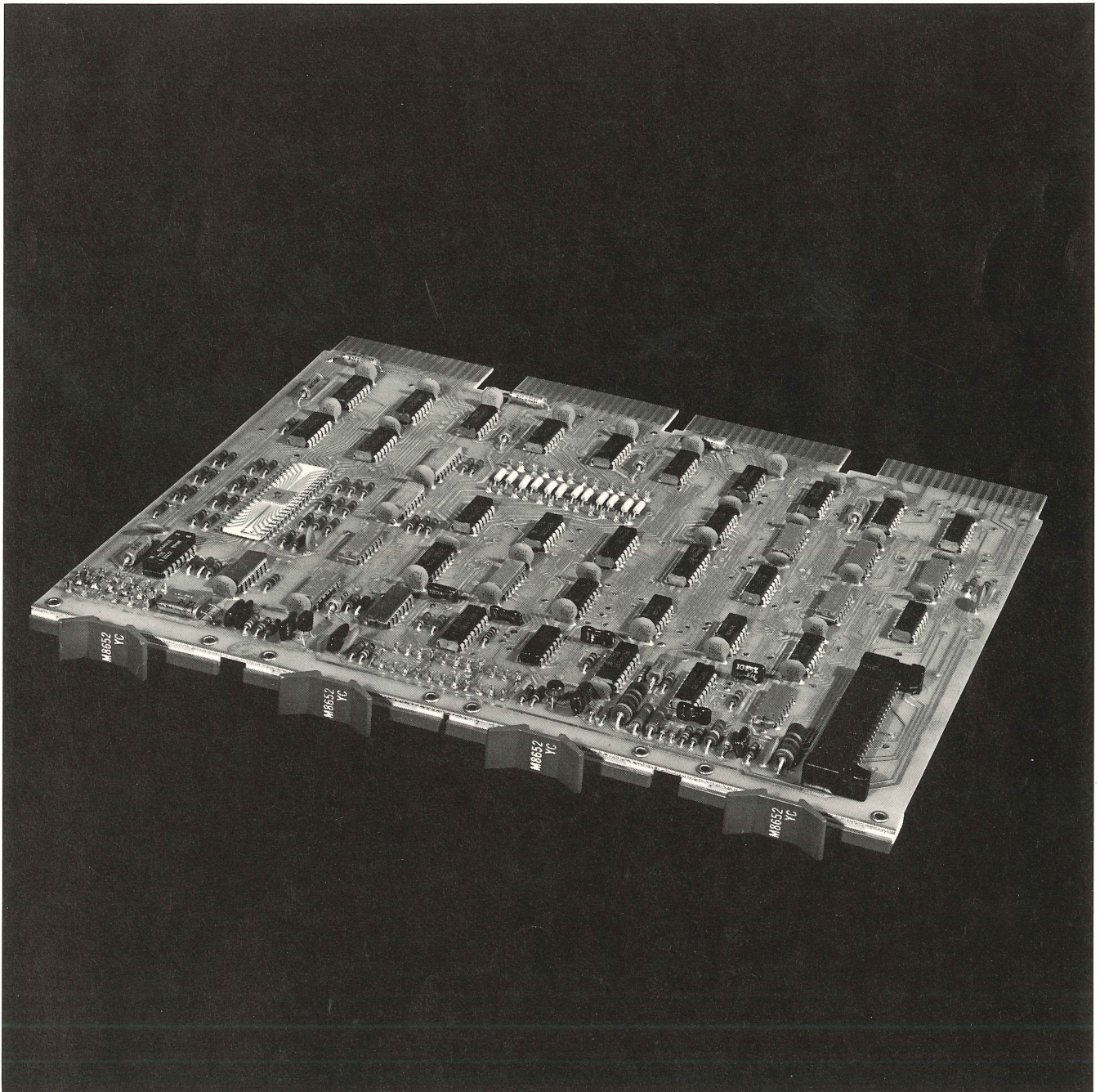


DIGITAL EQUIPMENT CORPORATION

pdp8/e

KL8 Communication Interfaces



digital

The KL8 is a single line asynchronous data control designed and packaged on one quad module which plugs directly into the Omnibus of the PDP8/E. The KL8 series provides complete facilities for interfacing teleprinters, alpha-numeric displays and other asynchronous terminals to the PDP8/E. The KL8 may also be used to communicate to PDP8/E's or other computers. The KL8 is available in various baud rates along with a double buffered version and a modem control.

