

CMOS 8-bit Single Chip Microcomputer

Piggyback/
evaluator type**Description**

The CXP82900 is a CMOS 8-bit single chip micro-computer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP82940/82948/82952/82960.

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 250ns at 16MHz operation
 122μs at 32kHz operation
- Applicable EPROM LCC type 27C512 (Maximum 60K bytes are available.)
- Incorporated RAM capacity 2048 bytes (Including fluorescent display data area.)
- Peripheral functions
 - A/D converter 8-bit, 8-channel, successive approximation method (Conversion time of 20μs/16MHz)
 - Serial interface Incorporated buffer RAM (Auto transfer for 1 to 32bytes), 1 channel
 Incorporated 8-bit, 8-stage FIFO (Auto transfer for 1 to 8 bytes), 1 channel
 - Timer 8-bit timer
 8-bit timer/counter
 19-bit time base timer
 32kHz timer/counter
 - Fluorescent display panel controller/driver
 Maximum 196-segment display possible
 1 to 16-digit dynamic display
 Dimmer function
 High voltage drive output (40V)
 Pull-down function
 Hardware key scan function (Maximum 12 × 8 key matrix compatible)
 - I²C bus interface
 - Remote control transmission circuit
 Auto transmission for 1 to 32 bytes, restart function, carrier output function
 - Remote control reception circuit
 8-bit pulse measurement counter with on-chip 6-stage FIFO
- Interruption 16 factors, 15 vectors, multi-interruption possible
- Standby mode SLEEP/STOP
- Package 80-pin ceramic QFP

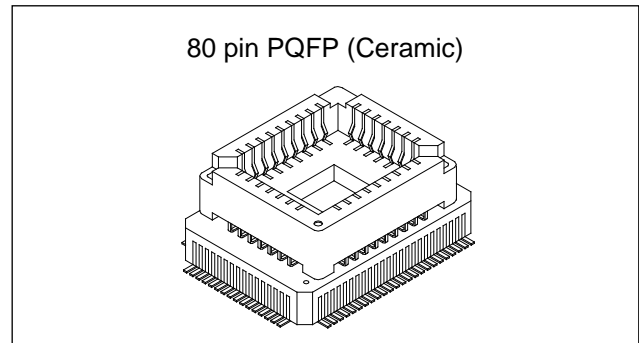
Note) Mask option depends on the type of the CXP82900. Refer to the Products List for details.

