

CMOS 8-bit Single Chip Microcomputer

Description

The CXP81100 is a CMOS 8-bit single chip micro-computer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP81120/81124.

Features

- A wide instruction set (213 instructions) which cover various types of data
 - 16-bit operation/multiplication and division/boolean bit operation instructions
- Minimum instruction cycle
- Applicable EPROM
- Incorporated RAM capacity
- Peripheral functions
 - A/D converter
 - Serial interface
 - Timer
 - PWM output
- Interruption
- Standby mode
- Package

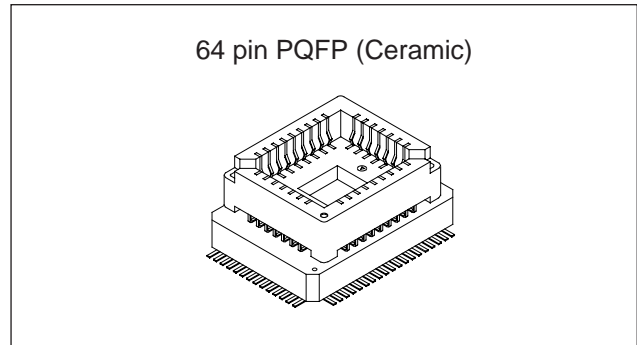
333ns at 12MHz operation (3.0 to 5.5V)
 250ns at 16MHz operation (4.5 to 5.5V)
 LCC type 27C128, LCC type 27C256
 (Maximum 24Kbytes are available.)
 832bytes

8-bit, 8-channel, successive approximation method
 (Conversion time of 20 μ s/16MHz)
 Incorporated buffer RAM (Auto transfer for 1 to 32bytes),
 1channel
 Incorporated 8-bit, 8-stage FIFO
 (Auto transfer for 1 to 8bytes), 1channel
 8-bit timer
 8-bit timer/counter
 19-bit time base timer
 12bits, 2channels
 (repetitive frequency 62.5kHz/16MHz)
 10 factors, 10 vectors, multi-interruption possible
 SLEEP/STOP
 64-pin ceramic PQFP

Note) Mask option depends on the type of the CXP81100. Refer to the Products List for details.

