revenues
- Worldwide distributors
● 3 companies: SOGA SpA, CMZ Sistemi Elettronici Srl, Sincro d.o.o.
● 5 commercial brands, international presence in 80 countries
● Turnover ~ 50.000.000,00 € / yearly ● ~ 300 employees
● Plants and offices for more than 76.000 sq.m.
Packaging

HORIZONTAL PACKAGING MACHINE

VERTICAL PACKAGING MACHINE

LOADING SYSTEMS AND SMART BELTS

END LINE
Beverage

LABELLING MACHINES

FILLING MACHINES

BLOWING MACHINES

CAPPING MACHINES
Dosing & Weighing

MULTIHEAD WEIGHERS

LINEAR WEIGHERS

VIBRATING FEEDERS
Printing

SYNCHRONIZATION OF THE PRINTING CYLINDERS

REGISTRATION CONTROL OF THE PRINTING CYLINDERS

Paper converting

INTERFOLDERS
REWINDERS
CUTTING LINE
FLEXO MACHINES
Textile

MACHINES FOR THE TREATMENT OF SYNTHETIC AND NATURAL FIBERS

CROCHET AND JACQUARD MACHINES

MACHINES FOR THE TREATMENT OF THE FIBER (COMBING MACHINES, DRAW FRAME MACHINES)

SEWING/EMBROIDERY MACHINES

SINGLE and MULTI NEEDLE QUILTING MACHINES

ISO interpreter (G-code)

TRANSVERSAL AND PRESENT IN QUITE ALL AUTOMATION FIELDS

CNC MACHINES
Glass

- MACHINES FOR THREADING
- SEALING MACHINES
- EDGERS MACHINES
- COATING REMOVER
- CUTTING UNIT

Metal sheet

- CUT WITH TRANSLATING CARRIAGE
- CUT WITH ROTATING SHEAR
CMZ Company profile

**PRODUCTS**

**External**
Internet, PC, Teleservice, Other systems

**CMZ Data Connection**

**Master Controller**
FCT series with Codesys

**Interface HMI**

**Libraries & App**
For many applications

**EtherCAT®, CANopen, PROFINET®**

**Drives**
SBD, LBD, SVM, NBD

**Integrated Motor and Drives**
IBD and ISD

**Field**
Motors, Transducer, I/O
FCT640: Master Controller

**Processor**
CPU: QorIQ T1024, 1 GHz

**Memory capability**  1 GB
Nand Flash  512 MB DRAM
32 KB Ferromagnetic RAM (non-volatile PLC data)  EEPROM (Serial no., IP-config)
SD-Card

**Communication ports**
1x RJ45 Ethernet 10/100 MBit (“Debug”/PC/Codesys)  2x RJ45 Ethernet 10/100 MBit (Fieldbus)  optional
1x RJ45 CAN-Bus (CANopen Master/Slave)  optional

**Local I/O modules**
64 modules, each with a maximum of 16-bit IO (1024 digital) or 8 channel analog (512 analog)

**Fieldbus**
EtherCAT Master  CANopen
Master/Slave ModbusTCP
EtherNet/IP
Fieldbus options: everything with software stack offered by CODESYS

**Connectivity**
Integrated LTE modem

**General**
Power supply 24V DC
9 LEDs, dual color possible
0° - 60°C ambient temp
**FCT200: Master Controller**

Up to 8 axes real-time via CANopen

**Communication ports:**
- RS232, Ethernet, RS422-485, SMI port

**Field BUS on board:**
- up to 2 CANopen ports

**Optional Field BUS:**
- Profibus-DP slave

**Mass memory:**
- SD card

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**FCT300: Master Controller**

