



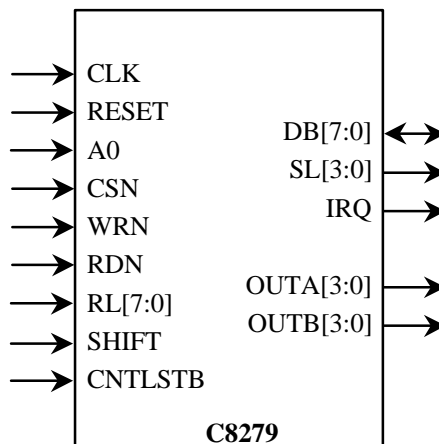
C8279 Programmable Keyboard/Display Interface

General Description

The C8279 is a programmable keyboard and display interface designed for use with microprocessors. The keyboard portion can provide a scanned interface to a 64-contact key matrix. The display portion provides a scanned display interface for LED, incandescent and other display technologies.

Features

- ◆ Simultaneous Keyboard Display Operation
- ◆ Scanned Keyboard Mode
- ◆ Scanned Sensor Mode
- ◆ Strobed Input Entry Mode
- ◆ 8-Character Keyboard FIFO
- ◆ 2-Key Lockout or N-key Rollover with Contact Debounce
- ◆ Dual 8- or 16-Numeric Display
- ◆ Single 16-Character Display
- ◆ Right or Left Entry 16-Byte Display RAM
- ◆ Mode Programmable from CPU
- ◆ Interrupt Scan Timing
- ◆ Interrupt Output on Key Entry
- ◆ Functionality based on the Intel 8279



Symbol

Pin Description

Name	Type	Polarity	Description
CLK	In	Rising	Clock
RESET	In	High	Reset
CSN	In	Low	Chip Select
A0	In	-	Buffer Address
RDN	In	Low	Input/Output Read
WRN	In	Low	Input/Output Write
RL[7:0]	In	-	Return Lines
SHIFT	In	-	Shift Input Status
CNTSTB	In	-	Control/Strobed Input Mode
IRQ	Out	-	Interrupt Request
SL[3:0]	Out	-	Scan Lines
OUTA[3:0]	Out	-	Outputs for the 16x4 display refresh registers
DBN	Out	Low	Blank Display

Device Utilization & Performance

Target Device	Speed Grade	Utilization		Performance F_{max}	Availability
		LCs	EABs		
EPF10K50E	-1	1870	-	32 MHz	Now

Verification Methods

The C8279 core's functionality was verified by means of a proprietary hardware modeler. The same stimulus was applied to a hardware model which contained the original Intel 8279 chip, and the results compared with the core's simulation outputs.

Deliverables

Encrypted Licenses

- Post-synthesis AHDL
- Assignment & Configuration
- Symbol file
- Include file
- Vectors for testing the functionality of the megafunction

HDL Source Licenses

- HDL RTL source code
- Testbench
- Example testbench wrapper for post-route simulation
- Vectors for testbench
- Expected results for testbench
- Simulation and synthesis script

Related Information

Intel Microprocessor and Peripheral Handbook
Volume II, 1989
ISBN 1-55512-041-5

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