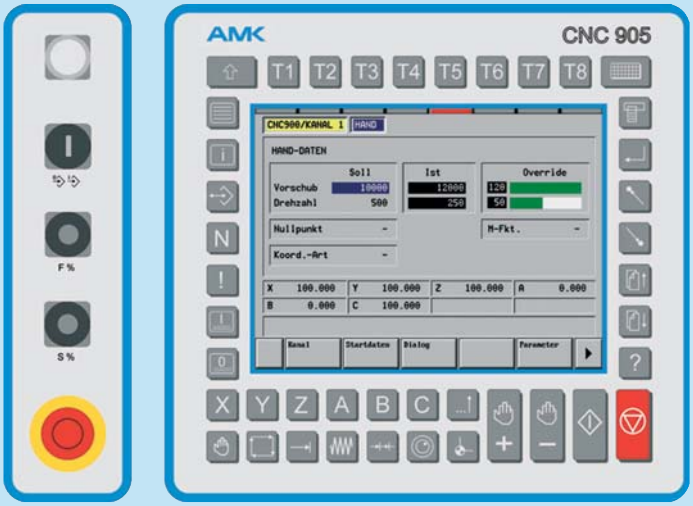
The Intelligent and Compact Controllers
CNC 904 and CNC 905

AMK

CNC 904 / CNC 905 with Ethernet and CAN bus

CNC 904

Dimensions (W x H in mm) 277 x 227



CNC 905

Dimensions (W x H in mm) 328 x 310
Machine panel (W x H in mm) 80 x 310

Functions of the »Low cost« -controller

The CNC communicates directly through the CAN bus with the drives and the I/O bus.

- Realtime operating system
- TCP/IP-, CANopen protocol stacks
- Soft PLC
- Design of a simple CNC control system associated with integrated PLC
- Programming of the operator interface via PROMA
- In large NC programs block-by-block reloading
- Graphic cycle programming
- Free DLL for implementation of user programms

Interfaces

- Ethernet (TCP/IP) RJ45
- CAN Bus 1000kbit for CANopen drive system
- CAN Bus 500kbit for I/O field bus systems according to CANopen specification
- PCMCIA e.g. for ext. hard disk (CNC 905 option)
- Serial RS232, RS422, 20mA
- USB

Operator panel data

- TFT colour LCD display
- Display size CNC 904 6.4”
  CNC 905 10.4”
- Resolution 640 x 480
- 256 of 4096 colours
- Touch switch resolution 1024 x1024
- 42 function keys, 15 of them configurable,
- PLC keys indicated on LCD display,
- Operating voltage 24V DC
- Battery backed realtime clock

Control elements*

- Override potentiometer 4
- Keylock switch 1
- Joystick (instead of 3 override potentiometers) 1
- Capability for handwheel connection

* with CNC 905 on separate machine panel

The CNC controllers are:

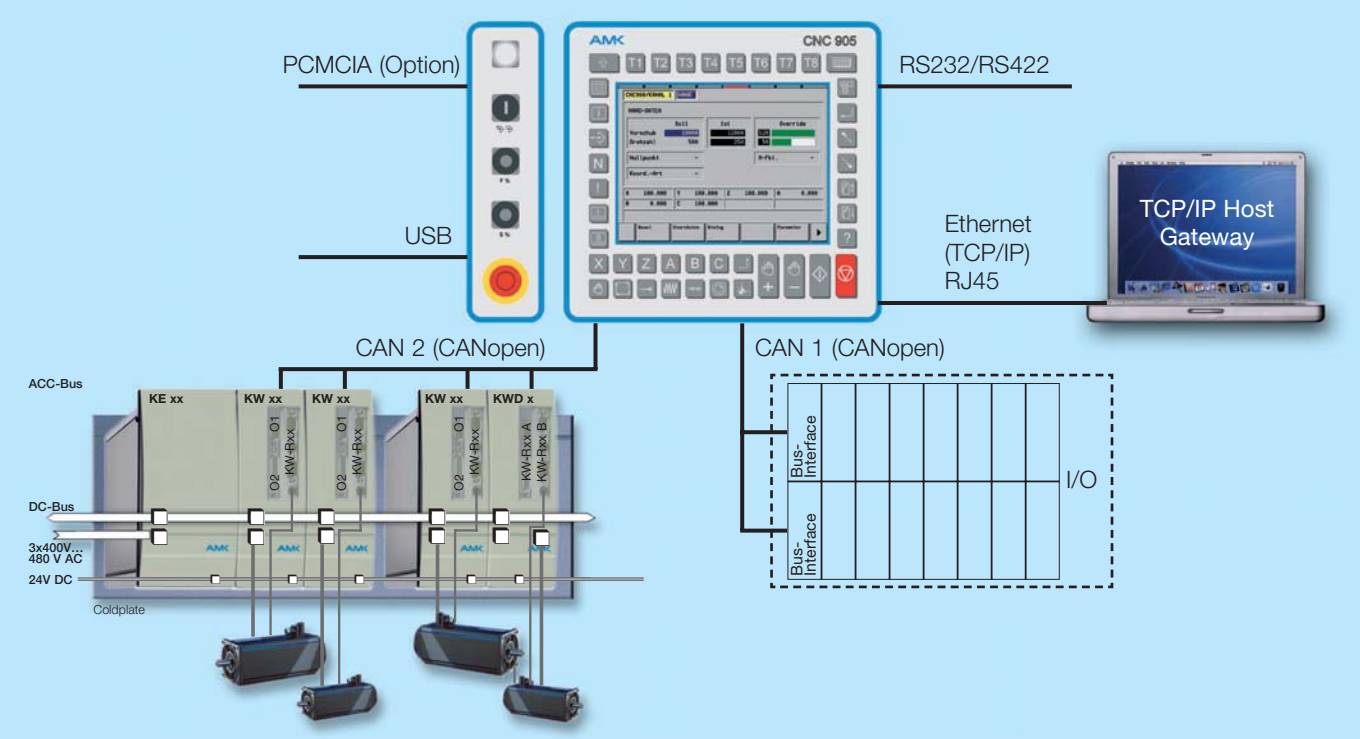
modular
- adaptable to customer requirements

flexible
- extensible according to requirements

future-oriented
- offers full scope for upgrade

economical
- through remote diagnostics and assistance ability

Economical, compact controllers



CPU data

• Static RAM	512kB
• DRAM operating memory	16MB
• Flash-disk-memory for operator interface	8MB
• Flag memory	60kB
• NC memory	193kB
• Remanent flags	4096
• Parameters	20000
• NC channel	1
• Axes	3 +1 x Gantry
• C axis operation for spindle	1
• POS axes via CAN Bus handled by the PLC	4

Programmable field bus interface

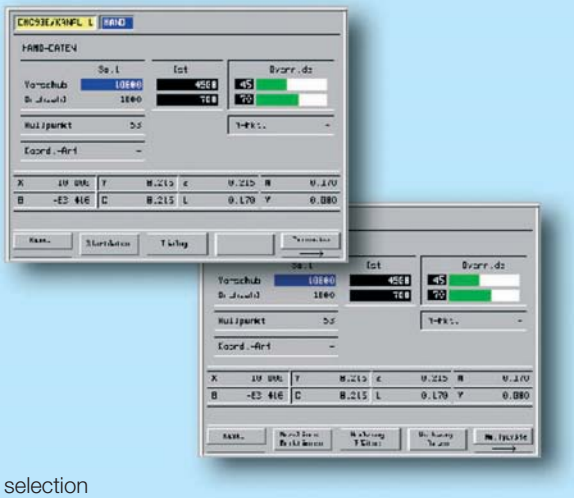
• I/O nodes for input/outputs	12
inputs per each node	64
outputs per each node	64
Max. number of inputs	256
Max. number of outputs	256
• Analog inputs	4 x16bit
• Analog outputs	4 x16bit