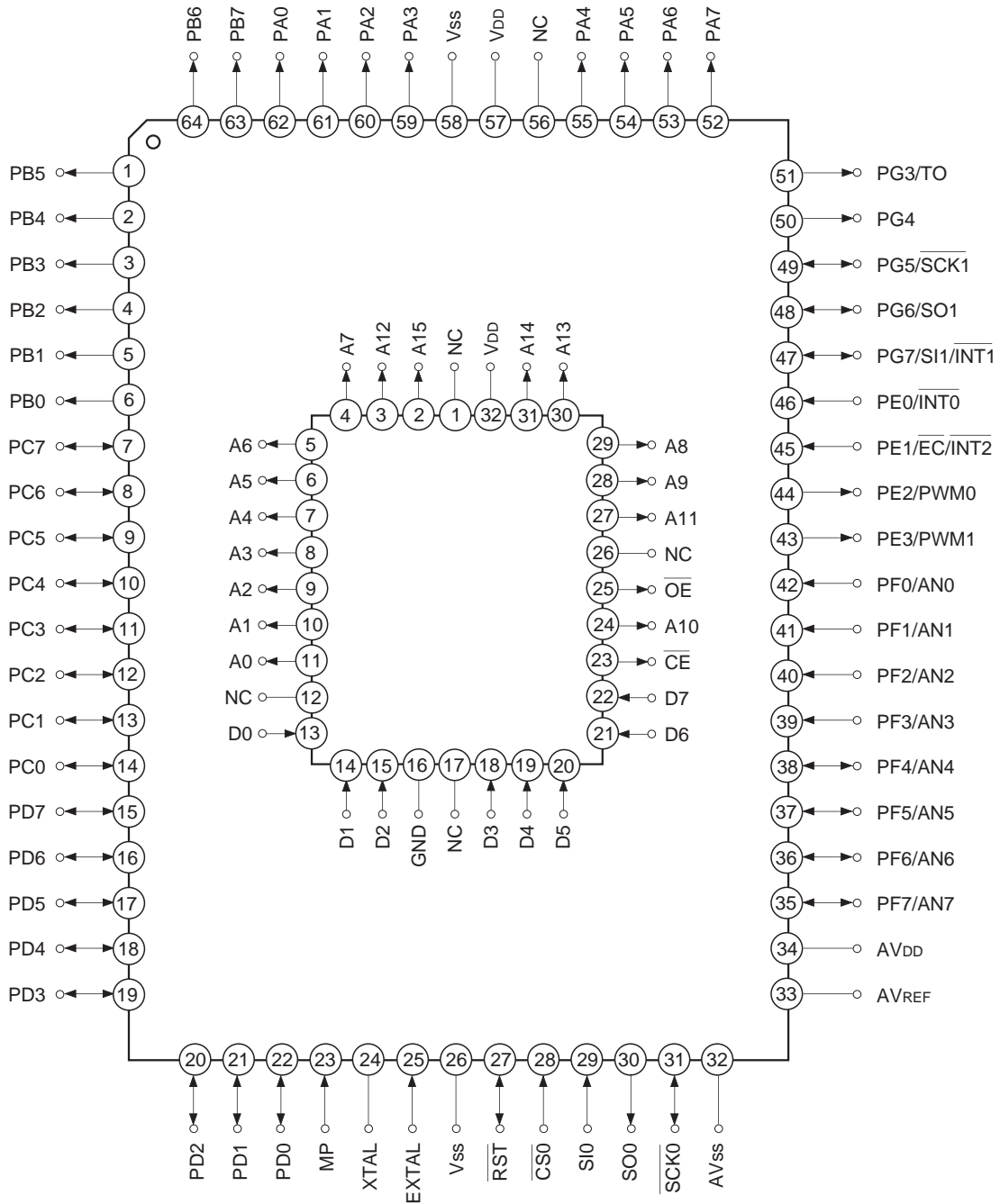
Structure

Silicon gate CMOS IC



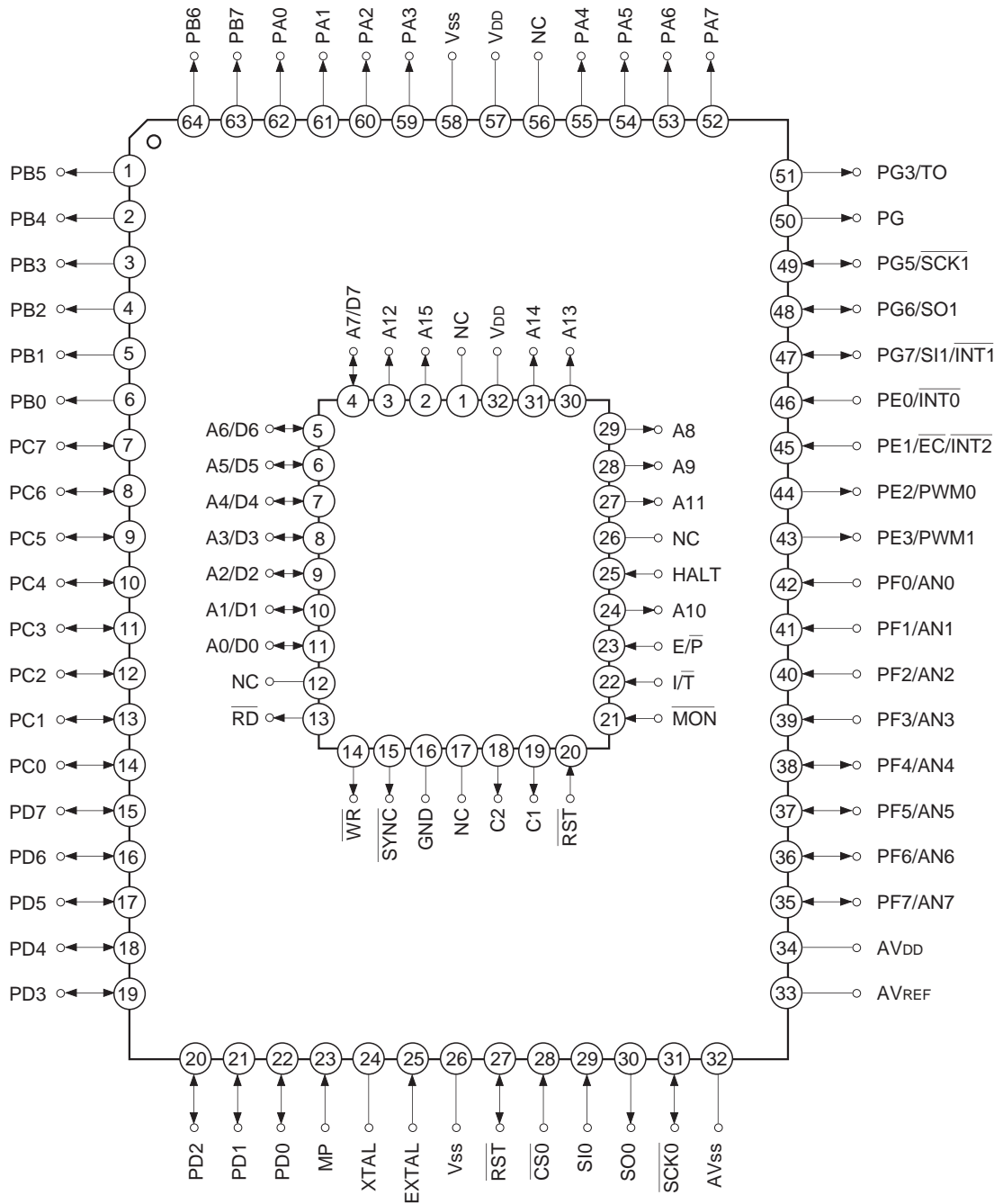
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Pin Assignment in Piggyback Mode



- Note)**
1. NC (Pin 56) is always connected to V_{DD}.
 2. V_{ss} (Pins 26 and 58) are both connected to GND.
 3. MP (Pin 23) is always connected to GND.

