

-PRELIMINARY-

Asynchronous Communications Interfaces



12966A • 12968A • 12587B

Features

- Plug-in compatibility with 21MX Series and 2100 Series computers
- EIA RS-232-C and CCITT V.24 compatibility
- Compatible with Bell 103 and 202 Data Sets or equivalent
- Data Set control implemented through software
- Simplex, half duplex or echoplex operations with secondary data channel
- Selectable data transfer rates to 9600 bits per second, under either program or Dual Channel Port Controller/Direct Memory Access control
- Multiple character buffering
- Special character recognition/interrupt capability with 256 special character memory (12966A only)
- Selectable character size, parity checking, and number of stop bits
- Hardware break detection (12966A and 12968A)

HP 12966A BUFFERED ASYNCHRONOUS COMMUNICATIONS INTERFACE

The HP 12966A offers the most capability of HP's single line asynchronous interfaces, featuring a 128-character data buffer for efficient use of CPU time, and special character recognition/interrupt capability with a 256 character RAM special character memory. The interface has flags to indicate buffer status, enabling more efficient CPU utilization by reducing the number of times an interrupt must be serviced. Efficiency may be further increased by using the capability to transfer data directly to and from memory at Dual Channel Port Controller (DCPC) speeds. The special character memory allows the user to specify up to 256 special characters and set a flag for interrupt purposes whenever a special character is received.

The 12966A is programmable using HP Assembly Language subroutines, and gives the user the flexibility to handle a large variety of communications requirements. Byte parity generation and checking (even or odd, on or off), character size (5-8 bits), number of stop bits (1, 1-1/2 or 2), and data transmission rates (from 50 to 9600 bits per second) are all determined under program control, and are easily modified through software. The 12966A also has full modem control capability implemented through software, so that any 103 or 202 type modem may be interfaced without the need for hardware modifications on the interface board. The interface may be used either with local (hardwired) terminals, or with remote terminals via modems. The 12966A has secondary data channel capability, is able to detect a hardware break, and features continuous monitoring of RS-232-C input lines.

HP 12968A ASYNCHRONOUS COMMUNICATIONS INTERFACE

The HP 12968A was designed for the user who needs a flexible communications interface capable of operating at high speeds, but who does not need all the power of the large buffer and special character recognition/interrupt feature that the 12966A offers. The 12968A is identical to the 12966A in every respect, except that it has a two-character buffer and no special character capability.

Since the 12968A is a subset of the 12966A, a convenient upgrade path to the 12966A is available; application software may be written so that one driver program will work with either board, and take full advantage of the capabilities of each interface. The more economical 12968A may be used until the full power of the 12966A is required, and the upgrade will require no additional software investment.

The 12968A offers most of the flexibility of the 12966A, including programmable parity checking, character size, number of stop bits, and data transmission rates. It may also be used with local terminal connections or via 103 or 202 or equivalent data sets.

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**DATA SET SIGNALS PROVIDED
(HP 12966A and 12968A)**

EIA Designation	
Transmitted Data	(BA)
Received Data	(BB)
Request to Send	(CA)
Clear to Send	(CB)
Data Set Ready	(CC)
Signal Ground	(AB)
Received Line Signal Detector	(CF)
*Secondary Received Line Signal Detector	(SCF)
*Secondary Transmitted Data	(SBA)
*Secondary Received Data	(SBB)
*Secondary Request to Send	(SCA)
Data Terminal Ready	(CD)
Ring Indicator	(CE)

**The user may choose any one of the pairs SBA,SBB; SBA,SCF; SCA,SBB; or SCA,SCF. Wiring details are given in the Reference and Application Manual.*

HP 12587B ASYNCHRONOUS COMMUNICATIONS INTERFACE

The HP 12587B may be used with local (hardwired) connections or via data sets to provide asynchronous communications at speeds up to 3110 bits per second. Data rates

are jumper selectable, and programmable functions include character size, parity generation and checking, and number of stop bits.

The 12587B conforms to EIA and CCITT specifications, and is installed by simply plugging the printed circuit board into the appropriate computer I/O slot and connecting the cable.

