
Features

- Programmable Peripheral Interface
- Three 8-bit Programmable Ports
- 24 Programmable I/O Signals
- Bit Set/reset Capability
- Read/write Control Register
- Gate Count: 1200 Gates

Description

The CB_8255 is a general-purpose programmable peripheral interface. It has three 8-bit I/O ports (Port A, Port B, Port C) which can be written to, or read from, by an 8-bit CPU interface. They can be individually configured as inputs or outputs. Alternatively, Port C can be used to provide handshaking lines to control the transfer of data over the other two ports. The inputs and outputs can be read or written directly, or they can be strobed by external signals providing handshaking and interrupt signals.



Standard Interface Macrocell

CB_8255 Programmable Peripheral Interface

0886A/cb_8255.fm5-8/97



Signal description

The direction of Port A is controlled by NDAO, when low data is driven out from OA 0-7. The direction of Port B is controlled by NDBO, when low data is driven out from OB 0-7. There are 7 direction control lines for Port C. NOC1 controls bits 0 and 1, NOC 2-7 control bits 2 to 7 respectively.

The CB_8255 has 79 external signals; 38 inputs and 41 outputs.

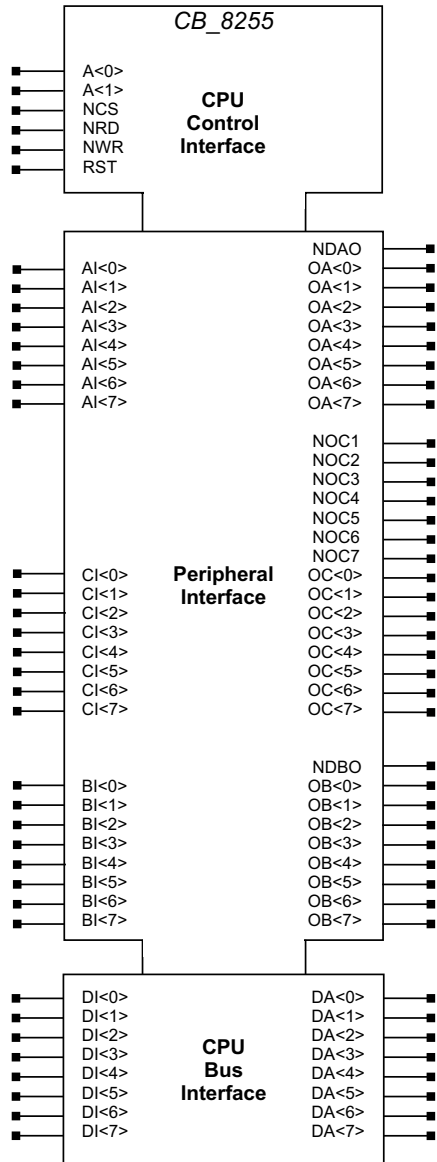


Table 1. CPU Control Interface

Signal Name	Type	Description
A0-1	Input	CPU address lines
NCS	Input	CPU chip select, active low
NRD	Input	CPU read strobe, active low
NWR	Input	CPU write strobe, active low
RST	Input	Reset line

Table 2. Peripheral Interface

Signal Name	Type	Description
AI 0-7	Input	Port A inputs
CI 0-7	Input	Port C inputs
BI 0-7	Input	Port B inputs
NDAO	Output	Port A direction control, low=output
OA 0-7	Output	Port A outputs
NOC 1-7	Output	Port C direction control lines, low=output
OC 0-7	Output	Port C outputs
NDBO	Output	Port B direction control, low=output
OB 0-7	Output	Port B outputs

Table 3. CPU Bus Interface

Signal Name	Type	Description
DI 0-7	Input	Data bus inputs from CPU
OD 0-7	Output	Data bus outputs to CPU