

Express 8-Port Mux



Transmit data between your AS/400 controller
polling groups over a single fiber pair.

FEATURES

- The only fiber optic mux that supports split-polling on enhanced AS/400 workstation controllers without requiring PTFs!
- Automatic detection of 1- or 2-Mbps (Express) data rates.
- Extends AS/400 ports up to 15,000 feet (4572 m) on multimode fiber optic cable.
- Up to 56 devices supported from 2 controllers on a single pair of fiber optic cable.
- Supports both point-to-point and multipoint applications.

OVERVIEW

Let Black Box give your IBM® System/3x or AS/400® network some "backbone." The Express 8-Port Mux can eliminate the expense and performance limitations of a remote controller and leased lines in campus-area environments. Using a backbone wiring scheme consisting of fiber optic cabling, local workstation controller ports can be multiplexed and extended to remote user-areas as far as 15,000 feet (4572 m) away from the host.

The Express 8-Port Mux takes advantage of all the increased performance of AS/400e Twinaxial Workstation Controllers. It enables up to two AS/400 controller polling groups to be transmitted over a single fiber optic pair. That means up to two AS/400e, AS/400, System/36 hosts, or 5494 Remote Control Units can simultaneously share a single set of fiber optic cabling. Controller redundancy and maximum fiber optic efficiency are obtained by multiplexing four ports each from two separate controllers to connect up to a total device capacity of 56 remote 5250-type devices (such as 5250 Express Adapters or twinax displays). This feature also enables AS/400e controllers to provide their maximum throughput potential by transparently multiplexing the split-polling feature without requiring performance-robbing Programming Temporary Fixes (PTFs).

IBM has introduced a number of enhancements to the 5250 (twinaxial) protocol. AS/400e models, with the Enhanced Workstation Controller (WSC), now include support for the faster 5250 Express Data Stream and TCP/IP. The throughput performance gain is significant, rivaling that of a LAN-connected device, without the distance limitations and technical issues that arise during the implementation of a LAN. The 5250 Express Data Stream has two independent modes: Optimized mode and 2-Mbps mode. Each of these modes changes the physical communication characteristics from the host controller port to the desktop 5250 device. Optimized mode streamlines data transmissions to the desktop device by reducing the number of bits required to transmit the same amount of data, so that transmission occurs almost twice as fast as in normal data transfers. The 2-Mbps mode doubles overall line speed from 1 Mbps to 2 Mbps. When used together, throughput can be increased by up to four times.

In addition, a method of terminal communication called split-polling is now standard on new AS/400e Enhanced WSCs. By changing the method of polling, the IBM Enhanced WSCs

that support the 5250 Enhanced Data Stream also enable devices to communicate with the host more frequently than standard controllers do. Using these controllers can improve the performance of legacy devices, even without the 5250 Express capability, by up to 200%. The Enhanced WSC provides a split-polling group so that communications between the host controller and various devices can occur simultaneously between two groups of four ports, rather than once across all eight ports of an IBM workstation controller card.

The combined performance gain when using the Express Data Stream and the split-polling feature on the Enhanced WSC is an 800% improvement over legacy devices using the older polling scheme.

The Express 8-Port Mux has eight shielded RJ-45 port connections and a DB25 direct-connection, eliminating the need for the twinaxial brick and associated twinaxial cabling. Link connectivity is via ST fiber optic multimode connection with the ability to operate in both point-to-point and multipoint ring topologies. This reduces hardware requirements by up to 50%.

Other features include advanced noise filtering, LED port diagnostics, configurable UTP pin assignments, and a field-replaceable wide-ranging power supply.

TECH SPECS

Data Rate — 1 and 2 Mbps

Distance (Maximum) — High-speed DB25 cable: 30 ft. (9.1 m);

Category 3 cable: 2000 ft. (609.6 m);

Category 5 cable: 2200 ft. (670.6 m);

Multimode fiber: 6600 ft. (2011.7 m)

Fiber Optic Budget — 12 dB (typical)

Peak Power Wavelength — 820 nm

Ports — 8

Protocol — 5250

Connectors — (8) shielded RJ-45, (1) DB25, (2) ST*

Indicators — (1) power, (2) TX activity, (2) RX activity, (14) express mode, (14) data activity

Temperature Tolerance — Operating: 32 to 104°F (0 to 40°C);
Storage: 32 to 185°F (0 to 85°C)

Humidity Tolerance — Up to 95% noncondensing

Power — 100–240 VAC to +5 VDC external power supply

Size — 1.75"H (1U) x 19"W x 8.75"D (4.4 x 48.3 x 22.2 cm)

Weight — 5.6 lb. (2.5 kg)

Item	Code
Express 8-Port Mux	IC219A