CN2008_Mech

GENERAL CHARACTERISTICS

CN2008_Mech is an embedded computer, small in size, with a +24VDC supply with internal bus PC104 and Windows CE 6.0 operating system, designed to be installed in electric cabinet with mounting on DIN rail (omega guide) or on the wall.

CN2008_Mech operates in connection with a supervision PC Unit by means of a dedicated Ethernet network; you can place the CNC in an electrical cabinet, remoting the position of the dashboard that hosts the user interface.

The system CN2008_Mech is a numerical control suitable for medium size machines, roughly up to 16 axes and 16 remote I/O couplers. It is possible to connect several CN2008_Mech devices with the same supervisor PC unit; doing so can provide a modular control system particularly suitable for a line of machines or a large work centre.

The environment of development and debugging of the automation features is Albatros (minimum v3.0 - see catalogue software section) hosted on the supervision PC where the user interface software is installed.

SYSTEM CN2008

•Embedded PC, small in size, expandable with PC104 CARDS.

•The system is modular based on the needs of the work centre to be controlled, can have a maximum of two local expansion cards; each of which must have standard size according to the specification PC104. The electrical and mechanical integration with any PC104 card is possible after approval by Tpa.

•Provided with EC Certification and compatible with EMC regulations.

MECHATROLINK-II FUNCTION

•The bus Mechatrolink-II consists of a half-duplex 10Mbit/s serial transmission on shielded twisted pair, isolated and terminated, with impedance prescribed by the Mechatrolink-II specifications.

•The implemented protocol is the official standard for Mechatrolink-II drives.

•Communication format implemented: packet (size 31 bytes).

•Axis position check by sending instantaneous speed data and immediate detection of the position in real time.

•Options on the cycle time (Real Time): 1ms or 2ms if > 8 axes.

•Possibility of sending or reading drives parameters.

•Diagnostics of communication and of the drives in real time.

COMPOSITION OF CN2008_Mech

- MPU board: CPU 1GHz, RAM DDR266 SoDimm 256MB (up to max 512MB).
- Connections for control functions: no. 2 serial Sub-D 9 poles (1XRS232, 1xRS485), no. 1 Ethernet LAN 100BaseT LAN for connection with supervisor PC Unit
- Connections for debugging functions: conn. PS/2, CRT video socket, conn. USB 2.0.
- Storage Memory Unit, consisting of a Compact Flash device.
- Windows CE operating system with NC firmware by TPA.
- Mechanical, rectangular, metal box, small in size.
- Connections replicated on the front panel.
- Fixing elements to a wall or with omega raceway (DIN).

TMSPower CARD

Provides the necessary power supply to the MPU and the expansion cards, using the connection PC104 without occupying the 2 available slots.
Input Power Supply +24VDC with a wide range (+20V to +30V DC).
Filtered, protected input. Led indicating the presence of internal power supplies.

TMSBus CARD

- Connection to the fieldbus GreenBus 4.0. Remote devices are supplied by the same GreenBus line.
- CAN transmitter compatible with the version 2.0b.
- Connector for the Feed-Rate function. By connecting an external potentiometer you can vary in real time the execution speed of the trajectories in a linear fashion.
- Non-volatile memory (NVRAM) necessary to save the information and variables of the CNC in real time; size 128 Kbytes, data retention 10 years.

CARD ALBMECH(/E)

- Connection to the fieldbus Mechatrolink-II, on which the drives are connected.
- Synchronous communication with the time base of the numerical control.
- Sending of commands and drive state inquiry.
- Fully compatible with the drives that adopt the standard Mechatrolink-II.
- Connection on AlbMech/E realized with a USB connector.

