mycom

DMP2042

2 axes LSI Pulse Generator

Features

■2 axes control by one chip

■Full proportional user setting acceleration/deceleration curve function which is realized by simple free setting of user image

■Automatic generating S curve acceleration/deceleration by same parameter setting with trapezoidal driving

■Buffering function which can store maximum 3 sets of driving parameter.

■Shape protection function when changing speed during driving

■Shape protection function which automatically correct contradictory parameter setting

■Speed override function

■Automated continuous interpolated driving/path driving

■Absolute/incremental count of the numbers of output pulses. Wide range managing counter.

■32 bit encoder counter / general purpose counter of automatic bite length.

■8bit x 8 general purpose counter with compare, available to connect bite by bite (maximum 64 bit length)

■Home search movement with Z phase counter function.

Specification

Power voltage: 3.3V±5%

I/O level: TTL level

Standard clock: Maximum 10MHz

Range of total pulse numbers setting: 1 to 16,777,215 pulses or endless

Range of deceleration start point setting: 0 to 16,777,215 pulses

Numbers of frequency setting step: 65,536 steps

Numbers of acceleration deceleration slope setting: 65,536 steps

Numbers of output pulse gear step: 256 steps

Numbers of proportional shape slope data: 64 words

Range of output frequency :

　　　　0.004 to 256Hz (CLK=131kHz, ratio=256)

　　　　1 to 65,535Hz (CLK=3.2768MHz, ratio=25)

　　　　75 to 5,000,000Hz (CLK=10MHz, ratio=1)

Driving and function:

Full proportional shaped and trapezoidal acceleration deceleration driving

Automatic generating S curve acceleration/deceleration driving

Shape protect and guarantee function

Buffering function

Speed override function

Interpolation for more than 2 axes

Continuos interpolation function for more than 2 axes by buffering function

Path moving

Path moving

Supporting 8/16bit data bus

Supporting Intel/Motorola data format

Supporting absolute or incremental moving distance

Multi axes synchronous start function

Automatic calculation of deceleration start point

Home searching

Encoder counter function (with interrupt function)

8bit with comparer (proportional combination is available) x 8 general purpose counter

Pulse generation function for motor driving from A/B phase pulse input

Deviation discriminative function

I/O signal logic setting function

Forward / Reverse overrun

Instant / decelerated stop

Servo motor control

Monitor for numbers of output pulses

Setting of each acceleration / deceleration slope

Liner interpolation movement

Driver interface:

Output: clock, 1/2 clock selectable, logic selectable

Input : Alarm(logic selectable),

In-position (logic selectable),

Deviation counter overflow (logic selectable),

Sensor input

Overrun (Forward, reverse, logic selectable)

Near home (logic selectable)

Home (logic selectable)

Encoder Interface

Input: A/B phase, Phase 1/2/4 times, CW, CCW clock count

Output : 4 interrupt outputs

Exclusive I/O

Input : Deceleration, Decelerated stop, Instant stop, Synchronization

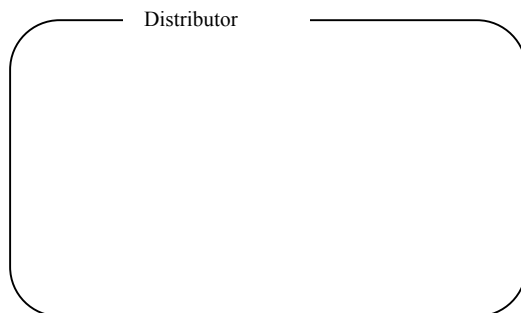Output : During pulse output, End interrupt

Exclusive I/O

Each 8 points

Operating Environment temperature : 0 to +70℃

Storing temperature :   -55 to +125℃

Package: 144 pins, plastic QFP, 0.5mm lead pitch