

### Description

The CXP82300 is a CMOS 8-bit single chip micro-computer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP82316/82320/82324.

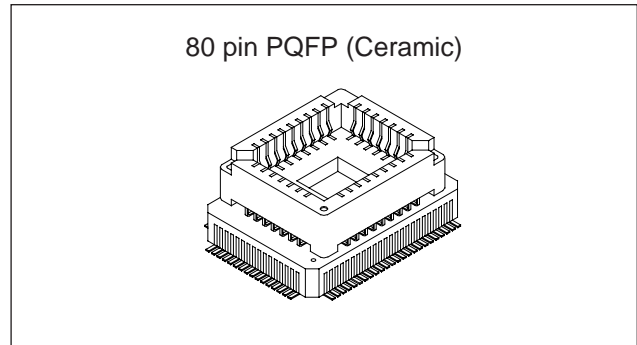
### Features

- 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
- 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 $\mu$ 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
  - Fluorescent display panel controller/driver  
Maximum 336 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
- Interruption                        14 factors, 14 vectors, multi-interruption possible
- Standby mode                      Sleep/stop
- Package                             80-pin ceramic QFP

**Note)** Mask option depends on the type of the CXP82300. Refer to the Products List for details.

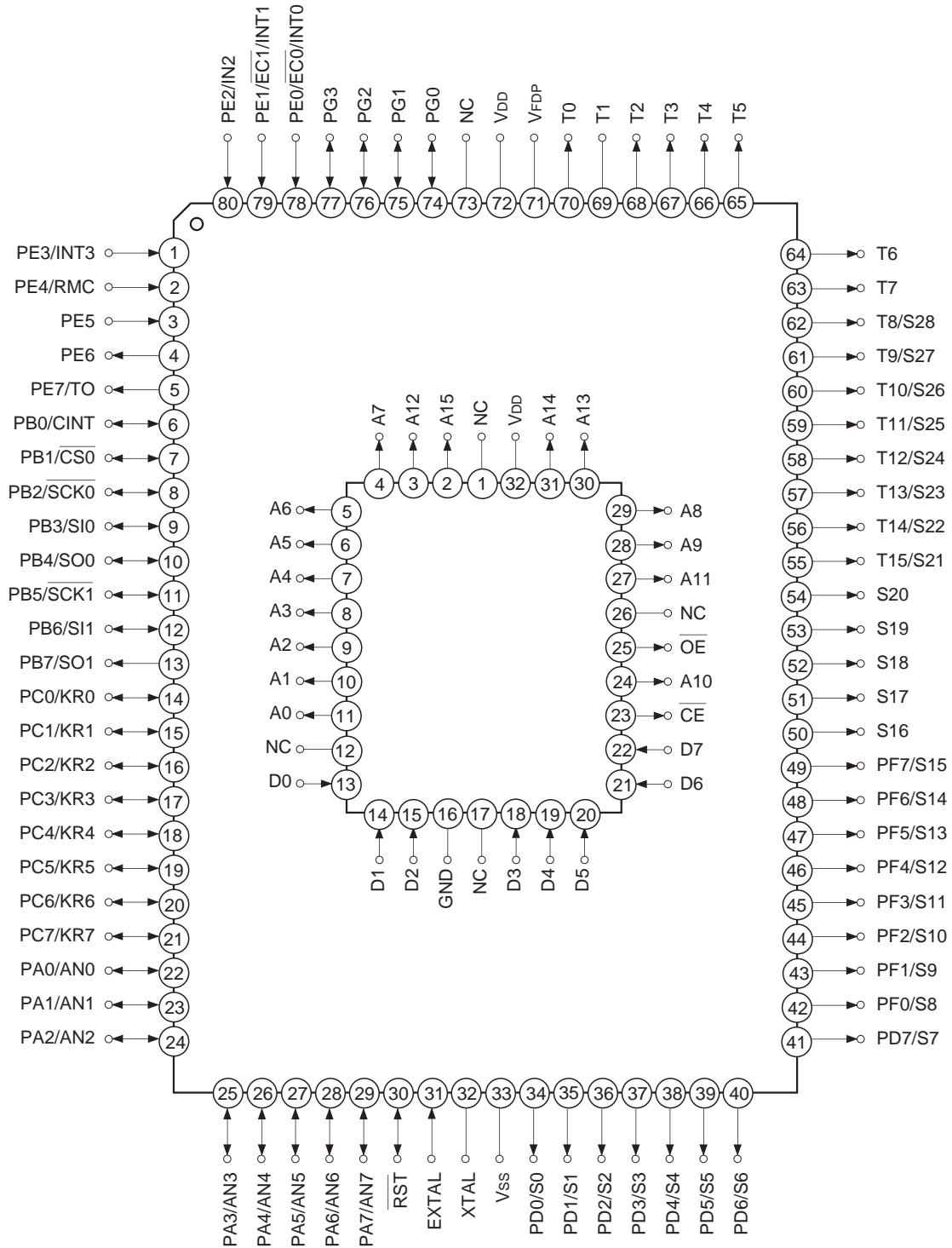
### Structure

Silicon gate CMOS IC



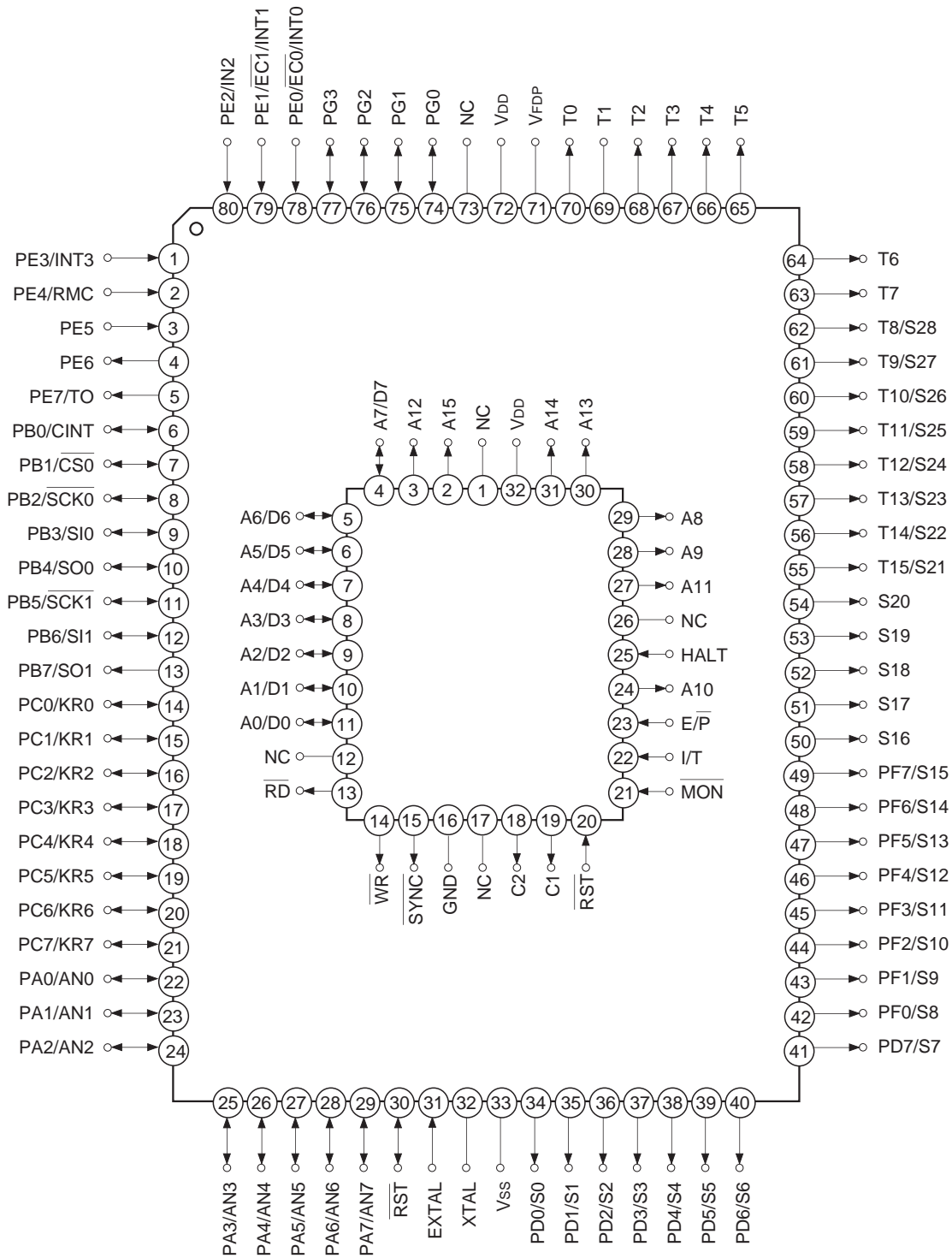
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Pin Assignment in Piggyback Mode