Up to 99 axes real-time via CANopen & EtherCAT

**Communication ports:**
- RS232, 2xEthernet, RS422-485, SMI port

**Field BUS on board:**
- 2 CAN ports, 1 EtherCAT port

**Optional Field BUS:**
- 2xCANopen auxiliary, 2x Ethernet port, Profibus DP slave, DeviceNet, Ethernet/IP

**Mass memory:**
- 1xSD card, 1X internal, SD card

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**SOFTWARE ENVIRONMENT**

2 choices: same HW platform-same support

- CODESYS (3.5 Versions)
- 4CONTROL (Our environment in IEC61131)
**LBD: Servo Drives**

Brushless drive with CANOpen and EtherCAT interface

- From 5 to 75 A nominal
- 230 and 480 Vac
- Feedback: Resolver or absolute/incremental encoder
- Encoder OUTPUT or second encoder INPUT
- STO

**SBD: Servo Drives**

Brushless drive with CANOpen EtherCAT and Profinet* interface

- From 5 to 20 A nominal
- 230 and 400 Vac
- Bluetooth Control*
- Feedback: Resolver or absolute/incremental encoder
- Encoder OUTPUT or second encoder INPUT
- STO

* Coming soon
MMB/D/S: Servo Motors
Brushless motors

TORQUE RANGE
- From 0,25 to 300 Nm stall torque

TORQUE POWER
- From 0,15 to 80 kW

POWER SUPPLY
- 48 / 230 / 400 V AC

SPEED
- From 1500 to 6000 rpm

FLANGE
- From 40 to 230 mm

FEEDBACK
- Resolver / Incremental / Absolute – Hyperface / DSL

OPTIONS
- Brake / Flywheel / IP67

ONLINE CONFIGURATOR
Website*
*Coming soon
IBD: Integrated brushless drive

**Power supply:** 275 ÷ 730Vdc (560Vdc Nominal)
**Logic supply:** 24 Vdc
**Torque range**
Stall torque 1,3-1,5-2-4-5,6-6-8-15-30 Nm,
**Rated speed:**
Vn=5000 rpm (for 1,3Nm)
Vn=3000 rpm (for 1,5-2,8-4-5,6-6-15-30Nm
**Feedback**
HIPERFACE absolute encoder single or multiturn
**On board I/O’s**
for size 1,3Nm:
3 digital inputs PNP 24V
2 digital output PNP 24V
1 programmable input/output PNP 24V
for sizes from 1,5Nm to 30Nm:
6 digital IN 24Vdc general purpose, configurable as:
PSTOP, NSTOP, Enable, Home, Capture
3 digital OUT 24Vdc 250mA, general purpose
1 digital IN/OUT 24Vdc with configurable function
3 differential I/O’s configurable as master incremental encoder
and Step/Direction
1 analogue IN +/-10V

**Interface**
EtherCAT, CANopen

**Safety**
for size 1,3Nm:
STO 2 channels, SIL3 (pending)
for sizes from 1,5Nm to 30Nm:
STO 1 channel, SIL3 PL ‘d’ category2

**Protection**
IP65

**Option**
Internal brake

SOFTWARE ENVIRONMENT
SD Setup
NBD: Near by Servo Drives
Drive IP65 for linear and rotating brushless motors

Power supply: 275 ÷ 730Vdc (560Vdc Nominal).
Rated current: 8Arms
Peak motor current: 15Arms
Logic supply: 24Vdc Protection: IP65
Security: STO 2 channels
Input/Output:
3 digital inputs PNP 24V 2
digital outputs PNP 24V
2 digital input/digital output bidirectional PNP 1 analog
input +/- 10V
Encoder master input + 5V out

SOFTWARE ENVIRONMENT
SD Setup
**SVM: Stepless servo drive & MM stepless motors**

- Interface: CANOpen, Profibus DP, ±10V, RS485 Modbus, pulse/direction
- Profiles of speed, position and torque
- Internal PLC programmable in IEC61131 dedicated and general purpose IN/OUT’s
- **Motors sizes** available up to 21Nm, DC power supply up to 160 Vdc

**ISD: Integrated Stepless drive**

- Up to 12Nm, DC power supply up to 135 Vdc
- Interface: CANOpen, Profibus DP, ±10V, RS485 Modbus, pulse/direction
- Profiles of speed, position and torque
- Internal PLC programmable in IEC61131 dedicated and general purpose IN/OUT’s

