USB Synapse Cable

symbol®

Symbol Synapse Cables

Symbol Synapse cables are a unique solution for a wide range of scanner connectivity challenges.

Synapse cables give the input flexibility you need to connect a wide range of bar code scanners to your host device. In addition, Symbol Synapse cables allow you to switch your scanner from one host device to another simply with a quick cable change. As your business needs change, and you need to upgrade your Symbol scanners – without changing the host device – the Synapse cable product family is the perfect connectivity solution.

Industry Standard Interface: USB

The Universal Serial Bus (USB) is an industry standard for the connection of multiple peripherals to a host computer. The standard is sponsored by industry leaders such as Intel®, Microsoft, Compaq and NEC and supported by hundreds of other manufacturers.

USB has been available on all desktops and notebooks since 1997. In the year 2000 USB has gained a significant market momentum due to the introduction of many USB peripherals and many computers which simply do not offer any other connectivity for peripherals. Most new notebooks, network computers and Apple® iMac™ all attach traditional human interface devices like the keyboard and mouse through USB. Symbol scanners now attach to this new class of machines like any other peripheral!

In the retail point-of-sale terminal arena, the IBM SurePos POS 7X0 terminal also moved to USB for all its retail peripherals.

Symbol USB Synapse Cable

Symbol USB Synapse cables allow connectivity of any Synapse-compliant scanner to USB.

USB brings a number of important benefits to scanner connectivity and, in addition, it is often the only method to connect scanners in a variety of environments.

Symbol Technologies is an active member of the USB Implementers Forum and the introduction of these new cables reinforces the long-term commitment of Symbol to USB connectivity.

Benefits of USB connectivity

Benefits of USB connectivity include:
▸ Ability to collect multiple peripherals to one host: USB allows connection of up to 127 peripherals to one host system. Typically computers are delivered with two root ports, however, USB hubs allow expansion as required.

USB
UNIVERSAL SERIAL BUS

Features	Benefits
Standard USB interface	Allows you to switch your scanner between host systems
Full-speed USB	Faster transmission of larger PDF Symbols
Power distribution	In most cases no power supply is needed
Plug and play	Scanners can be plugged and removed dynamically
Bus architecture	Multiple scanners can be connected to one host
Synapse architecture	The USB cable can be used with virtually all Symbol scanners

▸ Plug and play: A Symbol scanner can be attached and detached dynamically without turning off the host computer or reconfiguring it.
▸ Power management: USB also covers power distribution and power management. Typically either root ports or powered hub port will supply enough current to power most Symbol hand-held scanners. The system will inform the user when a power supply is needed for the newly attached peripheral. For portable systems USB offers an efficient power management scheme for peripherals.
▸ Full speed: A data transfer is typically much faster than using RS-232 or keyboard wedge interfaces and is well suited for transmission of larger PDF417 symbols data. USB allows data rates of up to 12 Mbps. The bandwidth is shared between peripherals and therefore actual transfer rate may vary significantly but are typically higher than traditional interfaces used previously.
▸ Flexible connectivity: Connectivity to all USB hosts including notebooks, desktop PCs, point-of-sale terminals in the IBM SurePos family, Apple iMac, and network computers all using the same cable.

To find out how your company can benefit from the use of Symbol scanners and Synapse cables, call any of the convenient locations on the back address panel, or visit us at **www.symbol.com/barcode**

Symbol USB Synapse Cable Specification Highlights

Physical Characteristics

Dimensions:	**2 in. L x 1 in. W x 1 in. H/5.08 cm L x 2.5 cm W x 2.5 cm H**
Electrical:	**5 volts, 60 mA (typical) required**
Power Supply Option Input:	**100 VAC±10%, 50-60 Hz; 117VDC±10%, 60 Hz; 220/240 VAC±10%, 50 Hz**
Power Supply Option output:	**+5 VDC, 1.0 amp**
Input Cable:	**Depends on bar code collection device, common length is 6 ft./183 cm**
Output Cable:	**Common length is 18 in./45.7 cm** **STI85-xxxx has a standard USB series A connector** **STI86-xxxx has a Power+ connector**

Performance Characteristics

Hardware Interface:	**The Synapse cable is a full-speed USB device**
Software Interface:	**The following modes are supported:** **Native Symbol bar code reader mode** **HID Keyboard emulation** **IBM Hand-held reader mode** **IBM table top reader mode** **COM port emulation**

User Environment

Operating Temperature:	**32° to 110°F/0° to 43°C**
Storage Temperature	**30° to 160°F/-34° to 71°C**
Humidity:	**5% to 95% (non-condensing)**

Regulatory

EMI/RFI:	**FCC Part 15 Class A, ICES-003 Class A, European Union EMC Directive, Australian SMA**

For system, product or services availability and specific information within your country, please contact your local Symbol Technologies office or Business Partner.

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