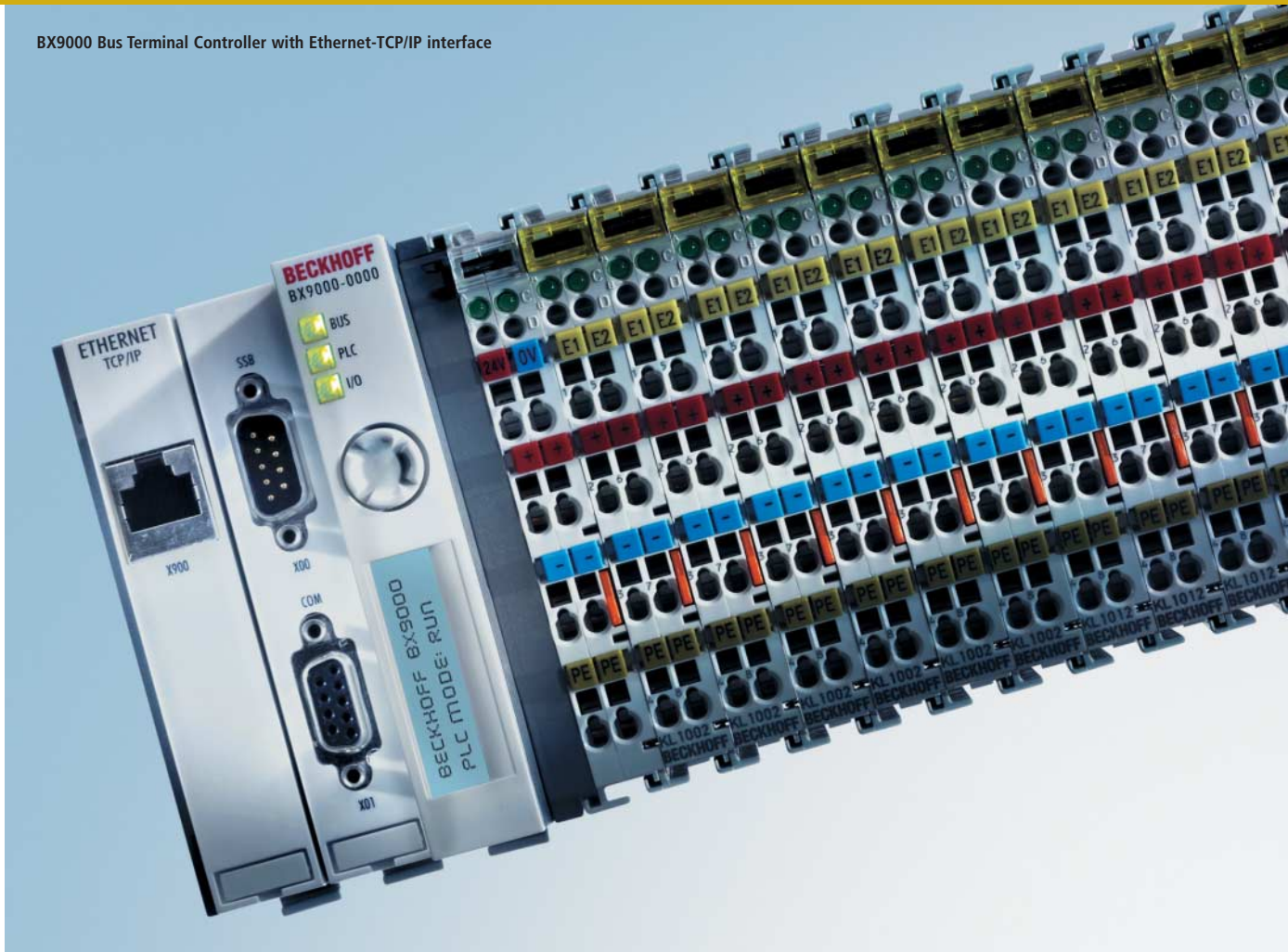


Scalable, Ethernet-based control technology

→ The BX9000 Bus Terminal Controller makes the range of Ethernet controllers from Beckhoff even more scalable. In terms of equipment and performance, the BX9000 is positioned between the Bus Terminal Controllers of the BC series and the Embedded PCs of the CX series. The comprehensive product range of the Beckhoff I/O system is available for the Bus Terminal PLC.