**SOFTWARE ENVIRONMENT**

**SD Setup**

*Through external getaway*
**TSC: Near by Servo Drives**

Drive for 3 stepper motors

**Power supply:** 48 Vdc.
**Protection:** IP65
**Input:** 1 analog input +/- 10V
**Daisy chain** up to 6 devices

**Stepper motors size 60 mm**

**Torque:** 1.65 and 3.1 Nm
**Feedback:** Absolute single turn encoder

* Through external getaway
PT Series: HMI

HMI panel

- Consist of premium level panels.
- Available sizes: from 4.3” to 15” LCD display
- TFT-LCD
- Embedded touch system
- 16-bit
- LED
- From 250 to 450 cd/m2
- CPU RISC ARM9 32 bit
- Working Memory 64 MB
- USB

SOFTWARE ENVIRONMENT
Panel master designer
CP4PWM: Solution for management vibrating channels

Control of 4 channels not depending from frequency and main voltage

Adjustment during installation:
Fast self-search of resonance frequency
Automatic calculation of the impressed voltage

Movement dynamic regulation
Boost start for product release
Soft Start for silent start
Fast stop of the vibrator for reduction of the product queue

Programmability
Stand Alone with IEC61131 programmability

Supply voltage:
110/230 Vac 50/60 Hz
Maximum output power 600W/channel
Maximum output power of the system 1,4 kW @ 230 Vac , 700 W @ 110 Vac

I/O:
8 digital pnp input, 8 digital pnp output 24V 500 mA,
2 analog output 4-20 mA, 4 analog input 4-20 mA

Features:
Fanless, electronically protected against overheating,
configuration trough USB

SOFTWARE ENVIRONMENT
SD Setup
# SOFTWARE: Codesys Solutions

<table>
<thead>
<tr>
<th>LIBRARIES</th>
<th>FUNCTIONALITIES</th>
<th>APPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flying shear</td>
<td>Management of the basic movement cycle of a moving carriage</td>
<td>Cutting and working of material in movement (metal sheet, plastic, wood, etc)</td>
</tr>
<tr>
<td>Electronics cams</td>
<td>Movement of a slave in relation with a master. The movement is described by a master-slave positions table with many interpolation modalities between points.</td>
<td>Very common library allows the movement of an axis in relation with the master one.</td>
</tr>
<tr>
<td>Interpolation</td>
<td>Synchronized movement of many axes. The movement is described by a table of positions with a lot of interpolation modalities between points.</td>
<td>Materials processing, palletizers, pick and place, generic movement</td>
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<td>Flowpack and vertical packaging machine</td>
<td>Complete control of a flow-pack or a vertical packaging machine</td>
<td>Offers the complete realization of a flow-pack or vertical packaging machine. It allows to configure a lot of options</td>
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<tr>
<td>Linear and multihead weigher</td>
<td>Complete control of a linear or multihead packaging machine</td>
<td>Offers the complete realization of a linear or multihead packaging machine. It allows to configure a lot of options</td>
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<td>MODBUS</td>
<td>Management of the MODBUS protocol, on various communication ports, both in master modalities and slave</td>
<td>Intercommunication between systems, connections of panels and other devices to the controller.</td>
</tr>
<tr>
<td>PCCOMX</td>
<td>Communication between a PC and a controller</td>
<td>It allows to interface program that runs in a PC with the program that runs in the controller.</td>
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<td>Embedded file</td>
<td>Mass memory management</td>
<td>Saving and restoring of user data in the mass memory (compact flash or SD)</td>
</tr>
<tr>
<td>ProfibusDP</td>
<td>Control of ProfibusDP interface (Hardware option)</td>
<td>Make the controller able to work as ProfibusDP node slave and so to exchange data with a master PLC.</td>
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WHERE WE ARE

SALES OFFICES

PARTNERS