Pin Assignment in Evaluator Mode

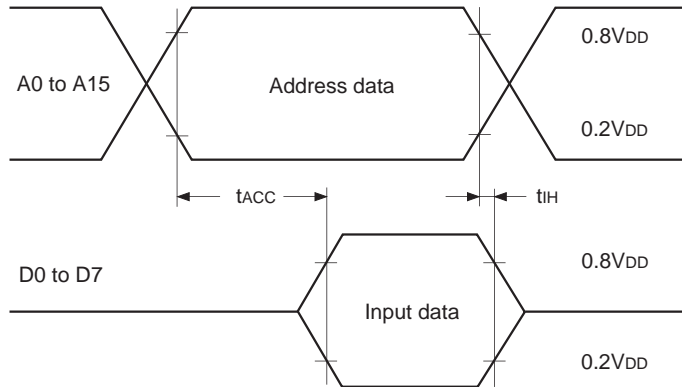


- Note**
1. NC (Pin 56) is always connected to VDD.
 2. Vss (Pins 26 and 58) are both connected to GND.
 3. MP (Pin 23) is always connected to GND.

EPROM Read Timing ($T_a = -20$ to $+75^\circ\text{C}$, $V_{DD} = 3.0$ to 5.5V , $V_{SS} = 0\text{V}$ reference)

Item	Symbol	Pin	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

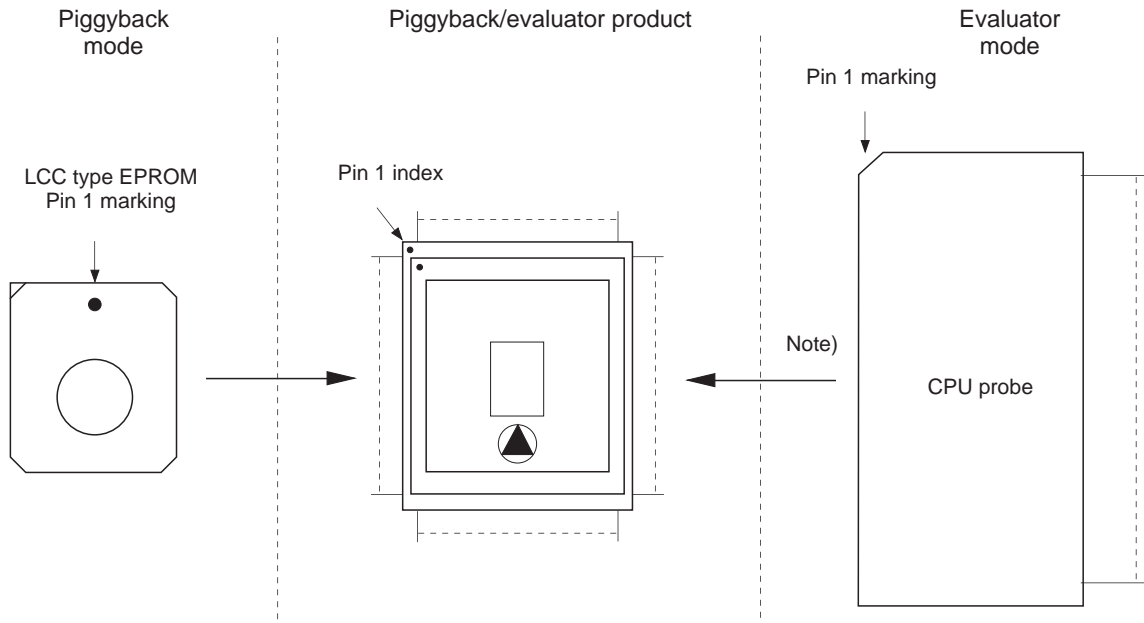
* At 12MHz operation ($V_{DD} = 3.0$ to 5.5V), At 16MHz operation ($V_{DD} = 4.5$ to 5.5V)



Products List

Option item	Products		
	Mask product		Piggyback/evaluator product
	CXP81120	CXP81124	CXP81100-U01Q
Package	64-pin plastic LQFP		64-pin ceramic PQFP
ROM capacity	20K bytes	24K bytes	EPROM 24K bytes
Pull-up resistor for reset pin	Existent/Non-existent		Existent
Power on reset circuit	Existent/Non-existent		Existent

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



Note) Evaluation cap should be connected to CPU probe.

Package Outline Unit : mm

64PIN PQFP (CERAMIC)

