

CMOS 8-bit Single Chip Microcomputer

Piggyback/
evaluator type

Description

The CXP82200 is a CMOS 8-bit single chip micro-computer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP82220/82224.

Features

- Wide-range instruction system (213 instructions) to cover various types of data
 - 16-bit operation/multiplication and division/
Boolean bit operation instructions
- Minimum instruction cycle 400ns at 10MHz operation
 122 μ s at 32kHz operation
- Applicable EPROM LCC type 27C128, LCC type 27C256
 (Maximum 24K bytes are available.)
- Incorporated RAM capacity 704 bytes (Including fluorescent display data area)
- Peripheral functions
 - A/D converter 8-bit, 8-channel, successive approximation method
 (Conversion time of 32 μ s/10MHz)
 - Serial interface Incorporated 8-bit, 8-stage FIFO (Auto transfer for 1 to 8 bytes), 1 channel
 8-bit clock sync type, 1 channel
 - Timer 8-bit timer
 8-bit timer/counter
 19-bit time base timer
 16-bit capture timer/counter
 32kHz timer/counter
 - Fluorescent display panel controller/driver
 - Maximum 384 segment display possible
 - 1 to 16-digit dynamic display
 - Dimmer function
 - High voltage drive output (40V)
 - On-chip pull-down resistor (Mask option)
 - Hardware key scan function (Maximum 16 \times 8 key matrix compatible)
 - Remote control reception circuit 8-bit pulse measurement counter with on-chip 6-stage FIFO
 - PWM output 14 bits, 1 channel
 - CTL duty detection circuit
 - High-speed output circuit Four RTG outputs
- Interruption 19 factors, 15 vectors, multi-interruption possible
- Standby mode Sleep/stop
- Package 100-pin ceramic QFP

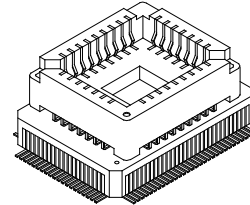
Note) Mask option depends on the type of the CXP82200. Refer to the Products List for details.

