**BUS-TECH**
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**Multi-Path Channel plus (MPC+)**

**Executive Summary**

MPC+ is IBM's latest and most-efficient ESCON channel-protocol. MPC+ can reduce mainframe CPU cycle time by more than 63% and provide a performance improvement over previ ous ESCON protocol implementations. MPC+ is licensed by Bus-Tech from IBM and minimizes the overhead associated with channel transfers.

In addition to improved performance and reduced cycle times, benefits include the ability to transport multiple protocols across a single channel interface as well as enhanced availability with non-disruptive re-routing of data over alternate sub-channels.

MPC+ permits you to combine the bandwidth of two or more ESCON channel connections into a single transmission group. The aggregate bandwidth of the ESCON adapters become available to the transmission group. This feature not only provides high-performance throughput and error free transmissions but also provides automatic fail-over in the event one of the ESCON connections are lost. With 2 ESCON/MPC+ adapters it is possible to implement full-duplex connections between an Enterprise Application Server and a Mainframe database.

The ESCON adapter with MPC+ works with Bus-Tech's TCP/IP Direct Connect drivers to establish a high-performance, direct connection between the TCP/IP stacks of the Windows NT Server and the IBM, or compatible, mainframe. The combination is ideally suited for 3-tier client/server application deployment where the mainframe participates as a "super" file server for Windows NT-based application servers requiring rapid access to mainframe resident data.

**Detail specifications**

MPC+ for Windows NT is a software option available with Bus-Tech's EnterpriseExpress/ESCON Adapter. MPC+ for Windows NT implements IBM's MultiPath Channel + protocols in a Windows NT environment. MPC+ allows multiple ESCON channels to be configured as a single, logical communications path (transmission group) between Windows NT Server and the mainframe; allowing the transmission group to exceed the throughput of a single channel and provide redundancy and high availability. MPC+ for Windows NT includes Bus-Tech's TCP/IP Direct Connect software that complies with the Network Driver Interface Specification (NDIS). TCP/IP applications running under Windows NT Server gain access to partner applications on the mainframe over ESCON channels. Applications such as SAP R/3 or DB2 Connect Enterprise Edition can use MPC+ for Windows NT to access DB2 Universal Database for OS/390.

MPC+ for Windows NT provides both High Speed Access Services (HSAS) and MPC Point -to-Point (MPCPTP) links to the mainframe. HSAS can be used to support:

High Speed UDP applications:
- DCE
- NFS
- SAP

High Speed Web Access applications:
- Domino Go
- Telnet

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**MPC Point-to-Point (MPCPTP) connections support FTP and TN3270.**
MPC+ for Windows NT also supports Advanced Peer-to-Peer Networking (APPN) by allowing MPC transmission groups to be defined as data links to IBM's Communications Server for Windows NT (CS/NT).

**Benefits**

- Designed for Performance - MPC+ for Windows NT allows multiple ESCON adapters to be defined as a single logical connection; allowing total throughput to far exceed the capabilities of a single mainframe channel.
- High Availability and Redundancy - When multiple adapters and ESCON channels are used to make up a transmission group, failure of one channel or adapter will not disrupt operation of the transmission group.
- MPC+ for Windows NT works with either Microsoft's TCP/IP or IBM's Communications Server for Windows NT.
- Built on Industry Standards - Windows NT allows existing systems and applications to realize immediate performance improvements by accessing the mainframe over high-performance ESCON connections.