

# C320Turbo Series

**8 to 32-port intelligent RS-232 Universal PCI serial boards**



- > Supports 128 high-performance serial ports per system
- > Dramatically decreases host CPU load
- > Modular design makes port expansion easy
- > Monitor transmission status with LEDs on the module and two 7-segment displays
- > Drivers provided for a broad selection of operating systems
- > 460.8 kbps maximum baudrate



## Overview

The intelligent C320Turbo serial boards are expandable and flexible COM/TTY solutions for RS-232 applications that require connecting up to 128 serial devices to one computer. The C320Turbo's on-board

CPU and large dual-port memory take the load off host systems whose performance and scalability are critical for large-scale systems.

## Specifications

### Hardware

**Comm. Controller:** 16C550C or compatible x 8  
**Bus:** 32-bit Universal PCI  
**Connector:** DB25 female  
**Processor:** TMS320BC52-40 RISC CPU  
**Memory:** 512 KB

### Serial Interface

**Number of Ports:** 32 per control board (max.)  
**Serial Standards:** RS-232 (RS-422 available with desktop option)  
**Max. No. of Boards per PC:** 4

### Performance

**Baudrate:** 50 bps to 460.8 kbps

### Serial Communication Parameters

**Data Bits:** 5, 6, 7, 8  
**Stop Bits:** 1, 1.5, 2  
**Parity:** None, Even, Odd, Space, Mark  
**IRQ:** Assigned by BIOS

### Serial Signals

**RS-232:** TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND  
**RS-422:** TxD+/-, RxD+/-, RTS+/-, CTS+/-, GND

### Operating Systems

**Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), DOS, Windows Embedded CE 5.0/6.0, Windows XP Embedded  
**Fixed TTY Drivers:** QNX 6, SCO OpenServer, UnixWare 7, Solaris 10, FreeBSD

**Linux Real TTY Drivers:** Linux 2.4.x, 2.6.x, 3.x

*Note: Please refer to Moxa's website for the latest driver support information.*

### Physical Characteristics

**Dimensions:** 90 x 120 mm (3.54 x 4.72 in)

### Environmental Limits

**Operating Temperature:** 0 to 55°C (32 to 131°F)  
**Storage Temperature:** -20 to 55°C (-4 to 131°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)  
**Altitude:** Up to 2000 m

*Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.*

### Standards and Certifications

**EMC:** CE, FCC  
**EMI:** EN 55022, FCC Part 15 Subpart B Class A  
**EMS:** EN 61000-4-2, EN 61000-4-3, EN 61000-4-4  
**Green Product:** RoHS, CRoHS, WEEE

### MTBF (mean time between failures)

**Time:** 305,270 hrs  
**Database:** MIL-HDBK-217F, GB 25°C

### Power Requirements

**Power Consumption:** 500 mA max. @ +5 V

### Warranty

**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

	C32010T/ PCI	C32030T	C32045T	C32047T	C32061T
Dimensions (mm)	120 x 90 x 15	247 x 108 x 35	247 x 108 x 35	247 x 108 x 35	247 x 108 x 35
Weight (g)	90	425	500	485	488
Power Requirements	0.5A (+5V)	0.59A (+5V)	0.28A (+5V) 0.095A (+12V) 0.06A (-12V)	0.28A (+5V) 0.095A (+12V) 0.06A (-12V)	0.485A (+5V)

	C32065T	C32071T	C32080T	C32081T	C32082T	C32083T
Dimensions (mm)	247 x 108 x 35	247 x 108 x 35	277 x 165 x 44	277 x 165 x 44	277 x 165 x 44	277 x 165 x 44
Weight (g)	525	525	1020	1120	920	1000
Power Requirements	1.32A (+5V)	0.28A (+5V) 0.095A (+12V) 0.06A (-12V)	0.88A (+5V) 0.095A (+12V) 0.06A (-12V)	1.22A (+5V) 0.19A (+12V) 0.12A (-12V)	0.34A (+5V) 0.095A (+12V) 0.06A (-12V)	0.67A (+5V) 0.19A (+12V) 0.12A (-12V)

