

SmartNode 485

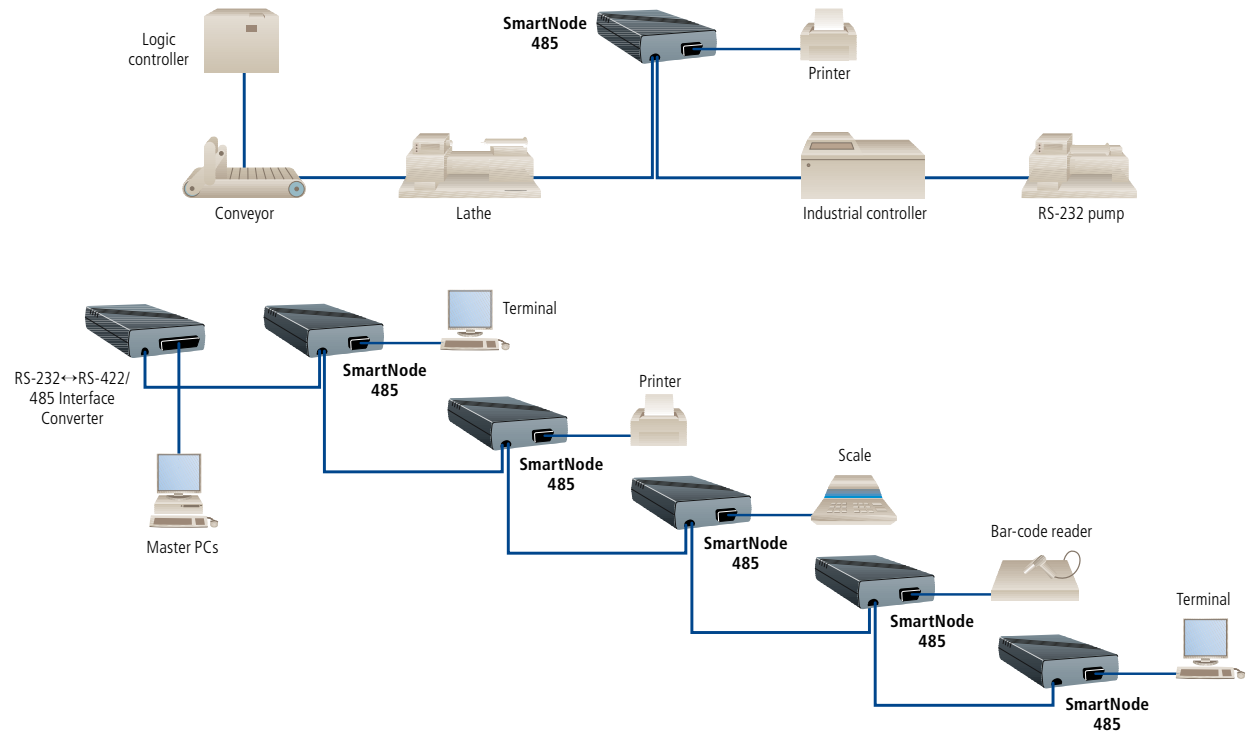
The only way to put
your async RS-232 devices
on an RS-485 network!



FEATURES

- » Poll “dumb” RS-232 devices on your multidrop RS-485 line.
- » Place your RS-232 devices up to 5000 ft. (1524 m) from each other.
- » 253 addresses for each network.
- » Send commands to individual SmartNode 485s or broadcast messages over the entire network.
- » No need to modify your RS-232 device or your RS-485 line.

Add RS-232 devices to your RS-485 environment or create an RS-232 multidrop network.



OVERVIEW

SmartNode 485 is the first device to allow async RS-232 printers, terminals, scales, lathes, bar code readers—any “dumb” RS-232 device—to function in a multidrop RS-485 network.