**Note** NC (Pin 73) is always connected to VDD.

Pin Assignment in Evaluator Mode

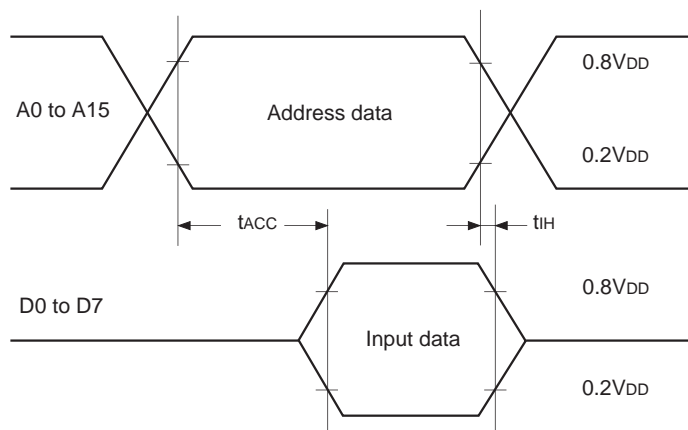


**Note** NC (Pin 73) is always connected to V<sub>DD</sub>.

**EPROM Read Timing**

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

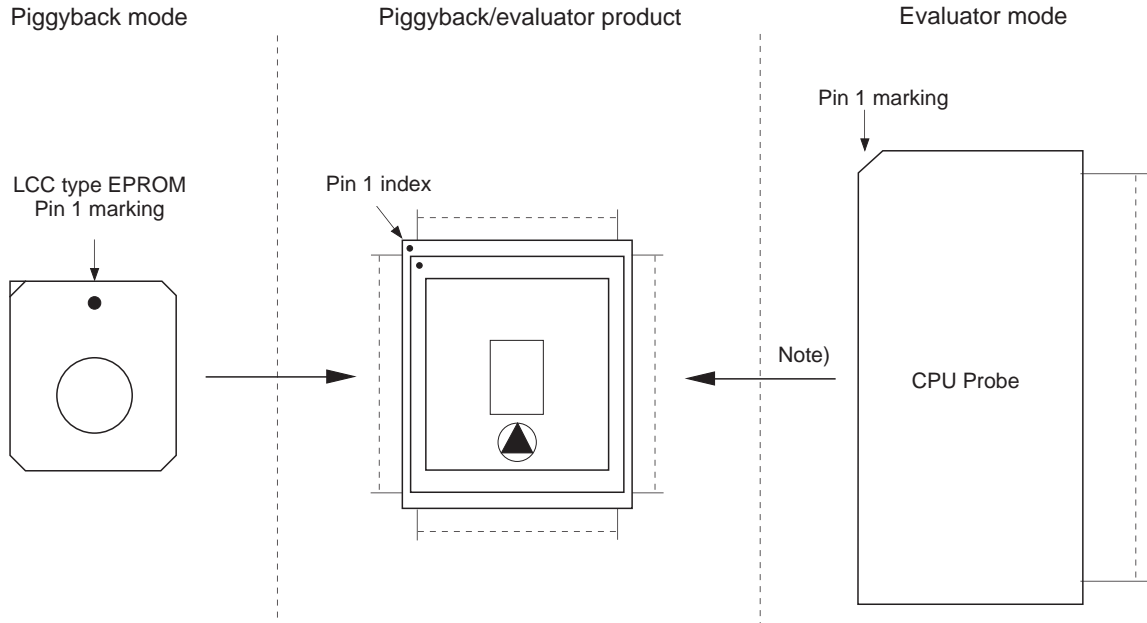
Item	Symbol	Pins	Min.	Max.	Unit
Address → Data Input delay time	$t_{ACC}$	A0 to A15 D0 to D7		120	ns
Address → Data Hold time	$t_{IH}$	A0 to A15 D0 to D7	0		ns



