

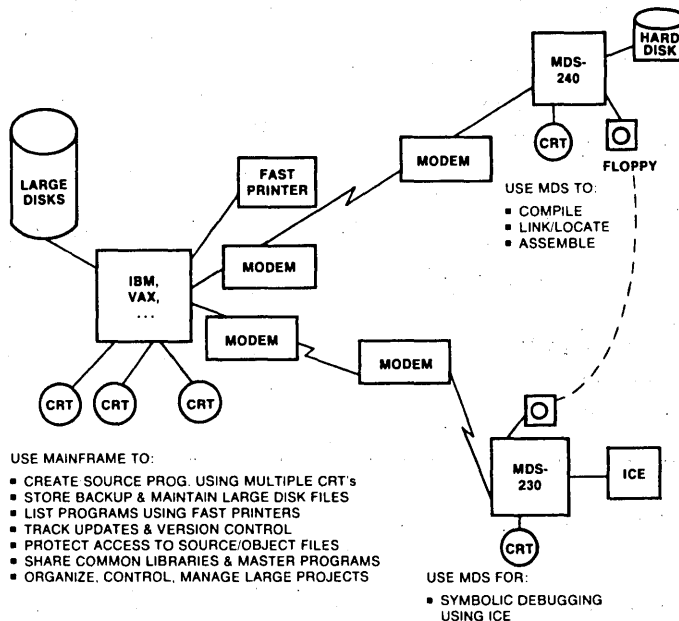


MAINFRAME LINK FOR DISTRIBUTED DEVELOPMENT

- Integrates user mainframe resources with Intellec® Development Systems.
- Uses IBM 2780/3780 standard BISYNC protocol supported by a majority of mainframes and minicomputers.
- Protocol supports full error detection with automatic retry.
- Software runs under ISIS-II on any Intellec® Development System.
- Communicates with remote systems on dedicated or switched (dial-up) telephone lines.
- Package also includes tests and a connector for loop-back self-test capability.

The Mainframe Link consists of software, modem cable to connect the development system to the modem and a loopback connector for diagnostic testing. The software runs under ISIS-II on Intellec Development Systems. It emulates the operation of an IBM 2780 or 3780 Remote Job Entry (RJE) terminal to (1) transmit ISIS-II files to a remote system or (2) receive files from a remote system using standard BISYNC 2780/3780 protocol. The remote system can be any mainframe or minicomputer which supports the IBM 2780 or 3780 communications interface standard. Files may contain ASCII or binary data so that either program source files (ASCII) or program object files (binary) may be transmitted.

The Mainframe Link allows the user to integrate in-house mainframe resources with Intellec Microcomputer Development resources. The mainframe can be used for storage, maintenance and management of program source and object files. The program source can be downloaded to a development system for compilation, assembly, linkage, and/or location. The linked modules can be transmitted and saved on the mainframe to be shared by all programmers. The linked program can then be downloaded to a development system for debugging using ICE emulation.



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FEATURES

- Runs under ISIS-II on any Intellec® Microcomputer Development System.
- Communicates with a remote system using IBM 2780/3780 standard BISYNC protocol, which is supported by a majority of minicomputers and mainframes, on dedicated or switched (dial-up) telephone lines.
- The modem cable supplied with the package can be used to connect the Intellec® Development System to the modem (or modem eliminator) using the standard RS232C port.
- Supports user selectable data transmission rates of up to 9600 baud.
- Package includes diagnostic tests used to verify the operation of the Intellec® Development System using the loop-back connector supplied and data transmission up to the modem using the analog loop-back feature.
- System can be configured to match the requirements of the installation, i.e., using modem eliminators for connections up to fifty (50) feet, or by using modems and telephone lines.
- Software can be configured from several configuration options such as:
 - 2780, 3780 or Intel Mode
 - Transparent mode for binary data
 - Non-transparent mode for ASCII data
- Automatic translation from ASCII to EBCDIC and vice versa
- Receive chaining for receiving multiple files
- Intel mode is used mainly for file transfers between two Intellec® Development Systems. The files are duplicated exactly.
- Console commands support all standard features including:
 - SEND data in Transparent or Non-transparent mode, with or without translation to EBCDIC
 - RECEIVE in Transparent or Non-transparent mode, with or without translation to EBCDIC.
 - Support for an IBM RJE console (such as HASP)
- Special utility programs are provided. STRZ strips extra binary zero's from the end of object files. CONSOL assigns system console input to an ISIS-II disk file.
- Can process commands interactively from the console or sequentially from an ISIS-II file under the SUBMIT facility for semi-automatic batch operation.
- Error detection in line transmission and error recovery by automatic retransmission.
- A special command such as DIAGNOSE, allows logging of all data activity on the line, during transmission and reception.
- When not used for communicating with the mainframe, the Intellec® Development System is available as a complete, stand-alone system.

