

USAR

K25C81

A Versatile PC/XT/AT/PS2 Compatible Keyboard Encoder KeyCoder™

Description

The USAR K25C81 KeyCoder is an HCMOS microcontroller offering encoding of a custom keyboard, a communication channel with a BIOS system keyboard port, and -in addition- an 8042 emulation port for communication with other optional keyboard compatible devices, such as a PS2 mouse, or a standard desktop keyboard.

This makes the K25C81 ideal for PC/AT/PS2 types of applications requiring a custom keyboard or keypad, while preserving the system keyboard communication port.

On an 8X18 matrix, the K25C81 will scan, debounce and encode up to 144 keys. Scan codes corresponding to single keys of the IBM 101 keyboard, or a combination of these with Shift, Ctrl and Alt keys are generated with each key press. Keys can be defined to be single action or repeating. All keys must be released between keystrokes otherwise scanning is suspended.

The K25C81 can buffer up to 122 keycodes. Control inputs/outputs are provided for interfacing with contact keyboards. Input both from the external device and the matrix is multiplexed and presented to the system as if it were originating from a single source.

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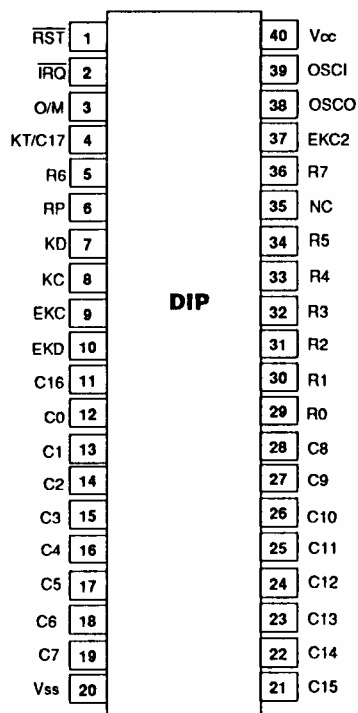
Features

- Interfaces directly to the PC's keyboard port
- Up to 144 custom keys on an 8 X 18 matrix
- Interfaces to 83 /101/102 standard keyboard or other 8042 compatible device
- Two-key inhibit scanning mode
- Buffers up to 122 keycodes
- Custom keypad scan codes are not affected by Shift states of external keyboard
- Jumper selectable auto-repeat for selected keys
- Low power HCMOS microcontroller, operating at 4 MHz
- Available in DIP, PLCC and Quad Flat packages
- Available in wide temperature range
- Custom versions available in small or large quantities

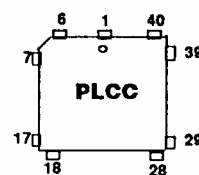
Applications

- Control Panels
 - Automatic teller machines
 - Instrumentation
- Point of sales terminals
Public information kiosks
Industrial controllers

Pin Configurations



Top View

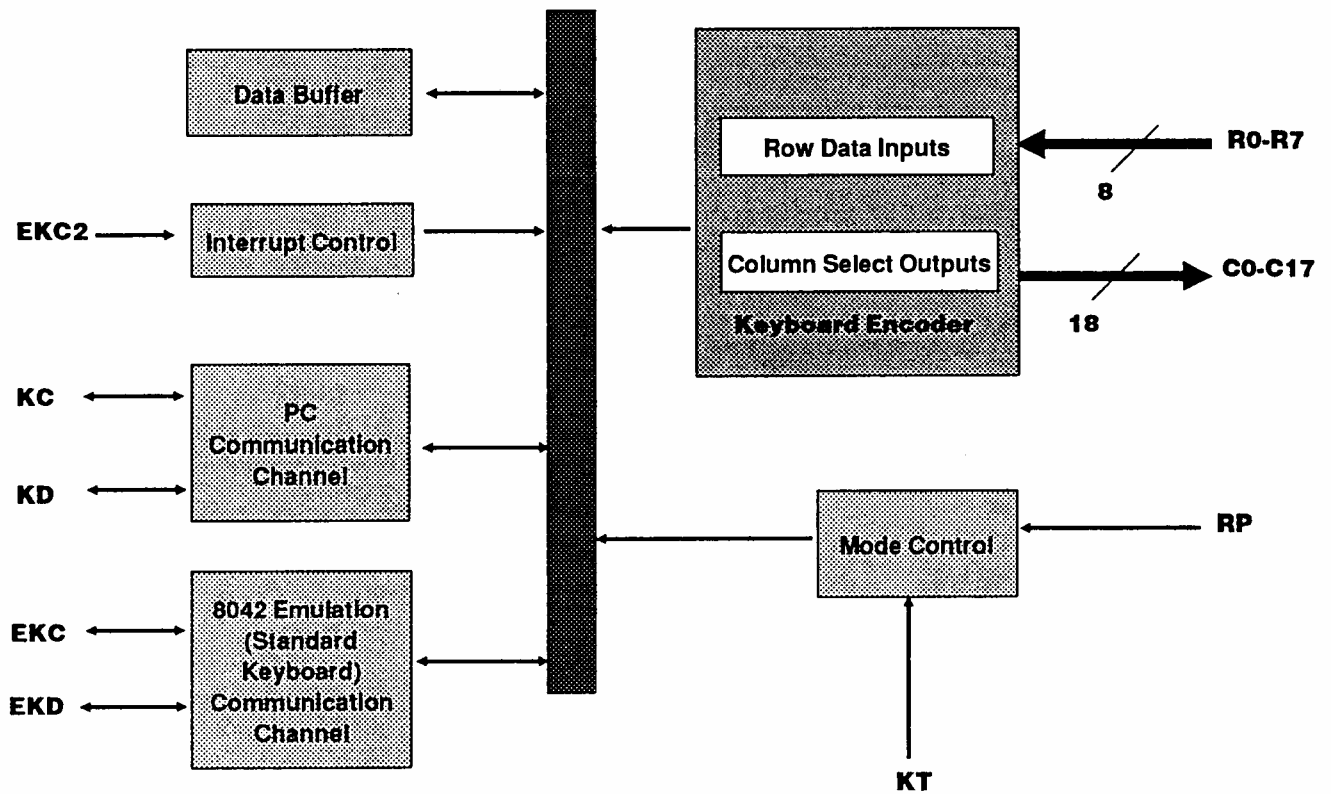


Pin	Function	Pin	Function
1	RST	23	NC
2	IRQ	24	C15
3	NC	25	C14
4	O/M	26	C13
5	KT/C17	27	C12
6	R6	28	C11
7	RP	29	C10
8	KD	30	C9
9	KC	31	C8
10	EKC	32	R0
11	EKD	33	R1
12	C16	34	R2
13	C0	35	R3
14	C1	36	R4
15	C2	37	R5
16	C3	38	NC
17	C4	39	R7
18	NC	40	NC
19	C5	41	EKC2
20	C6	42	OSCO
21	C7	43	OSCI
22	Vss	44	Vcc

Ordering Code

Packages	TA=0 °C to +70 °C	TA=-40 °C to +85 °C
40pin, Plastic DIP	K25C81-P	K25C81-CP
44pin, Plastic PLCC	K25C81-FN	K25C81-CFN
44pin, Plastic QFP	K25C81-FB	K25C81-CFB

Functional Diagram



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systems