Processor	VIA V4 Eden&C7 1GHz
Memory	DDR SoDimm 256MB (up to 512MB)
SSD	Compact Flash, Socket Type II, 512 MB
Expansions	2 slots PC104 16bit
Operating System	Windows CE 6.0 (or 4.2)
Software	NC Firmware (Stone)
Operating Temperature	$5 - 45°C$
Humidity	10 - 95% relative humidity, without condensation
Power Supply	+24V DC ± 20%, 4A (without cards)
Size	193 x 128 mm h = 84 mm
Weight	830 g max, 1000 g max with 2 expansions
Mounting	Omega guide DIN EN50022 and EN50035 or wall-mounted
Usable connections	RS232, RS485 half duplex (optional duplex)
Service Connections	PS/2 for mouse + keyboard, USB 2.0, CRT (monitor)
Link with supervisor	1 x Ethernet LAN 100BaseT
Max Number of axes	16
Real Time Period	min. 1 ms
Axes in interpolation	up to 6 axes
Axes in chain	Up to 5 slave axes for 1 master axis
NVRAM	Save of sensitive data in NVRAM 128KB
CAN bus	Cia CAN 2.0b
GreenBus v4.0	4 Mbit/s for remoted I/O 4 ms max 16 I/O devices
Merchatrolink-II	1 channel 10Mbit/s, 31 bytes packet, 1 ms - 8 axes, 2 ms - 16 axes
Certifications	EC and compatible with EMC regulations

CN2008_SCan

GENERAL CHARACTERISTICS

CN2008_SCan is an embedded computer, small in size, with a +24VDC supply with internal bus PC104 and Windows CE 6.0 operating system, designed to be installed in an electric cabinet with mounting on DIN rail (omega guide) or on the wall.

CN2008_SCan operates in connection with a supervision PC Unit by means of a dedicated Ethernet network; you can place the CNC in an electrical cabinet, remoting the position of the dashboard that hosts the user interface.

The system CN2008_SCan is a numerical control suitable for medium size machines, roughly up to 16 axes and 16 remote I/O couplers. It is possible to connect several CN2008_SCan devices with the same supervisor PC unit; doing so can provide a modular control system particularly suitable for a line of machines or a large work centre.

The environment of development and debugging of the automation features is Albatros (minimum v3.0 - see catalogue software section) hosted on the supervision PC where the user interface software is installed.

SYSTEM CN2008

- Embedded PC, small in size, expandable with PC104 CARDS.
- The system is modular based on the needs of the work centre to be controlled, can have a maximum of two local expansion cards; each of which must have standard size according to the specification PC104. The electrical and mechanical integration with any PC104 card is possible after approval by Tpa.
- Provided with EC Certification and compatible with EMC regulations.

SCan FUNCTION

- The SCan bus consists of a communication based on the standard CAN 2.0b. Allows real-time monitoring of drives: the channel consists of a terminated shielded twisted pair.
- The SCan bus is a protocol developed by Selema Srl.
- Communication format implemented: synchronous packet with size 5-8 bytes with max double information (e.g. torque + speed), asynchronous packet with size 1-8 bytes for commands.
- Axis position check by sending instantaneous speed data and real time position detection.
- Cycle Time (Real Time): 2 ms.
- Up to 5 drives with cycle time of 2 ms. Ability to provide a second TMSBus card for extension

- Possibility of sending or reading drives parameters.
- Diagnostics of communication and of the drives in real time.
- Instructions of parameters request and drives query available in a library and accessible from code.

COMPOSITION CN2008_SCan

- MPU board: CPU 1GHz, RAM DDR266 SoDimm 256MB (up to max 512MB).
- Connections for control functions: no. 2 serial Sub-D 9 poles (1XRS232, 1xRS485), no. 1 Ethernet LAN 100BaseT for connection with supervisor PC Unit.
- Connections for debugging functions: conn. PS/2, CRT video socket, conn. USB 2.0.
- Storage Memory Unit, consisting of a Compact Flash device.
- Windows CE operating system with NC firmware by TPA.
- Mechanical, rectangular, metal box, small in size.
- Connections replicated on the front panel.
- Fixing elements to a wall or with omega raceway (DIN).

TMSPower CARD

Provides the necessary power supply to the MPU and the expansion cards, using the connection PC104 without occupying the 2 available slots.
Input Power Supply +24VDC with a wide range (+20V to +30V DC).
Filtered, protected input. Led indicating the presence of internal power supplies.

TMSBus CARD

- Connection to the fieldbus GreenBus 4.0. Remote devices are supplied by the same GreenBus line.
- CAN transmitter compatible with the version 2.0b.
- Connector for the Feed-Rate function. By connecting an external potentiometer you can vary in real time the execution speed of the trajectories in a linear fashion.
- Non-volatile memory (NVRAM) necessary to save the information and variables of the CNC in real time; size 128 Kbytes, data retention 10 years.