Structure

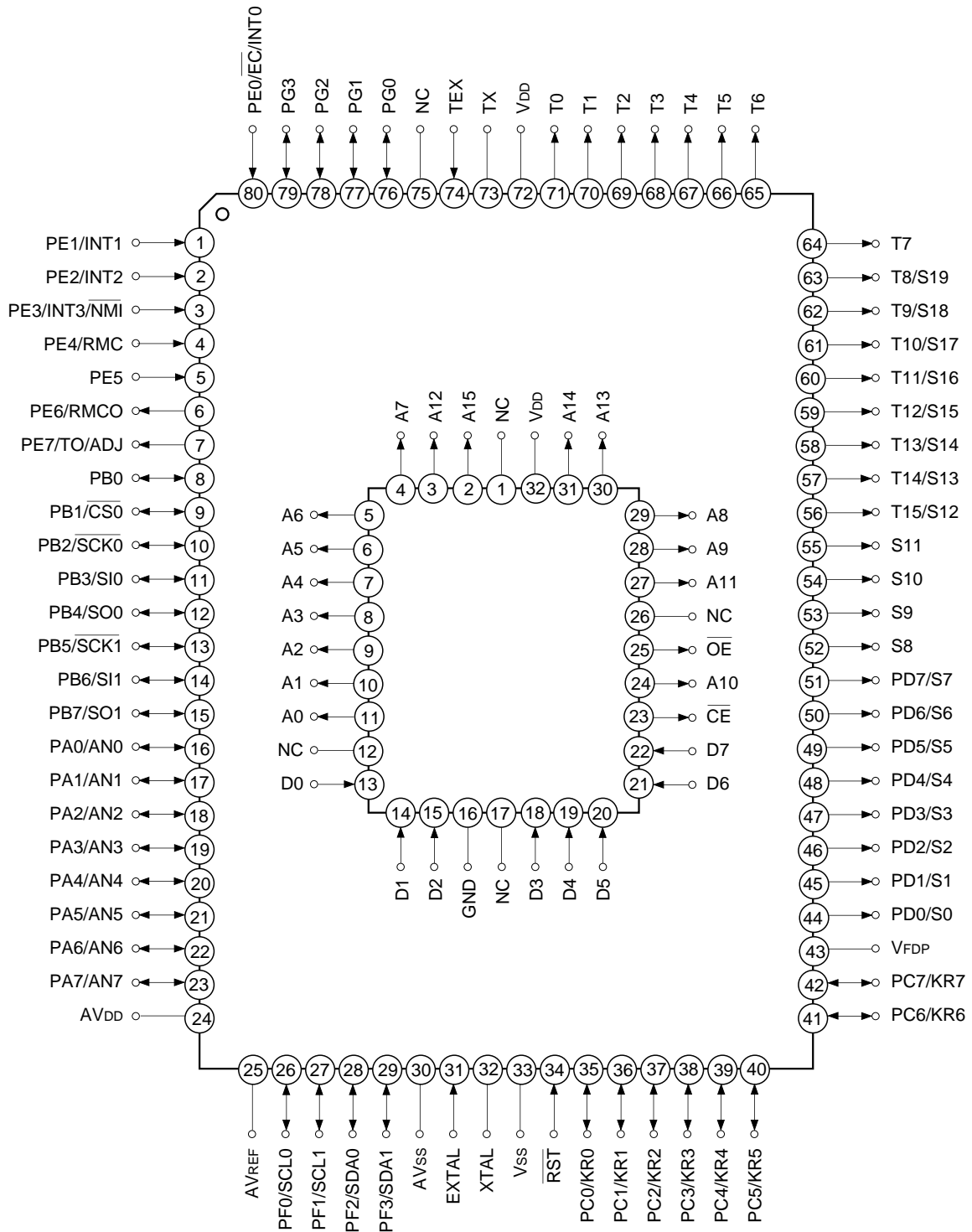
Silicon gate CMOS IC

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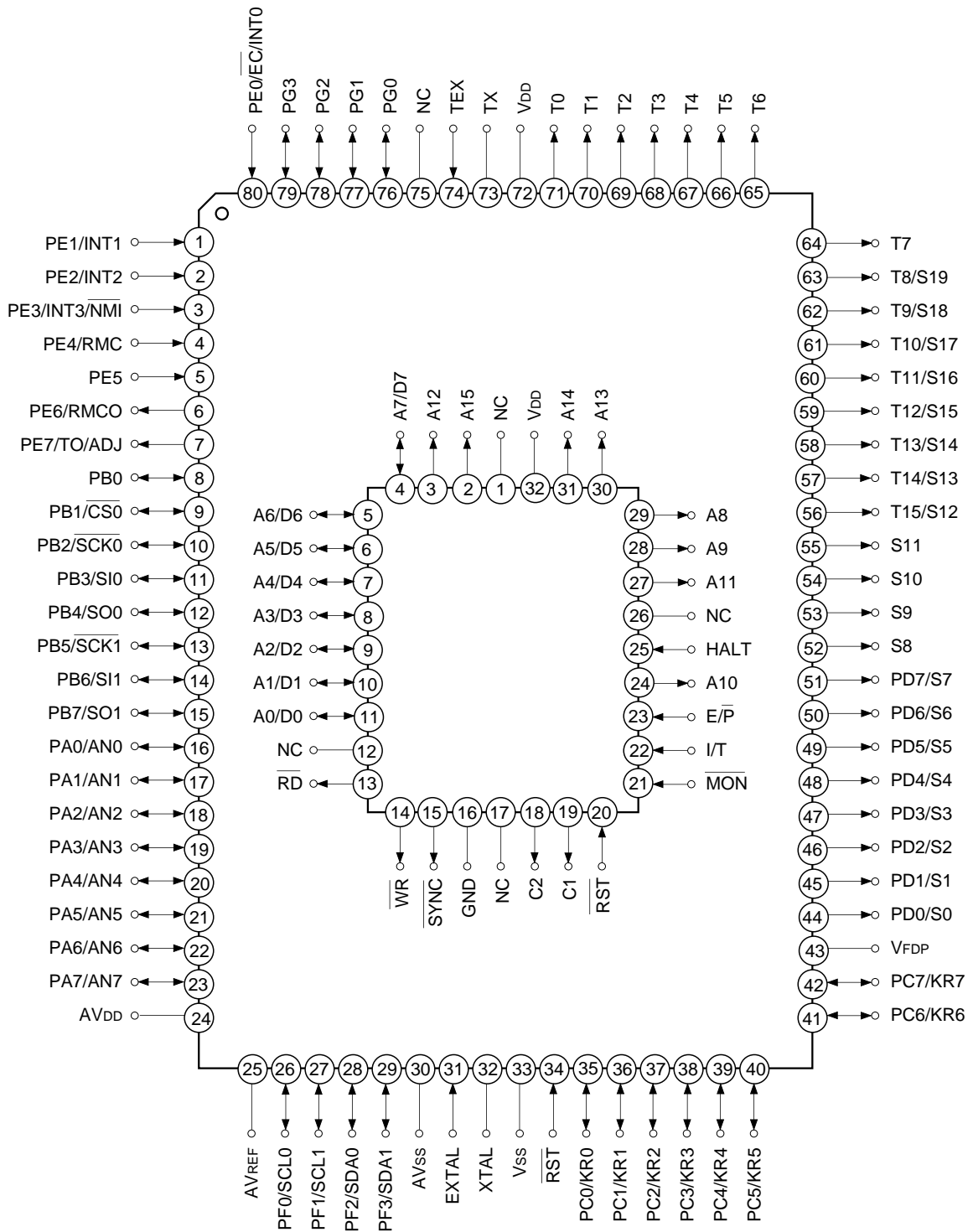


Pin Configuration in Piggyback Mode



Note) NC (Pin 75) is always connected to V_{DD}.