**DATA SET SIGNALS PROVIDED
(HP 12587B)**

EIA Designation	
Protective Ground	(AA)
Transmitted Data	(BA)
Received Data	(BB)
Request to Send	(CA)
Clear to Send	(CB)
Data Set Ready	(CC)
Signal Ground	(AB)
Carrier Detect	(CF)
Secondary Transmitted Data	(SBA)
Secondary Received Data	(SBB)
Data Terminal Ready	(CD)
Ring Indicator	(CE)

Product Specifications

Model	Interface Level	Number of Baud Rates		Maximum Baud Rate		Programmable Character Size	Number of Stop Bits		Character Buffering	Programmable Parity Generation Checking	Special Character Memory	Modem Interface Capability	Power Required	Break Detection
		Hardware Selectable	Software Selectable	Interface Clock	External Clock		Hardware Selectable	Software Selectable						
12966A	EIA/CCITT	15	15	9600	9600	5,6,7,8	-	1,1.5,2	128	None odd, even	256 char.	Bell 103 or 202 type data sets. Secondary data chan.	1.95A (+5V) 0.018A (+12V) 0.059A (-12V) 0.066A (-2V)	Hardware Detect
12968A	EIA/CCITT or 20 mA	15	15	9600	9600	5,6,7,8	-	1,1.5,2	2	None, odd, even	-	Bell 103 or 202 type data sets. Secondary data chan.	1.3A (+5V) 0.012A (+12V) 0.035A (-12V) 0.052A (-2V)	Hardware Detect
12587B	EIA/CCITT	N	-	3110	9600	1-9	1,2	-	2	None, odd, even	-	Bell 103 or 202 type data sets. Secondary data chan.	1.6A (+4.5V) 0.080A (+12V) 0.045A (-12V) 0.070A (-2V)	Software Detection with 202 type data set

Product Support

EQUIPMENT SUPPLIED – HP 12966A

Asynchronous Communications Interface Card
(12966-60001)

Test Connector Assembly (12966-60003)

Cables

Standard: EIA terminal cable (12966-60004)

Option 001: HP 2640A Cable (12966-60005)

Option 002: Data Set Cable (12966-60006)

Option 003: HP 2749B Cable (12966-60007)

SOFTWARE SUPPLIED

Standard: Interface diagnostic (12966-16001)

Option 421: DOS-III Driver, DVR 74 (24307-16014)

DOCUMENTATION SUPPLIED

Reference and Application Manual (12966-90001)

Diagnostic Manual (12966-90004)

Option 421: DOS-III Driver Manual (24307-90012)

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Asynchronous Communications Interface Card
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Option 002: Data Set Cable (12966-60006)

Option 003: 2749B Cable (12966-60007)

SOFTWARE SUPPLIED

Standard: Interface diagnostic (12968-16001)

Option 421: DOS III Driver, DVR 74 (24307-16014)

DOCUMENTATION SUPPLIED

Reference & Application Manual (12968-90001)

Diagnostic Manual (12968-90003)

Option 421: DOS-III Driver Manual (24307-90012)

EQUIPMENT SUPPLIED – HP 12587B

Asynchronous Communications Interface Card
(12587-60004)

Cables

Standard: Data Set Cable (12587-60006)

Option 001: HP 2616 terminal cable (12587-60010)

Option 003: HP 2640A cable

SOFTWARE SUPPLIED

Standard: Interface diagnostic (24221-60001)

Option 421: DOS-III Driver, DVR 72 (24350-16001)

DOCUMENTATION SUPPLIED

Operating and Service Manual (12587-90006)

Option 421: DOS-III Driver Manual (12587-90012)

ORDERING INFORMATION

HP 12966A	Buffered Asynchronous Communications Interface, including EIA terminal cable
-001	Add HP 2640A cable and delete EIA terminal cable
-002	Add data set cable and delete EIA terminal cable
-003	Add HP 2749B cable and delete EIA terminal cable
-421	Add DOS-III Physical Driver, DVR 74
HP 12968A	Asynchronous Communications Interface including EIA terminal cable
-001	Add HP 2640A cable and delete EIA terminal cable
-002	Add data set cable and delete EIA terminal cable
-003	Add HP 2749B cable and delete EIA terminal cable
-421	Add DOS-III Physical Driver, DVR 74
HP 12587B	Asynchronous Communications Interface including data set cable
-001	Add HP 2616 cable and delete data set cable
-003	Add HP2640A cable and delete data set cable
-421	Add DOS-III Physical Driver, DVR 72



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Sales and service from 172 offices in 65 countries.

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