Structure

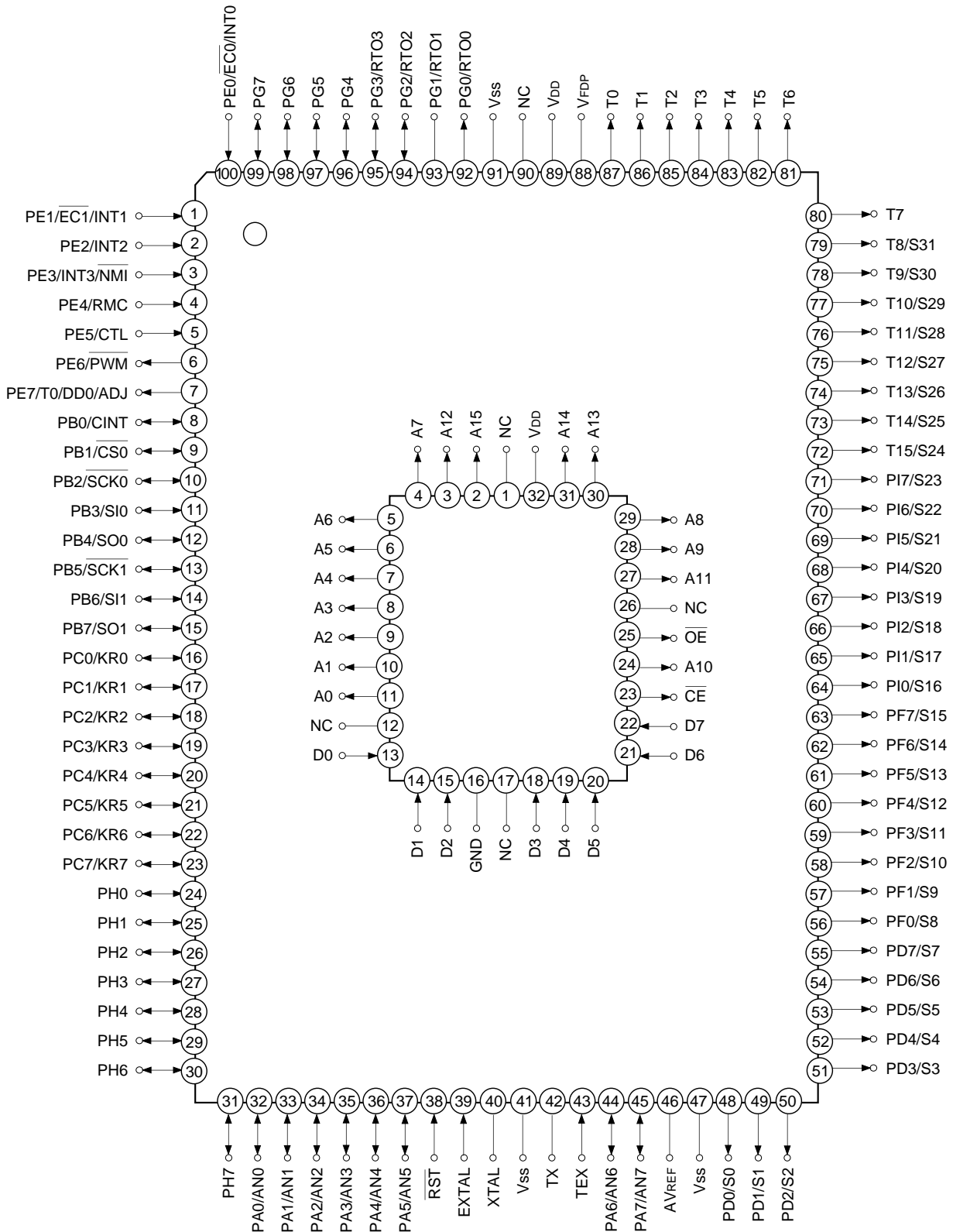
Silicon gate CMOS IC

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100 pin PQFP (Ceramic)

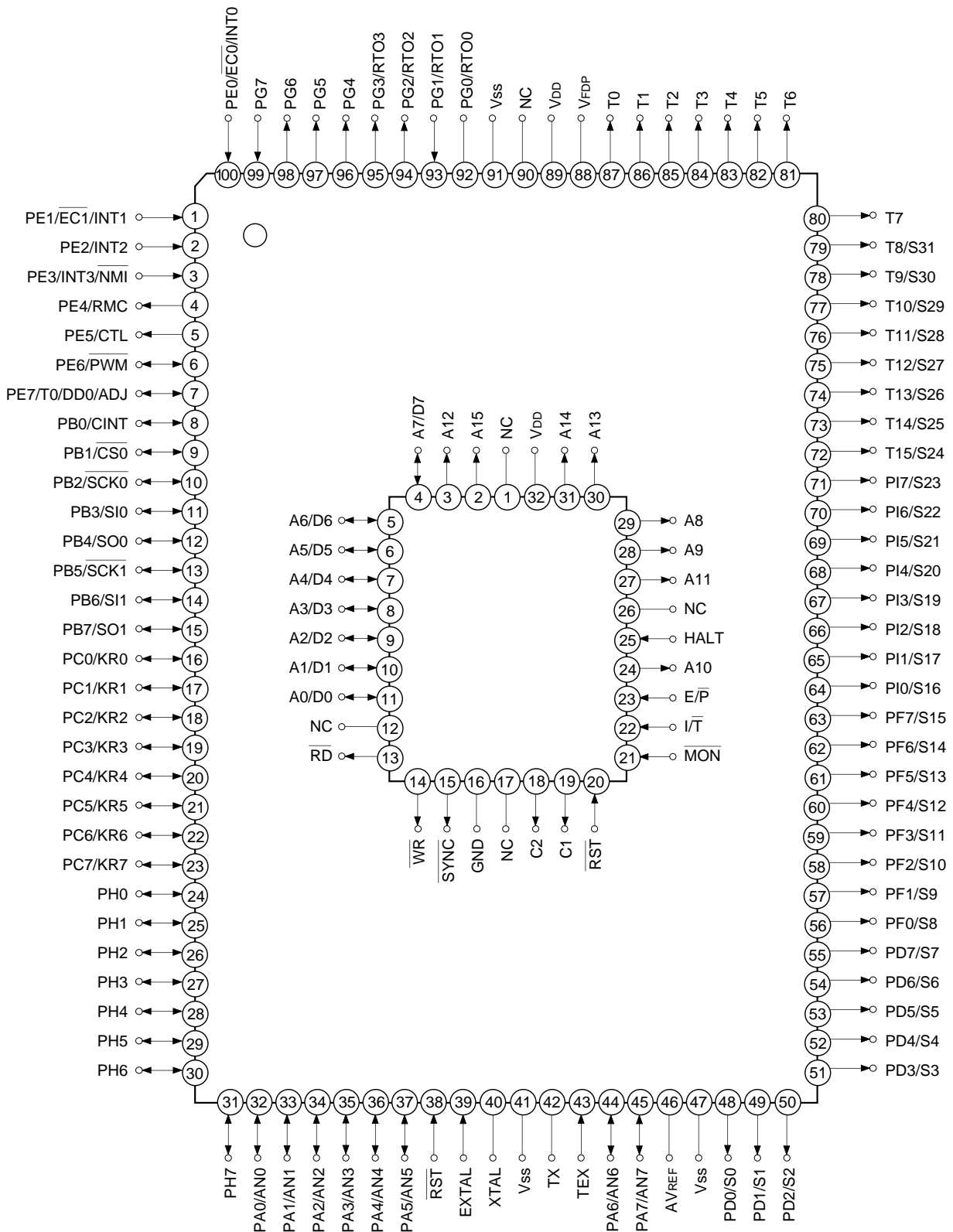


Pin Assignment in Piggyback Mode



- Note)**
1. NC (Pin 90) is always connected to VDD.
 2. Vss (Pins 41 and 91) are both connected to GND.