KL8-E Specifications

Environment

- Temperature: 0° to 55° C (operating)
- Humidity: 10% to 90% non-condensing (operating)
- Type of transmission—asynchronous
- Type of reception—asynchronous
- Number of start bits—one (1)
- Number of data bits—eight (8)
- Number of stop bits—1 or 2 (jumper selectable on module)

KL8-F Specifications

(Double Buffered Version)

Environment

- Temperature: 0° to 55° C (operating)
- Humidity: 10% to 90% non-condensing (operating)
- Type of transmission—asynchronous
- Type of reception—asynchronous
- Number of start bits—1
- Number of data bits—5, 6, 7, or 8 bits jumper selectable
- Number of stop bits—1 or 2 jumper selectable

Parity generation and checking is controlled by inserting jumpers, i.e. odd/even parity (5, 6, 7 or 8 bits), parity/no parity.

Interface Cable

Interface cable supplied is 25 feet.

Programming

The KL8-F is program compatible with the KL8-E instructions except where noted. The instruction set for the keyboard (input) is as follows:

Mnemonic	Octal	Operation
KCE	6XX0	Clear Keyboard Flag
KSF	6XX1	Skip on Keyboard Flag

KCC	6XX2	Clear Keyboard Flag (Set reader run*)
KRS	6XX4	Read Keyboard Buffer (Static)
KIE	6XX5	Set/Clear Interrupt Enable
KSE	6XX5	Set/Clear Status Word Enable (KL8-F only)
KRB	6XX6	Read Keyboard Buffer (Dynamic) Clear keyboard flag (set reader run*)

*KL8-E only

The instruction set for the teleprinter (output) is as follows:

Mnemonic	Octal	Operation
TFL	6XX0	Set Teleprinter Flag
TSF	6XX1	Skip on Teleprinter Flag
TCF	6XX2	Clear Teleprinter Flag
TPC	6XX4	Load Teleprinter and Print
TPI	6XX5	Skip on Teleprinter or Keyboard Flag if Interrupt Enabled is set
TLS	6XX6	Load Teleprinter Sequence
TBK	6XX7	Generate Break (KL8-F only)

KL8-F only

Read Status to AC0-3 if status word is Enabled.
(and clear status word enable—KL8-F).

Any Error	AC0
Parity Error	→ AC1
Framing Error	→ AC2
Overrun Error	→ AC3

KL8-E Designations

KL8-E	110 Baud send/110 Baud receive 20 ma current loop
KL8-EA	110 Baud send/110 Baud receive EIA Data Leads
KL8-EB	150 Baud Send/150 Baud receive EIA Data Leads
KL8-EC	300 Baud send/300 Baud receive EIA Data Leads
KL8-ED	600 Baud send/600 Baud receive EIA Data Leads
KL8-EE	1200 Baud send/1200 Baud receive EIA Data Leads
KL8-EF	1200 Baud send/150 Baud receive EIA Data Leads
KL8-EG	2400 Baud send/150 Baud receive EIA Data Leads

KL8-F Designations

KL8-FA	110 Baud send/110 Baud receive EIA Data Leads
KL8-FH	134.5 Baud send/134.5 Baud receive EIA Data Leads
KL8-FB	150 Baud send/150 Baud receive EIA Data Leads
KL8-FC	300 Baud send/300 Baud receive EIA Data Leads
KL8-FD	600 Baud send/600 Baud receive EIA Data Leads
KL8-FE	1200 Baud send/1200 Baud receive EIA Data Leads
KL8-FF	1200 Baud send/150 Baud receive EIA Data Leads

KL8-FG	2400 Baud send/150 Baud receive EIA Data Leads
KL8-FJ	1800 Baud send/1800 Baud receive EIA Data Leads
KL8-FK	2400 Baud send/2400 Baud receive EIA Data Leads

KL8-M

The KL8-M adds modem control capabilities to the KL8-E and KL8-F EIA type interfaces. The KL8-M provides control for "Data Terminal Ready" and "Request to Send," and detects the status of "Carrier Detect," "Clear to Send," and "Ring Detect." It also allows for secondary channel transmit and receive on a bit basis, program controlled. All of the above features conform to EIA RS232C and CCITT specifications. The KL8-M will accommodate Bell 103A/F/E/G/H, 202 C/D and 811B or equivalent modems.

Programming

Summary of KL8-M Instructions and their functions:

Mnemonic Octal Operation

6XX0	MCCI	Clear Modem Interface
6XX1	MCLC	Load Control Word
6XX2	MCST	Load Secondary Transmit
6XX3	MCRF	Skip on a Ring Flag, clear it if set
6XX4	MCSS	Skip on Clear to Send Transition, clear flag if set
6XX5	MCSC	Skip on Carrier Transition, clear flag if set
6XX6	MCSR	Skip on Secondary Receive Transition, clear flag if set
6XX7	MCRS	Read Status

