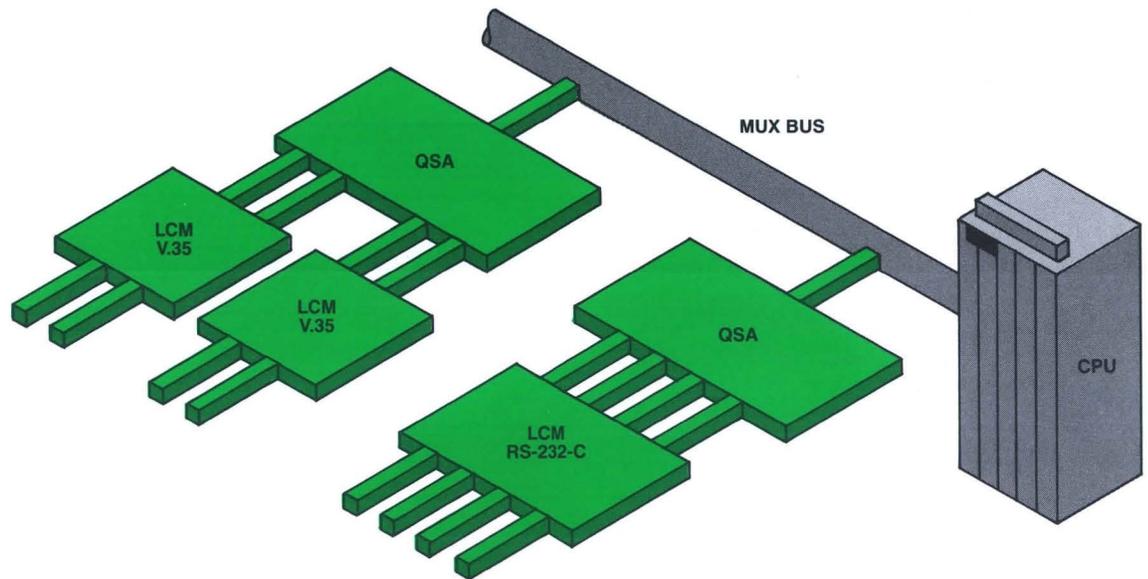


QSA

Quad Synchronous Adapter

A Data
Communications
Product



Product Description

The Quad Synchronous Adapter (QSA) is a highly flexible data communications interface for Perkin-Elmer's Series 3200 family of supermini computer systems. The QSA provides an economical telecommunications interface between the computer and the data set (modem) used with common carrier switched or leased facilities. Up to four lines can be supported.

Part of Perkin-Elmer's array of advanced data communications products, the QSA is a double-buffered communications interface and controller for the Bell Series 200 and 300 synchronous modems or equivalent. The QSA supports both half-duplex (2-wire) and full-duplex (4-wire) operations. Synchronous modems permit higher baud rates over voice grade facilities, allowing more efficient data transmission and lower line costs.

The QSA interfaces a wide variety of synchronous data sets including the I/O MUX bus, the SELCH bus, the private I/O bus of the Enhanced Memory Access Multiplexor (EMAM), and the DMA I/O Subsystem (DIOS).

The QSA is available in two versions:

- M47-002 accommodates binary synchronous protocols or other similar character-oriented protocols.
- M47-003 accommodates both binary synchronous protocols and bit-oriented protocols, such as SDLC, HDLC, and ADCCP.

Features

Models M47-002 and M47-003

- Four half or full-duplex lines per board, strap selectable on a per-line basis.
- Full support for binary synchronous protocol or other similar character-oriented protocols.
- High Data Throughput—The QSA handles data rates to 56K bits/second to match today's high data-rate facilities, minimizing line connection time and lowering costs.
- Program control of those parameters most commonly subject to change with system evolution, such as character size, sync character, and odd/even or no parity.
- Full modem control and double-buffering.

- System Design Flexibility—On-board ribbon-cable connector for use with Perkin-Elmer's Line Conditioning Module (LCM) (M47-004/005). This permits interfacing to modems using an electrical interface such as CCITT V.24, V.35, or RS-232-C.

- Local loopback mode for on-line testing.

Model M47-003 only

- Automatic Zero Bit Insertion/Deletion and automatic flag insertion/deletion as required for ADCCP, HDLC, and SDLC (enable/disable under program control).

Operational Characteristics

In the operational environment, the user-provided modem supplies the clock signals that determine the data transmission rate for the QSA. Perkin-Elmer's QSA is not affected by the transmission rate as long as it does not exceed the QSA's upper limit of 56K bits/second.

During binary synchronous transmission (or any similar character-oriented protocol), data is transmitted in a bit serial fashion. Synchronization, or character framing, is achieved when the QSA detects a character match between the incoming characters and the character previously set up by the program. This match character, called a sync

character, can be any 5,6,7, or 8-bit character in the range Hex '03' to Hex 'FE' (with or without parity). The sync character is program selectable. The Zero Bit Insertion/Deletion (ZBID) function can be enabled or disabled under program control for data transmission using bit-oriented protocol. When enabled, the pattern and size of the flag character are set. The flag character is automatically sent by the QSA at the beginning and end of each transmission. The QSA also automatically provides Zero Bit Insertion and Deletion, as required between flags, while the bit stream is transmitted and received, respectively.

Specifications

Character Format:
Programmable—5,6,7, or 8 data bits

Maximum Data Rate:
56K bits/second, total

Parity:
Programmable—odd, even, or none

Modem Control:
Programmable—Data Terminal Ready; Request To Send

Modem Status:
Clear To Send
Carrier
Ring
Data Set Ready

Other Status:
Overflow
Parity Fail
Termination/Abort

Power Requirements:
4.8 amperes @ 5 volts DC

Operating Environment:
0° to 50°C
10-90% relative humidity (no condensation)

Weight:
1.5kg (3 pounds)

Dimensions:
381mm x 381mm (15 in. x 15 in.)

Product Numbers

M47-002 Quad Synchronous Adapter (character mode only)

M47-003 Quad Synchronous Adapter (character or bit mode)

Related Product Numbers

M47-004 Line Conditioning Module (CCITT V.35 specifications)

M47-005 Line Conditioning Module (CCITT V.24 specifications)

M47-008 Cable Assembly

Related Documentation

29-594 QSA Maintenance Manual

29-473 SSA/QSA Programming Manual

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SPAIN: Madrid; UNITED KINGDOM: Manchester,
Slough. Other countries are served by a network
of distributors.

The information contained herein is intended to be a general description and is subject to change with product enhancement.

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