

## Features

- Data Modes:
  - V.34: 33.6 Kbps - 2400 bps
  - V.32terbo: 19.2 Kbps, 16.8 Kbps (TCM)
  - CCITT V.32bis: 14.4 Kbps, 12.0 Kbps, 7200 bps (TCM)
  - CCITT V.32: 9600 bps (TCM), 4800 bps (TCM)
  - CCITT V.22bis: 2400 bps (QAM)
  - CCITT V.22: 1200 bps (DPSK)
  - CCITT V.21: 300 bps (FSK)
  - CCITT V.23: 600/75 bps, 1200/75 bps (FSK)
  - Bell 212A 1200 bps (DPSK)
  - Bell 103: 300 bps (FSK)
- FAX modes:
  - CCITT V.17: 14.4 Kbps, 12.0 Kbps, 9600 bps, 7200 bps (TCM)
  - CCITT V.29: 9600 bps, 7200 bps (QAM)
  - CCITT V.27ter: 4800 bps, 2400 bps (DPSK)
  - CCITT V.21 Channel 2: 300 bps (FSK)
- V.42 error correction (LAPM and MNP)
- V.42bis and MNP Class 5 data compression
- V.42 Appendix III - robustness of operation
- FAX command set: EIA/TIA 578 Class 1, 2
- Extensive AT command set

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## AccelePort Xem System

*Modem/4em and  
Modem/8em  
Modules*

## Hardware Information

### Introduction

AccelePort<sup>®</sup> Modem/4em<sup>™</sup> and Modem/8em<sup>™</sup> modules work with any Digi adapter or concentrator that employs Digi's EBI (External Bus Interface) bus. This includes the following Digi products:

- AccelePort Xem<sup>™</sup> adapters (EBI bus is available directly from the adapter to EBI bus modules such as PORTS/Xem<sup>™</sup> or Modem/Xem<sup>™</sup>)
- PORTS/Xem modules or other Modem/Xem modules (the EBI bus is used between modules)
- EPC/CON-16<sup>™</sup> concentrators (the EBI bus is available on each concentrator)
- PortServer II<sup>™</sup> terminal servers (the EBI bus is available on each terminal server)

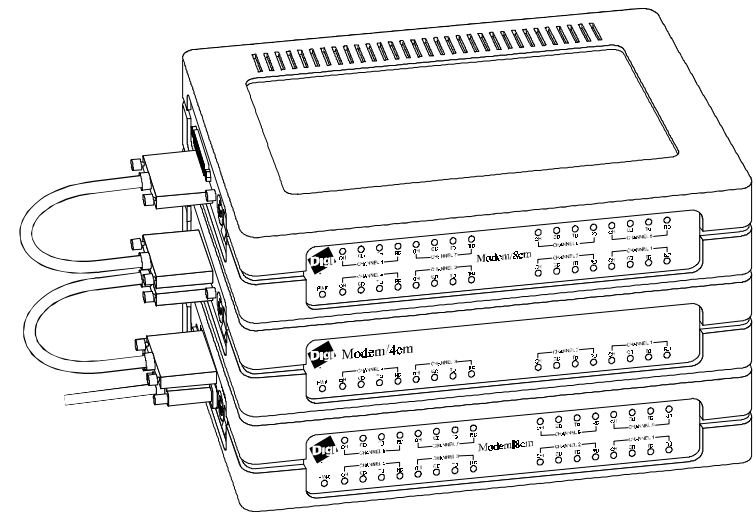


Figure 1. Modem/8em and Modem/4em modules cabled together

## Installation Guidelines

There are just a few things to remember as you install a Modem/4em or Modem/8em module:

### Number of Modules

Several Modem/Xem modules can be attached to one EBI bus. The EBI bus available on EPC/CON-16 concentrators and PortServer II terminal servers supports three Modem/Xem modules. Xem host adapters support four modules.

### EBI cabling

To cable a Modem/Xem module to the EBI bus, the EBI cable (from an Xem adapter, from a concentrator, or another PORTS/Xem or Modem/Xem module) is attached to the EBI IN connector. Use the EBI OUT connector to attach an EBI cable to the next module in the stack.

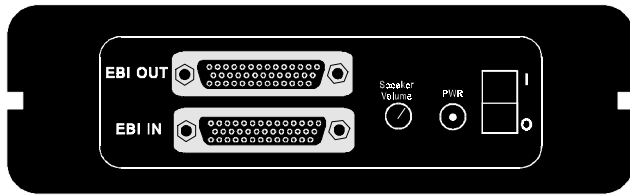


Figure 2. Left panel of Modem/Xem module

**Note:** You must use the cables that come with the PORTS/Xem module; the cables cannot be extended.

When attaching or removing EBI cables to/from the Modem/Xem modules, host system power and the Modem/Xem power switch must be OFF to prevent damage to the modules.

### Power

Power for Modem/Xem modules comes from an external power supply. You should be sure that there is an adequate number of AC receptacles available for the modules that you will install; each Modem/Xem module requires its own power supply.

### Software setup

Some applications may require that you enter a modem initialization string as part of the modem setup. The following initialization command sets the modem to use hardware flow control, error checking, and data compression:

AT&F <Enter>

If you also want to enable auto answer (modem will answer after one ring), use the following command:

AT&FS0=1 <Enter>

For detailed information about the AT command set supported by the Modem/Xem, see the material packaged with the Xem host adapter, or Digi's web site at: [www.dgii.com](http://www.dgii.com).

## Connecting to phone lines

Use standard RF-11C telephone cables to connect Modem/Xem modules to the telephone lines. Connect to analog telephone circuits only. Never connect a modem module to a digital wall jack. Note that internal telephone systems such as a PBX (Private Branch Exchange), may be digital.

Also, the Modem/Xem modules are to be used only with public access phone lines. Leased line operation and "ground start" phone systems are not supported.

### Front Panel

The front panel of the Modem/Xem module shows signal status for each line attached to the module:

- OH** Off Hook - Indicates that the modem is in use.
- CD** Carrier Detect - Indicates that a valid connection has been made over the line.
- TD** Transmit Data - Indicates that the modem is sending data over the line.
- RD** Receive Data - Indicates that the modem is receiving data over the line.

### Speaker control and volume

Each Modem/Xem module has an internal speaker which will provide audio output for any one of the modem ports in the module. You can select the modem port that is to be connected to the speaker (or elect not to use the speaker), via a dip switch on the rear of the unit. The switch settings are as follows:

Modem/4em port #	Modem/8em port #	1	2	3	4
speaker off	speaker off	up	up	up	up
4	8	down	up	up	up
3	7	down	down	up	up
2	6	down	up	down	up
1	5	down	down	down	up
speaker off	4	down	up	up	down
speaker off	3	down	down	up	down
speaker off	2	down	up	up	down
speaker off	1	down	down	down	down



There is a speaker volume control on the left side of the module. Use a small screwdriver to turn the volume up or down:

- To turn volume up, turn the control *counter-clockwise*.
- To turn volume down, turn the control *clockwise*.

The speaker remains on for the duration of the call, not just the modem training sequence. AT commands do not affect speaker operation; you must use the switch to turn off the speaker or change which modem port is connected to the speaker.