CNC functions

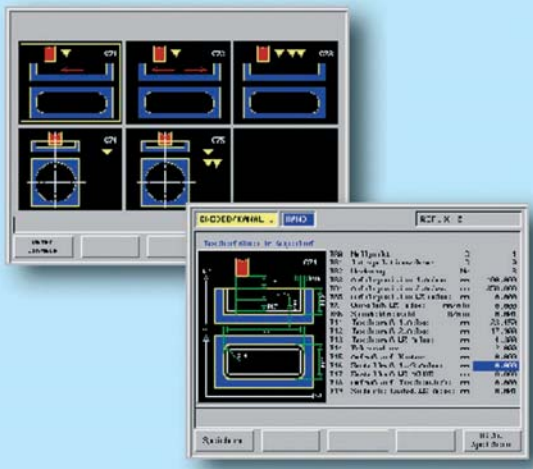
• Linear interpolation	3 axes
• Circular interpolation	3 axes
• Helical motion	2+1 axes

- Spline interpolation
- Polynom interpolation
- Tangential axis
- Coupling, mirroring, swapping of axes
- Restart after program abort
- Feed, angle, circle and contour dynamics
- Electronic gearing
- Handwheel
- Polar coordinate system
- Polar transformation
- Axes simulation
- Coordinate rotation, mirror-image and displacement
- Measuring and canned cycles
- Interpolation plane selection
- Tool radius path compensation
- Automatic selection of linear and circular interpolation
- Zero points / zero offset
- Short programming for contouring
- Parameters calculation
- Diagnostic functions

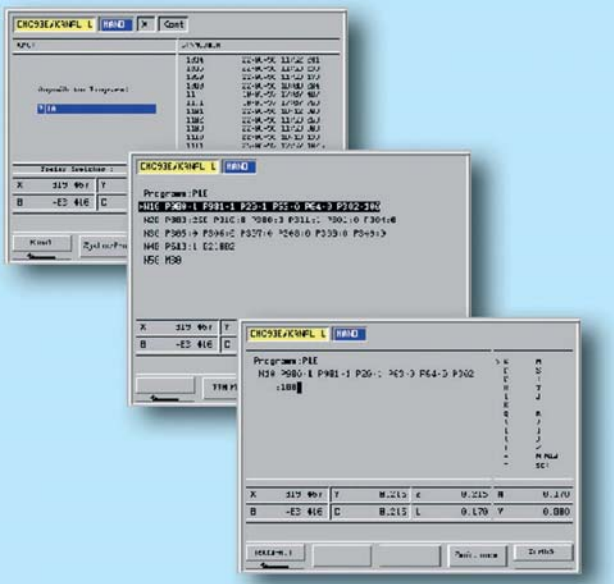
Individual, future-oriented controllers
Operator interface examples



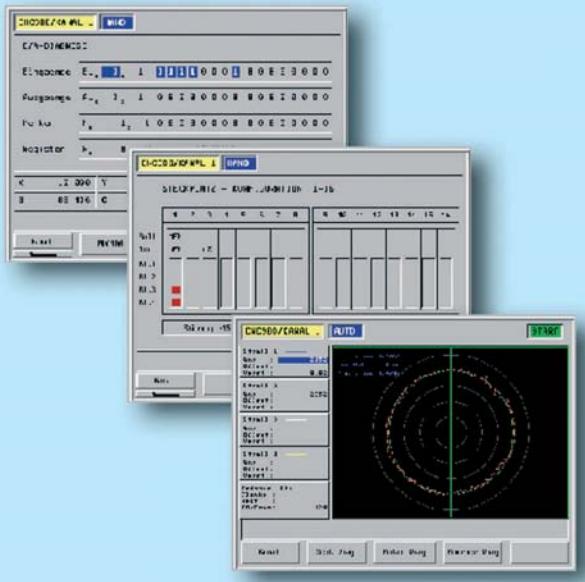
Menu selection



User specific dialog programming



DIN programming



Diagnostic functions

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Änderungen vorbehalten! 05M03