Processor	VIA V4 Eden&C7 1GHz
Memory	DDR SoDimm 256MB (up to 512MB)
SSD	Compact Flash, Socket Type II, 512 MB
Expansions	2 Slot PC104 1 used by TMSBus
Operating System	Windows CE 6.0 (or 4.2)
Software	NC Firmware (Stone)
Operating Temperature	$5 - 45°C$
Humidity	10 - 95% relative humidity, without condensation
Power Supply	+24V DC ± 20%, 4A (without cards)
Size	193 x 128 mm h = 84 mm
Weight	830 g max, 1000 g max with 2 expansions
Mounting	Omega guide DIN EN50022 and EN50035 or wall-mounted
Usable connections	RS232, RS485 half duplex (optional duplex)
Service Connections	PS/2 for mouse + keyboard, USB 2.0, CRT (monitor)
Link with supervisor	1 x Ethernet LAN 100BaseT
Max Number of axes	5 (+5 optionals)
Real Time Period	min. 2 ms
Axes in interpolation	up to 6 axes
Axes in chain	Up to 5 slave axes for 1 master axis
NVRAM	Save of sensitive data in NVRAM 128KB
CAN bus	Cia CAN 2.0b
GreenBus v4.0	4 Mbit/s for remoted I/O 4 ms max 16 I/O devices
SCan	1 channel 1Mbit/s channel, 5-8 byte packet, 2 ms
Certifications	EC and compatible with EMC regulations

CN2008_ECAT

GENERAL CHARACTERISTICS

CN2008_ECAT is an embedded computer, small in size, with a +24VDC supply with internal bus PC104 and Windows CE 6.0 operating system, designed to be installed in electric cabinet with mounting on DIN rail (omega guide) or on the wall.

CN2008_ECAT operates in connection with a supervision PC Unit by means of a dedicated Ethernet network; you can place the CNC in an electrical cabinet, remoting the position of the dashboard that hosts the user interface.

The system CN2008_ECAT is a numerical control suitable for medium size machines, roughly up to 16 axes and 16 remote I/O couplers. It is possible to connect several CN2008_ECAT devices with the same supervisor PC unit; doing so can provide a modular control system particularly suitable for a line of machines or a large work centre.

The environment of development and debugging of the automation features is Albatros (minimum v3.0 - see catalogue software section) is hosted on the supervision PC where the user interface software is installed.

SYSTEM CN2008

• Embedded PC, small in size, expandable with PC104 CARDS.

• The system is modular based on the needs of the work centre to be controlled, can have a maximum of two local expansion cards; each of which must have standard size according to the specification PC104. The electrical and mechanical integration with any PC104 card is possible after approval by Tpa.

• Provided with EC Certification and compatible with EMC regulations.

ECAT FUNCTION

• The ECAT function is carried out through the Tpa implementation of the fieldbus master Ether-CAT®.

• The application protocol implemented is the official standard CoE (CANopen over EtherCAT®).

• The EtherCAT bus® uses a standard Ethernet cable 100BASE-TX (CAT-5 or higher) that allows a distance of up to 100 m between the individual devices.

• Communication format implemented: standard Ethernet packet (size 1518 bytes).

• Axis position check by sending instantaneous speed data and immediate detection of the position in real time

• Transmission cycle time: 1 ms up to 32 nodes (I/O and/or drives).

- Ability to write and read the parameters of the drives.
- Diagnostics of communication and of the drives in real time.

COMPOSITION OF CN2008_ECAT

- MPU board: CPU 1GHz, RAM DDR266 SoDimm 256MB (up to max 512MB).
- Connections for control functions: no. 2 serial Sub-D 9 poles (1XRS232, 1xRS485), no. 1 Ethernet LAN 100BaseT LAN for connection with supervisor PC Unit
- Connections for debugging functions: conn. PS/2, CRT video socket, conn. USB 2.0.
- Storage Memory Unit, consisting of a Compact Flash device.
- Windows CE operating system with NC firmware by TPA.
- Mechanical, rectangular, metal box, small in size
- Connections replicated on the front panel.
- Fixing elements to a wall or with omega raceway (DIN).

TMSPower CARD

Provides the necessary power supply to the MPU and the expansion cards, using the connection PC104 without occupying the 2 available slots.
Input Power Supply +24VDC with a wide range (+20V to +30V DC).
Filtered, protected input. Led indicating the presence of internal power supplies.