Pin Configuration in Evaluator Mode

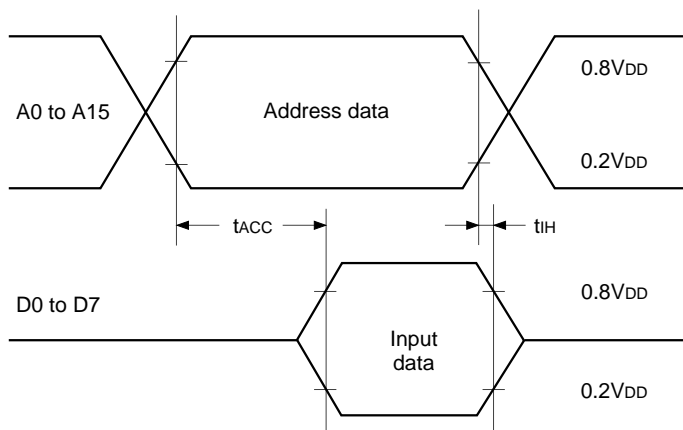


Note) NC (Pin 75) is always connected to VDD.

EPROM Read Timing

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

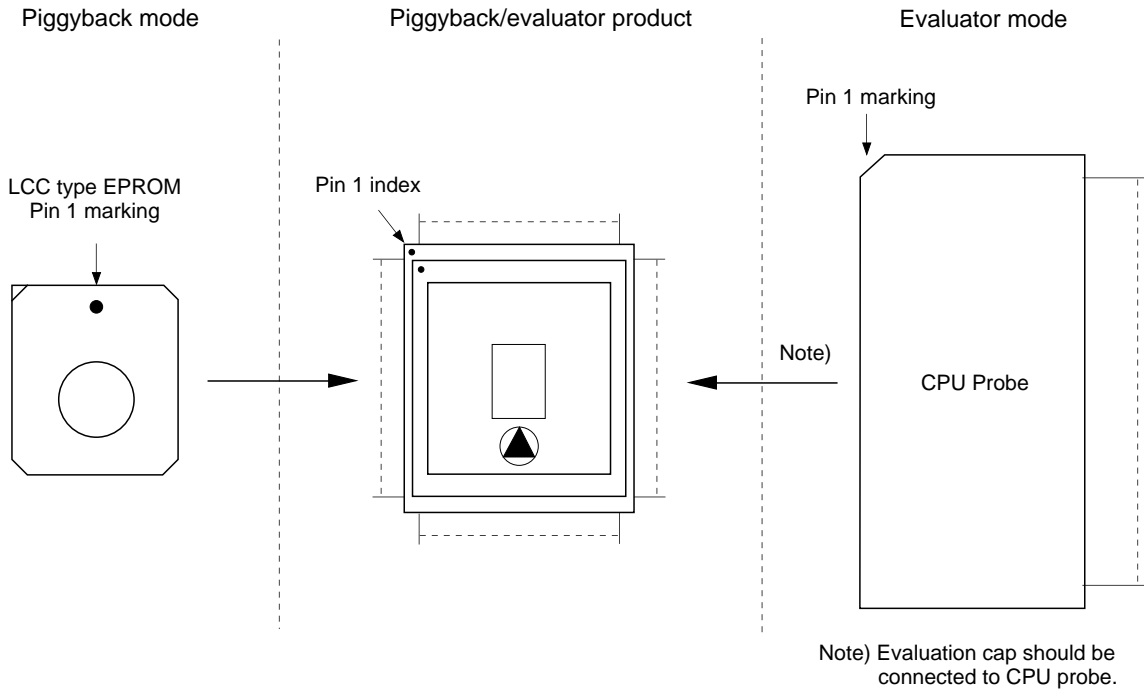
| Item | Symbol | Pins | Min. | Max. | Unit |
|------------------------------------|-----------|-----------------------|------|------|------|
| Address → Data Input delay time | t_{ACC} | A0 to A15 D0 to D7 | | 75 | ns |
| Address → Data Hold time | t_{IH} | A0 to A15 D0 to D7 | 0 | | ns |



Products List

| Option item | Products | | | | |
|---|-----------------------|-----------|-----------|-----------|--|
| | Mask type | | | | Piggyback/evaluator product |
| | CXP82940 | CXP82948 | CXP82952 | CXP82960 | CXP82900-U01Q |
| Package | 80-pin plastic QFP | | | | 80-pin ceramic QFP |
| ROM capacitance | 40K bytes | 48K bytes | 52K bytes | 60K bytes | EPROM 60K bytes |
| Pull-up resistance for reset pin | Existent/Non-existent | | | | Existent |
| Pull-down resistance for high voltage drive pin | Existent/Non-existent | | | | Existent: T0 to T7, S8 to T8/S19 Non-existent: PD0/S0 to PD7/S7 |

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



Package Outline Unit: mm

80PIN PQFP (CERAMIC)