## Ordering Information

### Package Checklist

- 1 C320Turbo/PCI board
- Long-range extension kit (optional)
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

### Desktop Option

- CPU module
- One or more UART modules (32 ports maximum per board)

### Rackmount Option

- Basic module
- Zero or more expansion modules (32 ports maximum per board)

## Available Models

### Control Boards (must choose one)

**C32010T/PCI:** Universal PCI board

### External Modules

#### Rackmount Option

##### Basic Modules (must choose one)

**C32080T:** 8 RS-232 ports, 10-pin RJ45 connectors

**C32081T:** 16-port, RS-232, 10-pin RJ45

##### Expansion Modules (optional)

**C32082T:** 8 RS-232 ports, 10-pin RJ45 connectors

**C32083T:** 16 RS-232 ports, 10-pin RJ45 connectors

### Long-range Extension Kit (optional)

**C32050T:** Includes the following items

- 2 meter DB25-M to DB25-F 10-wire cable (generally used for set-up)
- 90-240 VAC switching power adaptor (0-30°C operating temperature)

**NOTE:** Build your own DB25-M to DB25-F 10-wire cable for connecting up to 100 meters.

### Connection Cable (required)

**C32020T:** 2 meter DB25-M to DB25-F cable with 25 pins for short-range usage

### Desktop Option

#### CPU Module (required)

**C32030T:** Connects directly to one UART module

### 8-port UART Modules (choose at least one)

**C32045T:** RS-232, DB25-F connectors

**C32047T:** RS-232, DB25-M connectors

**C32071T:** RS-232, DB25-F connectors (25 kV ESD surge protection)

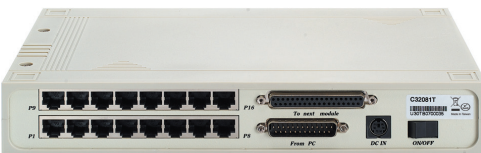
**C32061T:** RS-422, DB25-F connectors

**C32065T:** RS-422, DB25-F connectors (2 kV electrical isolation)

## Ordering Examples

### Rackmount Ordering Examples

#### 16 RS-232 ports



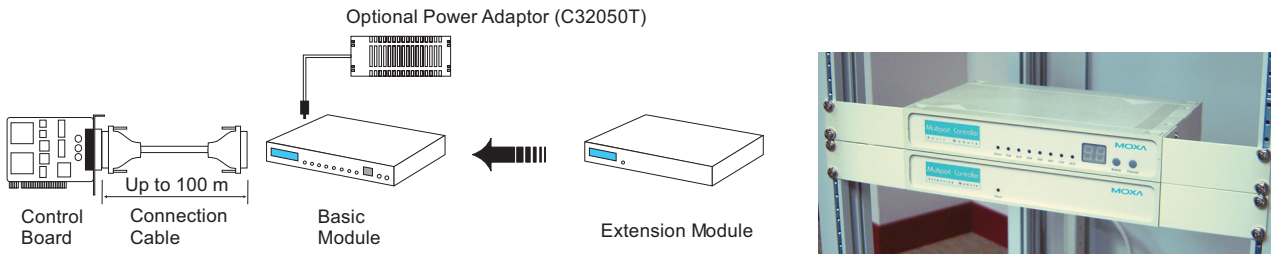
**Control Board:** C32010T/PCI  
**Connection Cable:** C32020T  
**Basic Module:** C32081T

#### 32 RS-232 ports



**Control Board:** C32010T/PCI  
**Connection Cable:** C32020T  
**Basic Module:** C32081T x 1  
**Expansion Module:** C32083T x 1

### Rackmount Setup Diagram



### Desktop Ordering Examples

#### 8 RS-232 ports



**Control Board:** C32010T/PCI  
**Connection Cable:** C32020T  
**CPU Module:** C32030T  
**UART Module:** C32045T x 1

#### 8 RS-232 ports + 16 RS-422 ports



**Control Board:** C32010T/PCI  
**Connection Cable:** C32020T  
**CPU Module:** C32030T  
**UART Module:** C32045T x 1 + C32061T x 2

### Desktop Setup Diagram