TMSBus CARD

- Connection to the fieldbus GreenBus 4.0. Remote devices are supplied by the same GreenBus line.
- CAN transmitter compatible with the version 2.0b.
- Connector for the Feed-Rate function. By connecting an external potentiometer you can vary in real time the execution speed of the trajectories in a linear fashion.
- Non-volatile memory (NVRAM) necessary to save the information and variables of the CNC in real time; size 128 Kbytes, data retention 10 years.

Processor	VIA V4 Eden&C7 1GHz
Memory	DDR SoDimm 256MB (up to 512MB)
SSD	Compact Flash, Socket Type II, 512 MB
Expansions	2 slot PC104 16bit
Operating System	Windows CE 6.0 (or 4.2)
Software	NC Firmware (Stone)
Operating Temperature	$5-45°C$
Humidity	10 - 95% relative humidity, without condensation
Power Supply	+24V DC ± 20%, 4A (without cards)
Size	193 x 128 mm h = 84 mm
Weight	830 g max, 1000 g max with 2 expansions
Mounting	Omega guide DIN EN50022 and EN50035 or wall-mounted
Usable connections	RS232, RS485 half duplex (optional duplex)
Service Connections	PS/2 for mouse + keyboard, USB 2.0, CRT (monitor)
Link with supervisor	1 x Ethernet LAN 100BaseT
Max Number of axes	16
Real Time Period	min. 1 ms
Axes in interpolation	up to 6 axes
Axes in chain	Up to 5 slave axes for 1 master axis
NVRAM	Save of sensitive data in NVRAM 128KB
CAN bus	Cia CAN 2.0b
Certifications	EC and compatible with EMC regulations

CN2008_GBus

GENERAL CHARACTERISTICS

CN2008_GBus is an embedded computer, small in size, with a +24VDC supply with internal bus PC104 and Windows CE 6.0 operating system, designed to be installed in electric cabinet with mounting on DIN rail (omega guide) or on the wall.

CN2008_GBus operates in connection with a supervision PC Unit by means of a dedicated Ethernet network; you can place the CNC in an electrical cabinet, remoting the position of the dashboard that hosts the user interface.

The system CN2008_GBus is a numerical control suitable for medium size machines, roughly up to 16 axes and 16 remote I/O couplers. It is possible to connect several CN2008_GBus devices with the same supervisor PC unit; doing so can provide a modular control system particularly suitable for a line of machines or a large work centre.

The environment of development and debugging of the automation features is Albatros (minimum v3.0 - see catalogue software section) hosted on the supervision PC where the user interface software is installed.

SYSTEM CN2008

- Embedded PC, small in size, expandable with PC104 CARDS.
- The system is modular based on the needs of the work centre to be controlled, can have a maximum of two local expansion cards; each of which must have standard size according to the specification PC104. The electrical and mechanical integration with any PC104 card is possible after approval by Tpa.
- Provided with EC Certification and compatible with EMC regulations.

COMPOSITION OF CN2008_ECAT

- MPU board: CPU 1GHz, RAM DDR266 SoDimm 256MB (up to max 512MB).
- Connections for control functions: no. 2 serial Sub-D 9 poles (1XRS232, 1xRS485), no. 1 Ethernet LAN 100BaseT for connection with supervisor PC Unit.
- Connections for debugging functions: conn. PS/2, CRT video socket, conn. USB 2.0.
- Storage Memory Unit, consisting of a Compact Flash device.
- Windows CE operating system with NC firmware by TPA.
- Mechanical, rectangular, metal box, small in size.
- Connections replicated on the front panel.
- Fixing elements to a wall or with omega raceway (DIN).

