CPU modules: BC5311-01A

200 MHz G3 CPU

▶ *Base level CPU configuration; suitable for most general purpose applications*

▶ *Single 200MHz G3 processor board and no additional boards.*

▶ *Communications:*

- *two Ethernet connectors*
- *one USB port and two serial ports[1]*

Specifications

System resources

Processor type	200 MHz 32-bit ARM
Number of processors	1
Operating system	Industrial real-time deterministic
Real-time clock	Yes
Flash file system memory	32 MB
Internal	4 MB
Removable	none

Active program resources

Quickstep	
Simultaneous programs	1
Program runtime memory	4 MB
Max simultaneous tasks	96
Non-volatile variables (typ)	5000
Volatile variables (typ)	600
Max array size	> 240 columns x 2048 rows
C/C++	
Simultaneous programs	2
Program runtime memory	6 MB
Max simultaneous tasks	96
Non-volatile variables (typ)	5000
Volatile variables (typ)	600

Note

1. *Each serial port supports two independent RS-232 channels. The COM splitter cable (PN 000-288050) is required to access the second channel.*
2. *Document No. 950-530000-004*

Actual size

Specifications

System resources[1]

Max number of I/O modules per rack	8
Max number of I/O modules per system	16
Max number of motion axes	16
Data logging storage	> 350,000 values
Web server	Yes

Environmental

Operating temperature	
Horizontal installation	-25 to 50°C
Vertical installation	-25 to 45°C
Storage temperature	-40 to 85°C
Humidity	5 – 95% non-condensing
Protection	IP20
Operating vibration[2]	
Random (IEC 60068-2-64)	10 – 500 Hz, 2g rms
Sinusoidal (IEC 60069-2-6)	10 – 500 Hz, 2g rms
Operating shock[2] (IEC 660068-2-27)	15 g

Ethernet communications

Number of ports[3]	2
Speed	10/100 base T
Type	Full duplex with DMA and flow control
Connector type	RJ-45
Network support	Wired and wireless
Firmware support	HTTP, FTP, UDP, TCP/IP, HTTP file server, raw socket
SNTP	Yes, supports automatic time synch
DHCP	Yes, automates IP address assignment
Modbus	Master and slave

Serial communications

Number of channels	4
Channel type	RS-232
Max speed	115 KBaud
Connector type	RJ-11
Modbus	Master and slave (ASCII or RTU)

Web server

Internally hosted	Yes
Number of web pages	Limited only by memory
Interfaces	HTTP
Remote monitoring and control	Via standard web browser

HMI integration

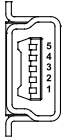|	
CTC iPanel support	Fully integrated
Third party HMIs	Supported via serial or Ethernet
CT webHMI support	Yes

Note
1. Capacities are not mutually inclusive.
2. Test results based on DIN rail mounting, all screws torqued to 5.2 in-lb.
3. Internal Ethernet switch.
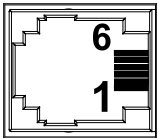4. Factory default IP address is 192.168.1.53
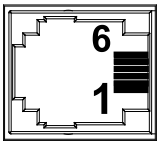
CPU modules

Connector pinouts

USB COM1 pinouts

Pin #	Signal
1	USB Power
2	USB DM
3	USB DP
4	NC
5	GND

COM1 and COM2 RS232 pinouts

Pin #	Signal
1	TxD COM1
2	TXD COM2
3	Common
4	Common
5	RXD COM2
6	RXD COM1

COM3 and COM4 RS232/RS485 pinouts

Pin #	Signal
1	TxD COM4
2	TXD COM3/A (+RS485)
3	Common
4	Common
5	RXD COM3/B(-RS485)
6	RXD COM4

Ethernet 10 base–T pinouts
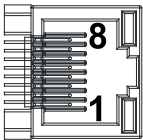
Pin #	Signal
1	TX0+
2	Tx0–
3	RX1+
4	NC[1]
5	NC[1]
6	RX1–
7	NC[1]
8	NC[1]

CPU module

LED identification

PWR (Backplane power)	Steady Off = backplane rack not powered up Steady On = backplane rack powered up
FLT (Backplane fault)	Steady Off = normal operation. No fault on local backplane Solid = hardware fault on local backplane Slow flash = software fault on local backplane Fast flash = DHCP negotiation in progress (CPU only) Blink = flash reprogramming in progress (CPU only)
ST1 – ST3	Off/Off//Off = Normal operation (CPU only) Off/Off/On = Global hardware fault (CPU only) Off/On/Off = Global software fault (CPU only) Off/On/On = Corrupt user program or data table or NVRAM On/Off/Off = Loading program or flashing flash On/Off/On = DHCP in progress, program not running On/On/Off = Program mode – stopped or if booting awaiting abort boot escape sequence On/On/On = Power up/reset state or program node restarting reset (CPU only)
SL1 – SL3	Fault for local slot when local FLT or global SLT1-3 are in a non-normal operation state. Binary code identifies the affected local slot as follows: Off/Off/Off = Local slot #1 On/Off/Off = Local slot #5 Off/Off/On = Local slot #2 On/Off/On = Local slot #6 Off/On/Off = Local slot #3 On/On/Off = Local slot #7 Off/On/On = Local slot #4 On/On/On = Local slot #8

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