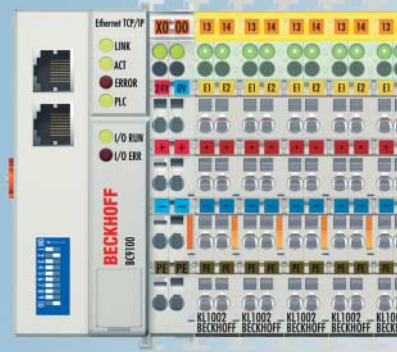
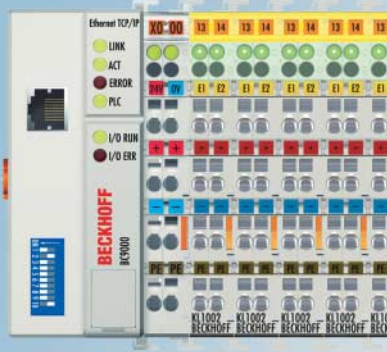
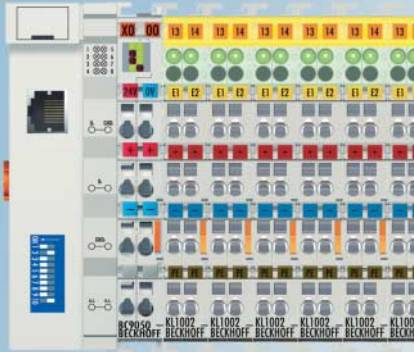
BX9000 Bus Terminal Controller with Ethernet-TCP/IP interface

The BX9000 Bus Terminal Controller has an Ethernet slave/master interface and features automatic baud rate detection up to 100 Mbaud. The following Ethernet protocols are implemented: ModbusTCP, ADS/TCP and ADS/UDP, as well as BootP, DHCP, SNTP and SMTP. The integrated real-time clock can be used in decentralized applications, for which the time or the day of the week play an important role.

With a 256 kbyte program memory and a 256 kbyte data memory, the BX9000 offers a larger memory capacity and extended interfaces when compared with the BC series. Additionally, the device has two integrated serial interfaces (1 x RS232 and 1 x RS232/RS485) for programming and for connecting further serial devices. Additional peripheral devices such as displays, modems or drives can be con-

nected via the integrated Smart System Bus (SSB), which is a CANopen-based master device. As with all other Beckhoff controllers, TwinCAT automation software forms the basis for parameterization and programming according to the IEC 61131-3 global standard.

The Ethernet-TCP/IP controller is ideal for use in industrial automation and building automation applications, for example. In intelligent buildings, the BX9000 can be used as a stand-alone controller, as distributed intelligence in conjunction with Ethernet I/Os, or as a slave for a higher-level controller.



BC9050: The “small” Ethernet controller with integrated PLC functionality, programmable according to IEC 61131-3.

BC9000: The “standard” Bus Terminal Controller for Ethernet applications is used in more than 20,000 applications.

BC9100: The Ethernet Bus Terminal Controller with integrated switch saves cabling costs in line topologies.

Ethernet controller BC9000 versus BX9000

	BC9000	BX9000
Program memory	64/96 kbyte	256 kbyte
Data memory	64/128 kbyte	256 kbyte
Remanent data	4080 bytes	2048 byte
Online Change	–	yes
Up/download code	–	yes/yes
PLC cycle time (without I/O cycle K-bus)	approx. 1.5 ms for 1000 instructions	approx. 1 ms for 1000 instructions
Programming/configuration	via TwinCAT according to IEC 61131-3	via programming interface or Ethernet
Fieldbus	Ethernet TCP/IP	Ethernet TCP/IP
Number of Bus Terminals	64	64 (255 with K-bus extension)
Max. number of bytes, fieldbus	512 bytes input, 512 bytes output	2048 bytes input, 2048 bytes output
Max. number of bytes, process image	512 bytes input, 512 bytes output	2048 bytes input, 2048 bytes output
Digital peripheral signals	512 inputs/outputs	2040 inputs/outputs
Analog peripheral signals	128 inputs/outputs	512 inputs/outputs
Protocol	TwinCAT ADS, Modbus TCP	TwinCAT ADS, Modbus TCP
Serial interface	–	1 x RS232, 1 x RS232 or RS485
SSB	–	yes
FSTN-Display	–	yes
Joystick switch	–	yes
Battery-powered clock	–	yes

BX9000 features

Ethernet

IP settings

- | IP setting via integrated display and joystick switch
- | DHCP
- | BootP
- | via TwinCAT System Manager or KS2000 software

Protocol

- | Protocols: SNMP, SMTP, ModbusTCP, ADS-UDP, ADS-TCP

PLC

- | 256 kbyte program memory
- | 256 kbyte data memory
- | Online Change
- | SourceCode up-/download

On-board interfaces

- | 10/100 Mbaud Ethernet
- | 1 x RS232
- | 1 x RS232/485
- | SSB (CANopen Master)

Additional functions

- | RTC: battery-powered internal clock for time and date
- | Display with menu implementation or for individual text display