TMSPower CARD

Provides the necessary power supply to the MPU and the expansion cards, using the connection PC104 without occupying the 2 available slots.
Input Power Supply +24VDC with a wide range (+20V to +30V DC).
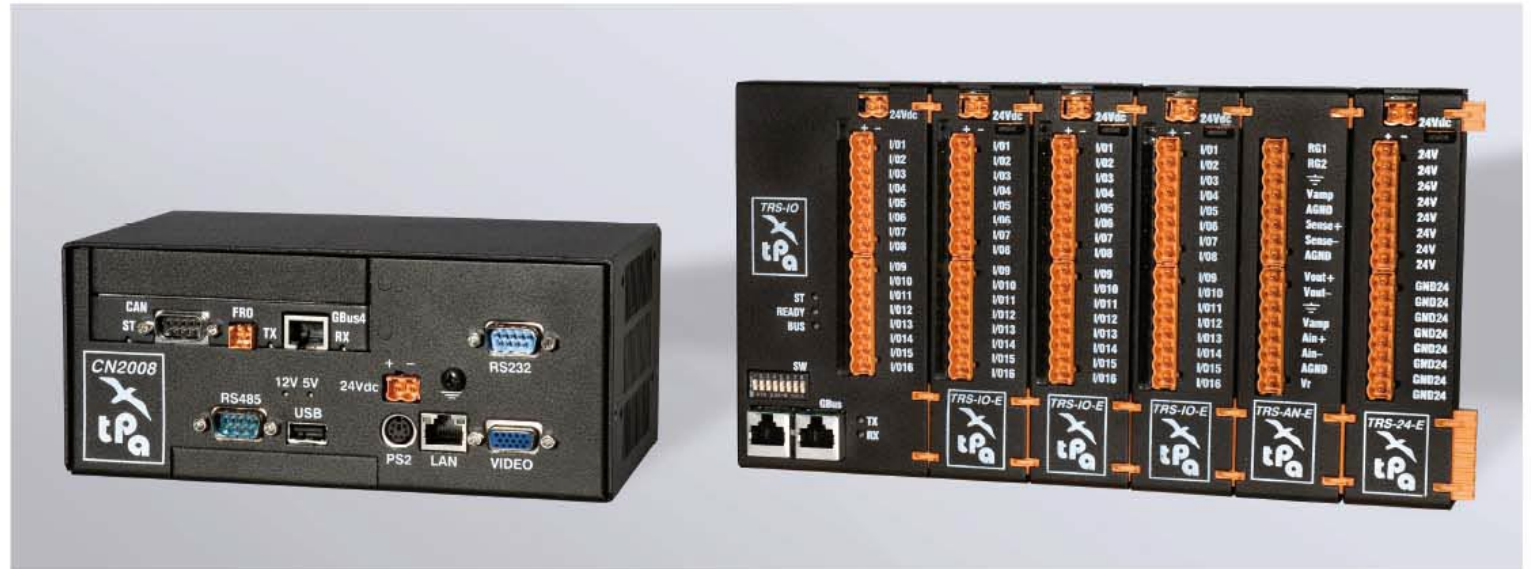Filtered, protected input. Led indicating the presence of internal power supplies.

TMSBus CARD

•Connection to the fieldbus GreenBus 4.0. Remote devices are supplied by the same GreenBus line.

•CAN transmitter compatible with the version 2.0b.

•Connector for the Feed-Rate function. By connecting an external potentiometer you can vary in real time the execution speed of the trajectories in a linear fashion.

•Non-volatile memory (NVRAM) necessary to save the information and variables of the CNC in real time; size 128 Kbytes, data retention 10 years.

Processor	VIA V4 Eden&C7 1GHz
Memory	DDR SoDimm 256MB (up to 512MB)
SSD	Compact Flash, Socket Type II, 512 MB
Expansions	2 Slot PC104 1 used by TMSBus
Operating System	Windows CE 6.0 (or 4.2)
Software	NC Firmware (Stone)
Operating Temperature	$5 - 45°C$
Humidity	10 - 95% relative humidity, without condensation
Power Supply	+24V DC ± 20%, 4A (without cards)
Size	193 x 128 mm. h = 84 mm.
Weight	830 g max, 1000 g max with 2 expansions
Mounting	Omega guide DIN EN50022 and EN50035 or wall-mounted
Usable connections	RS232, RS485 half duplex (optional duplex)
Service Connections	PS/2 per mouse + keyboard, USB 2.0, CRT (monitor)
Link with supervisor	1 x Ethernet LAN 100BaseT
Max Number of axes	16
Real Time Period	min. 1 ms
Axes in interpolation	up to 6 axes
Axes in chain	Up to 5 slave axes for 1 master axis
NVRAM	Save of sensitive data in NVRAM 128KB
CAN bus	Cia CAN 2.0b
GreenBus v4.0	4 Mbit/s for remoted I/O, 1 ms 8 slave devices 4 ms over 8 devices up to 32 I/O devices or max 16 axes and 16 I/O devices
Certifications	EC and compatible with EMC regulations