Pin Assignment in Evaluator Mode

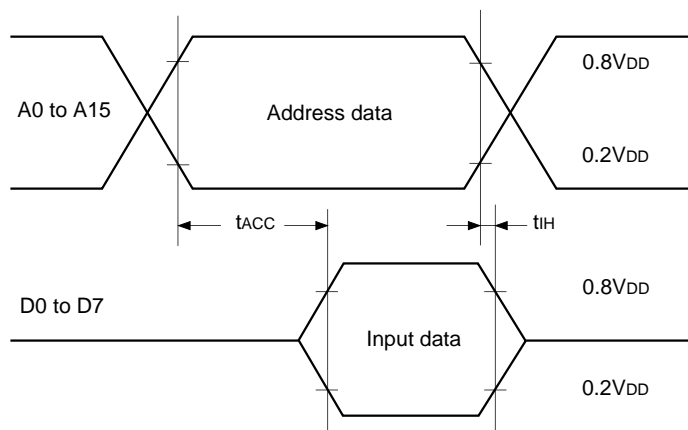


- Note)**
1. NC (Pin 90) is always connected to VDD.
 2. Vss (Pins 41 and 91) are both connected to GND.

EPROM Read Timing

($T_a = -20$ to $+75^\circ\text{C}$, $V_{cc} = 4.5$ to 5.5V , $V_{ss} = 0\text{V}$ reference)

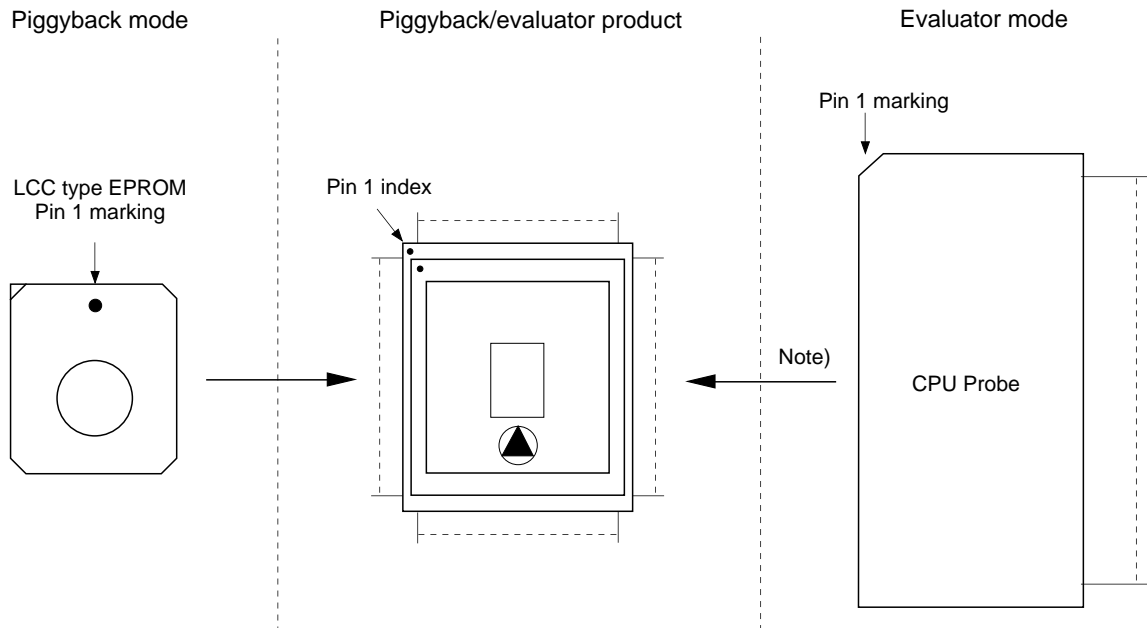
Item	Symbol	Pins	Min.	Max.	Unit
Address → Data Input delay time	t_{ACC}	A0 to A15 D0 to D7		120	ns
Address → Data Hold time	t_{IH}	A0 to A15 D0 to D7	0		ns



Products List

Option item	Products		
	Mask		Piggyback/evaluator
	CXP82220	CXP82224	CXP82200-U01Q
Package	100-pin plastic QFP		100-pin ceramic PQFP
ROM capacitance	20K bytes	24K bytes	EPROM 24K bytes
Pull-up resistance for reset pin	Existent/Non-existent		Existent
Power-on reset circuit	Non-existent		Non-existent
Pull-down resistance for high voltage drive pin	Existent/Non-existent		Only port for display

Piggyback mode/evaluator mode can be switched as shown below.



Note) Evaluation cap should be connected to CPU probe.