**Products List**

Option item	Products			
	Mask			Piggyback/evaluator
	CXP82316	CXP82320	CXP82324	CXP82300-U01Q
Package	80-pin plastic QFP			80-pin ceramic PQFP
ROM capacitance	16K bytes	20K bytes	24K bytes	24K bytes
Pull-up resistance for reset pin	Existent/Non-existent			Existent
Power-on reset circuit	Existent/Non-existent			Existent
Pull-down resistance for high voltage drive pin	Existent/Non-existent			Only port for display

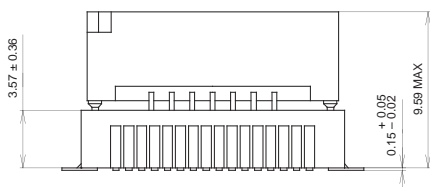
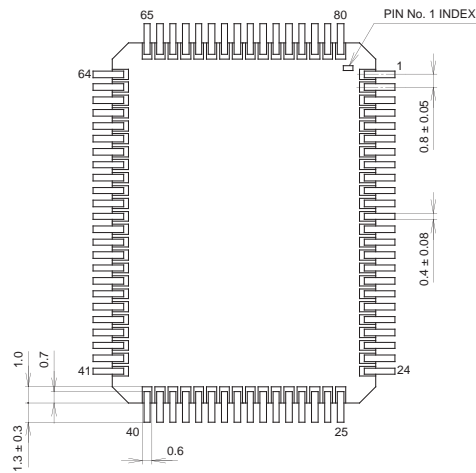
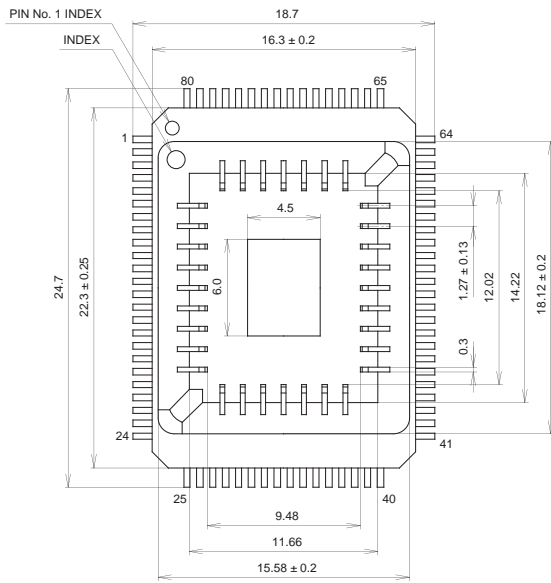
Piggyback mode/evaluator mode can be switched as shown below.



Note) Evaluation cap should be connected to CPU probe.

Package Outline Unit: mm

80PIN PQFP (CERAMIC)



PACKAGE STRUCTURE

SONY CODE	PQFP-80C-L01
EIAJ CODE	AQFP080-C-0000-A
JEDEC CODE	

PACKAGE MATERIAL	CERAMIC
LEAD TREATMENT	GOLD PLATING
LEAD MATERIAL	42 ALLOY
PACKAGE WEIGHT	5.7g



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