BENEFITS

- Allows the customer to use an in-house mainframe or minicomputer for program source-preparation, editing, back-up and maintenance using inexpensive CRT's and multi-terminal access. The common files may be shared and others protected.
 - Many programmers can use and share the high-performance devices normally available on large computer systems, e.g., fast printers to reduce listing time, the large capacity disks with their fast access time to store large program files.
 - The source files can be downloaded using the Mainframe Link to an Intellec Development System (e.g., Model 240 or 245) for compilation, linking and locating.
 - The compiled and/or linked object files may be transmitted back to the remote for storage. Updates and version numbers and dates can be tracked to ensure that the latest version is always used and back-up files are available. Binary object files can be later downloaded to an Intellec Development System for debugging using an ICE emulator.
 - In short, provides a powerful and flexible tool combining the best of both micro and mainframe worlds, i.e., powerful CPU with large disk capacity, file sharing, multi-terminal access, etc., from a mainframe or minicomputer with Intel's versatile and compatible software support systems (including PL/M, PASCAL, FORTRAN, Assembler, R & L) and sophisticated debugging tools such as ICE emulators.
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SPECIFICATIONS**Operating Environment****Required Hardware:**

Intellec® Microcomputer Development System
Model 800
Models 220, 225, 230, 235, 240 or 245

64KB of Memory

One Diskette Drive
Single or Double Density

System Console
Intel CRT or non-Intel CRT

Recommended Hardware for Compilation:

Hard Disk (Models 240, 245, or Model 740 Upgrade)

Additional Hardware Required for Model 800
iSBC-955™, iSBC-534™

Required Software:

ISIS-II Diskette Operating System
Single or Double Density

Documentation Package

Mainframe Link User's Guide (121565-001)

Shipping Media

Flexible Diskettes
Single and Double Density

ORDERING INFORMATION

Part Number	Description
*MDS-384 Kit	Mainframe Link for Distributed Development

*MDS is an ordering code only and is not used as a product name or trademark.
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Remote System Requirements

- IBM 2780/3780 BISYNC protocol as supported by a majority of mainframes and minicomputers including: all IBM-360/370 Systems, PDP-11/70, VAX-11/780, Data General ECLIPSE.
- Users should purchase this standard software package from the remote system vendor and any additional required hardware such as a synchronous communications interface.
- The operating system at the remote must be configured (SYSGEN'ed) with correct options such as line address, 2780 or 3780, . . .

Communication Equipment Requirements

The Intellec Development System may be connected to the remote system using any one of the following methods:

- For short distances (up to 50 feet), use a synchronous modem eliminator (e.g., SPECTRON ME-81FS-2).
- For distances up to four miles, use short haul synchronous modems and telephone lines.
- For distances greater than four miles, use synchronous modems and telephone lines. The following BELL modems or their equivalents are recommended:
 - BELL 201C 2400 bits/second
(half duplex, switched line)
 - BELL 208A 4800 bits/second
(full duplex, leased line)
 - BELL 208B 4800 bits/second
(half duplex, switched line)
 - BELL 209A 9600 bits/second
(full duplex, leased line)
- Modems at either end must be compatible.