
8-Channel Asynchronous Multiplexer Interface

Technical Data

**For HP 1000 A-Series
Computer Systems
Product Number
HP 12040D**

The HP 12040D is an Asynchronous Multiplexer* Interface that can connect up to eight asynchronous terminal, printer, or "black box" devices to an HP 1000 A-Series Computer System using a single I/O slot.

* Modem control lines are passed through to the multiplexer panel to allow passive full-duplex modem support. Active modem control may be achieved by adding the HP 37214A System Modem.

Features

- EIA RS-423-A and RS-232-C/CCITT V.24 compatibility
- Onboard microprocessor off-loads computer
- Onboard buffering with DMA capability
- Programmable data rates using two baud rate generators to eliminate hardware speed strapping
- Automatic baud rate generator configuration
- Programmable character size, parity checking, termination character, and number of stop bits for flexible control of transmission format

- Parity, overrun, and framing error detection
- Bi-directional Xon/Xoff control during multiplexer data transmission
- Supports HP 37214A Systems Modem, which can provide up to 7 ports having full modem control capabilities
- Two of ten baud rate groups may be simultaneously selected
- Supports a Virtual Control Panel (VCP) in RTE-A Systems
- Full-duplex or Echoplex transmission
- Capability to edit data prior to passing it to computer memory, featuring backspace erase
- Includes an 8-port Distribution Panel for mounting RS-232 connections

Functional Description

The HP 12040D Asynchronous Multiplexer Interface provides multiplexed terminal support for up to eight asynchronous RS-232-C compatible devices connected directly, or through full-duplex asynchronous modems*, to the multiplexer. The multiplexer interface can operate at programmable data rates up to 38.4 Kbits/second on

a given channel. For a description of the overall throughput performance refer to the HP 12040D Performance Brief (P/N 5954-8548).

* Modem control lines are passed through to the multiplexer panel to allow passive full-duplex modem support. Active modem control may be achieved by adding the HP 37214A System Modem.

The HP 12040D includes an eight-port multiplexer panel to provide for convenient connection via EIA 25-pin connectors.

Functional Specifications

Capacity

Channels: Eight full-duplex (transmit and receive) communications channels

Buffering: Two 254-byte transmit buffers and two 254-byte receive buffers for each channel

Communications

Interface Level:
RS-423-A/RS-232-C or
CCITT V.24

Program-selectable Data

Rates: 50, 75, 110, 134.5, 150,
300, 1200, 1800, 2400, 4800,
9600, 19.2 K, and
38.4 Kbits/second

Communication Mode:
Asynchronous, bit serial

Programmable Communications

Parameters: Character length
from 5 to 8 bits; 1, 1½, or 2 stop
bits; and odd, even, or no parity

Configuration Information

System Compatibility: The
HP 12040D Interface is
compatible with HP 1000
A-Series Computer Systems
operating under the RTE-A
real-time executive systems,
version 4.1 or later.

The HP 12040D incorporates
firmware designed specifically
for RTE-A interface drivers
ID800 and ID801 (for use with
37214A modem cardcage). The
HP 12040D will be compatible
with previous versions of
RTE-A if interface driver
IDM00 is replaced with either
ID800 or ID801. Consult the
RTE Driver Reference Manual
(P/N 92077-90011) for more
information about compatibility
and upgrade.

**Computer I/O Slots
Required:** 1

Software Support:
RTE Interface Drivers:
ID800, ID801 (37214A Modem)

Supports the following HP Terminals:

2392A	2645A
2621A	2645A Opt007
2622A	2647A
2623A	2647F
2624AB	2648A Opt 007
2625A	2648A
2626A	2649B Opt 007
2627A	2649B/C
2628A	2649C Opt 007
2631A/B	2649G
2635A/B	7310A
2640B	

Current Required from Computer Power Supply:

+5V	2.5 A
+12V	0.10 A
-12V	0.05 A

Physical Characteristics

Dimensions: 26.9 cm long by
17.2 cm wide, by 1.6 mm deep
(11.4 in by 6.75 in by 0.06 in);
top clearance, 10.2 mm (0.4 in);
bottom clearance, 5.1 mm
(0.2 in)

Weight: 481 grams (17 oz) with
mating connector

RS-232-C Panel Extension

The 1252-0508 MUX Cable
Extender Kit includes one set of
male and female connector
components which are used
with up to 300 feet of HP cable
(P/N 8120-4510) to remotely
position the 28658-60005
RS-232-C panel. The raw cable
can be purchased from the
Corporate Parts Center.

Ordering Information

The HP 12040D includes:

12040-60214 8-Channel
Multiplexer Interface Assembly
12040-90123 Interface
Installation and Reference
Manual
5001-5278 Mounting Bracket
28658-60005 8-Channel
RS-232-C Panel
28658-63005 3-meter EIA
RS-232 Cable
1252-0508 MUX Cable
Extender Kit

HP 12040D Options:

- 001** Firmware upgrade from
12040C to 12040D
Deletes: Everything
except manual
(12040-90123)
Adds: (12040-96001)
Instruction Sheet
(5180-7300) Firmware
ROM
- 002** Cable option for use with
37214A SystemModem
Deletes: (28658-60005)
RS-232-C Panel
(28658-63005) Cable
(1252-0508) Extender
Kit (5001-5278)
Mounting Bracket
Adds: (12828-60002)
Cable
- 003** Custom Connection
Deletes: (28658-60005)
RS-232-C Panel
(28658-63005) Cable
(1252-0508) Extender
Kit (5001-5278)
Mounting Bracket
Adds: (5061-3467) Edge
Connector Kit

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