

EPCIO ASIC

Position and I/O Control ASIC

Features

- 6-axis servo motor open circuit (or closed circuit) synchronized control
- 9-axis motor encoder or hand wheel counter
- 8-set Digit -Analogue converting control interface
- 8-set Analog - Digit converting control interface
- 768 remote input/output points
- Built-in 24 bits counter and 16 bits watchdog counter
- Built-in system bus bar decoder circuit



Introduction

The EPCIO 6988-01 120,000 Gates ASIC integrated most of the functions required by general industrial machinery control. Just add simple peripheral circuit will form a system control card of 3 to 6 axis. Coping additionally with IPC card, it will form a set of simple structure but complete function controller system. As it reduces the complexity of control system in large scale, it can reduce the costs in product manufacturing and maintenance, and increase the reliability and maintainability of system.

Specifications

- IC Work Clock: 8MHz~40MHz
- Data Bus bar width:16
- Open circuit motor control
 - ◆ Axis controllable:6
 - ◆ Depth of FIFO motion command of each axis: 64 pieces
 - ◆ Complement steps of each motion command can planned to (2^{10-15} Steps)
 - ◆ Open circ8it output pulse format 3 types (A/B or Pulse/Direction or CW/CCW)
 - ◆ Output pulse width Can plan between (0 ~ 4095 work clock width)
- Close circuit servo motor control
 - ◆ Controllable number of axis: 6
 - ◆ Deviation counter length:16 bits
 - ◆ Complementer form:proportional
 - ◆ Gain value:(0~127) \times (2^{-7} ~ 2^7)
- Motor encoder pulse signal counter
 - ◆ Connectable axis:9
 - ◆ Length of counter: 32 bits
 - ◆ Acceptable pulse format: 3 types (A/B, Pulse/Direction, CW/CCW)
 - ◆ A/B type pulse plan able multitude: 4 types ($x1, x2, x3, x4, x0$)
 - ◆ Equipped with digital filter
 - ◆ Equipped with Index position interception function
 - ◆ Equipped with comparer function
- Watch Dog
 - ◆ Length: 16 bits
 - ◆ Reset: signal length programmable.
- Remote Input / Output
 - ◆ Type: Master - Slave
 - ◆ Number of set: 2 (each set contains one master and 3 slaves)
 - ◆ Serial interface procedure specification: Procedure set by Machinery Institute
 - ◆ Input/ Output points of each slave: for both input and output each 64 points
 - ◆ Total input/output points: for both input and output each 384 points.
- Digit to Analog converter (DAC) Control Interface
 - ◆ Number of Channel:8
 - ◆ Resolution: 16 bits
 - ◆ Serial interface format:PCM56U compatible
 - ◆ Specific function: Touch automatic load in function
- Analog to Digit converter(ADC) Control Interface
 - ◆ Number of Channel:8
 - ◆ Resolution: 12 bits
 - ◆ Serial Interface Format: Max 186 compatible
 - ◆ Work mode transferring: 2 types (single and continuous transfer)
 - ◆ Specific function: equipped with comparer function.
- Chip direct digital input/output
 - ◆ Points: 4 points \times 7 sets
 - ◆ Input or output points: all 7 sets can be made to be input or output
 - ◆ Interrupting points equipped: 8 points with interrupting function.
- Timer
 - ◆ Length: 24 bits
 - ◆ Having interrupting function
 - ◆ Can act as software fixed time reference signal

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