An RS-485 network consists of a master device polling slaving devices for information. RS-485 devices already have the “smarts” needed to follow the rules for orderly communication. In contrast, RS-232 devices are “dumb”—unaided, they can’t follow the rules of a multipoint protocol. And that’s where SmartNode 485 comes in.

SmartNode 485 does two jobs. It converts your RS-232 signals to the RS-485 interface so your async ASCII devices can operate in an RS-485 polled environment.

It also acts as the address node for your RS-232 device, allowing it to communicate with a master device on a multidrop network.

SmartNode 485 lets you combine the variety of RS-232 devices with the advantages of RS-485. For example, the superb noise immunity of RS-485 enables your RS-232 devices to send data at rates up to 38.4 kbps, while residing on the network up to 5000 ft. (1524 m) away from one another.

And SmartNode 485 does not require you to modify your RS-232 device. Instead, you configure SmartNode 485 for your device’s requirements through internal DIP switches.

Each RS-485 network segment can consist of 32 devices. And up to 253 device addresses are available to SmartNode 485s on a network. Using repeaters, your SmartNode 485 network can be as complex as your application demands.

SmartNode 485 is available in either standalone or rackmount card versions. A 230-VAC model is also available.

Typical Applications

Add RS-232 devices to your existing RS-485 network. Your unmodified RS-232 devices operate along side your RS-485 machines.

Create a multidrop network of RS-232 devices. Place RS-232 printers, terminals, and bar code readers up to 5000 ft. (1524 m) apart. Control them with an RS-232 host controlling the network via an RS-232÷RS-485 Interface Converter.



IC150A

Technically Speaking

- SmartNode 485 responds to master-device polls using the unique SmartNode protocol.
- Each of the SmartNode 485's ports are user-configurable. Set each port for speed, parity, and data code of the device to which it is attached.
- Use inexpensive, twisted-pair cable to connect the devices on your RS-485 network.
- RS-485's exceptional noise immunity enables you to network RS-232 devices in electrically noisy environments like machine shops, hospitals, and factories.
- An 8K buffer is available either to store data from the RS-232 device until the master asks for it, or to spool master-device requests until the RS-232 device can respond.

Additional equipment you may need

- To use a PC in your network, try our PC↔422/485 Card (IC030C-R2). It fits right inside your PC to enable communication with RS-422/485 devices.
- To place an RS-232 master on your RS-485 line, you'll need an interface converter. Try our RS-232↔RS-422/485 Interface Converter (IC007A)

TECH SPECS

Altitude (Maximum) — 10,000 ft. (3048 m)
Leads Supported — RS-232: pins 1 through 9 (TD, RD, CTS, RTS, DSR, CD, SG, DTR, RI);
 RS-485: TD, RD
MTBF — 50,000 hours
Speed — 50 bps to 38.4 kbps
Connectors — (1) DB9 F DTE; (1) 4-wire terminal block
Indicators — Both ports: RD, TD
Temperature Ranges — Storage: -4 to +158°F (-20 to +70°C);
 Operating: 32 to 122°F (0 to 50°C)
Power — Primary: 115 VAC/60 Hz or 230 VAC/50 Hz;
 Secondary: 17-VAC center tap, 750 mA
Size — Standalone: 1.8"H x 5.5"W x 8.5"D (4.6 x 14 x 21.6 cm);
 Card: 4.5"H x 7.3"L (11.4 x 18.4 cm)
Weight — 2 lb. (0.9 kg)

Item

Code

SmartNode 485

115-VAC

Standalone

Rackmount Card

IC150A

IC150C

230-VAC

Standalone

IC150AE

You may also need...

12-Card Rack for SmartNode

9-Pin to DTE Cable

9-Pin to Modem Cable

9-Pin to AT Cable

9-Pin to PC Cable

DB9 Extension Cable

RM010-SN

EHN023

EHN024

EHN025

EHN026

EDN12H-0010-MF

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p.m. and you need help, but your vendor's tech support line is closed.

According to a survey by *Data Communications* magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.