AME, Inc.

ATXP6 Jumper Free Over Clock Controller

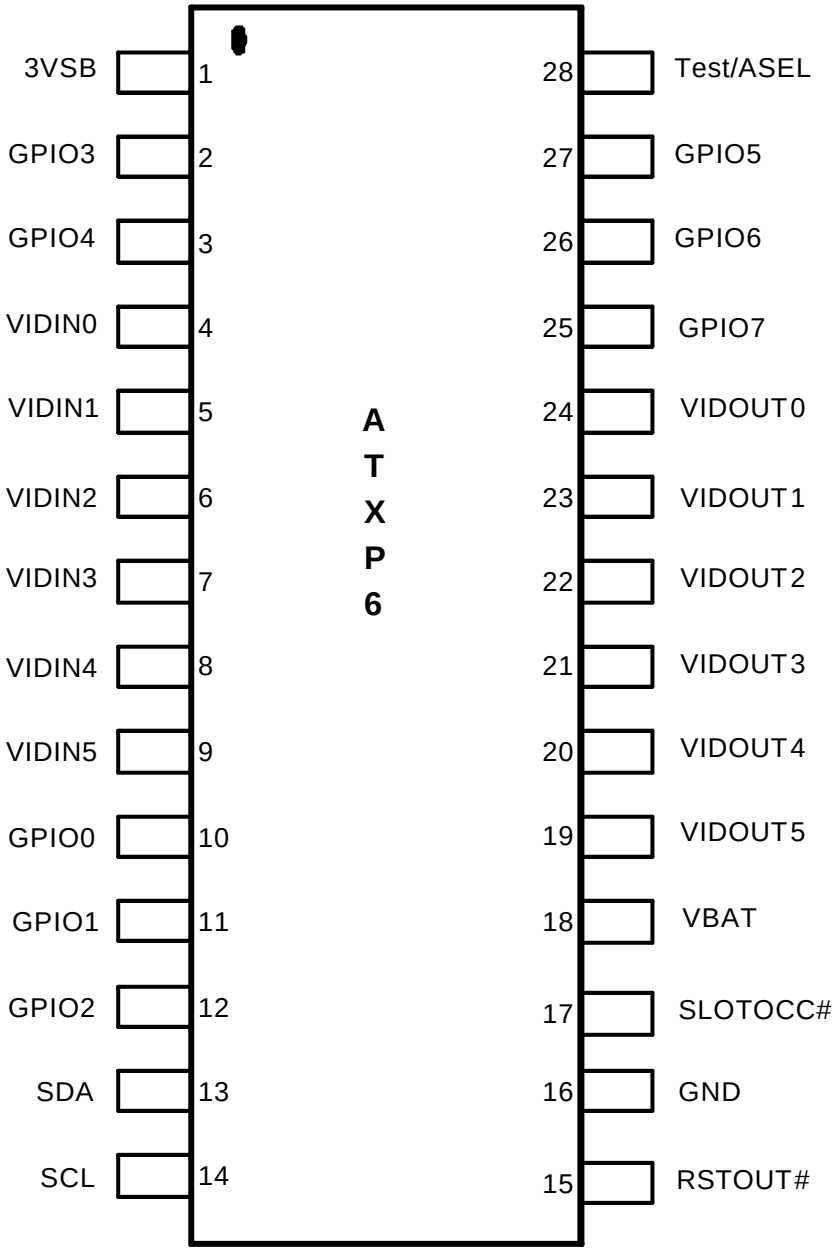
■ General Description

ATXP6 is a full feature of over clocking device for Intel© CPU. It integrates all functions that are possible to be utilized for over-clocking purpose.

■ Features

- Provide Six VID Input (VIDIN0-5) and Six VID Output (VIDOUT0-5) Pins
- Support Auto-Recover
  Build-in Watch Dog Timer & Reset Output Signal Pin
- Provide Eight GPIO Pins
- SM Bus Interface
- Provide CPU Changing Detect Pin (SLOTOCC#)
- Package: SSOP 28-Pin

■ Pin Configuration



■ Pin Description

I/O Type Description

IN_{tx} ---- Special level input.
$IN_{tx\text{-}100k\text{-}dn}$ ---- Special level input with 100K ohm pull-down resistor.
IN_{t} ---- TTL level input.
$IN_{t\text{-}47k\text{-}up}$ ---- TTL level input with 47K ohm pull-up resistor.
IN_{ts} ---- TTL level input with Schmitt-tigger.
$IN_{ts\text{-}27}$ ---- TTL level input with Schmitt-tigger and 27 n sec. glitch elimination.
OD_{12} ---- Open-drain with 12mA sink current.
O_{12} ---- Output buffer with 12mA drive/sink current
I/OD_{12} ---- TTL level bi-directional pin, and open-drain output with 12mA sink current.
I/O_{12} ---- TTL level bi-directional pin, and output with 12mA drive/sink current.
$I/O_{12\text{-}10k\text{-}up}$ ---- TTL level bi-directional pin, and output with 12mA drive/sink current and 10K ohm pull-up resistor.

Pin No.	Pin name	I/O Type	Function
1	3VSB	POWER	Power Pin
2	GPIO3	I/O_{12}	General Purpose I/O Pin, Default O/D
3	GPIO4	I/O_{12}	General Purpose I/O Pin, Default O/D
4	VIDIN0	IN_{tx}	Receive VID0 Signal from CPU
5	VIDIN1	IN_{tx}	Receive VID1 Signal from CPU
6	VIDIN2	IN_{tx}	Receive VID2 Signal from CPU
7	VIDIN3	IN_{tx}	Receive VID3 Signal from CPU
8	VIDIN4	IN_{tx}	Receive VID4 Signal from CPU
9	VIDIN5	$IN_{tx\text{-}100k\text{-}dn}$	Receive VID5 Signal from CPU
10	GPIO0	I/O_{12}	General Purpose I/O Pin, Default O/D
11	GPIO1	I/O_{12}	General Purpose I/O Pin, Default O/D
12	GPIO2	I/O_{12}	General Purpose I/O Pin, Default O/D

■ Pin Description

Pin No.	Pin Name	I/O Type	Function Description
13	SDA	I/OD_{12}	SMB Data Signal
14	SCL	IN_{ts}	SMB Clock Signal
15	RSTOUT#	OD_{12}	
16	GND	GND	GROUND Pin
17	SLOTOCC#	IN_{ts-27}	Receive SLOTOCC#From CPU
18	VBAT	POWER	Power Pin
19	VIDOUT5	OD_{12}	VID5 Signal Output Pin to PWM
20	VIDOUT4	OD_{12}	VID4 Signal Output Pin to PWM
21	VIDOUT3	OD_{12}	VID3 Signal Output Pin to PWM
22	VIDOUT2	OD_{12}	VID2 Signal Output Pin to PWM
23	VIDOUT1	OD_{12}	VID1 Signal Output Pin to PWM
24	VIDOUT0	OD_{12}	VID0 Signal Output Pin to PWM
25	GPIO7	I/O_{12}	General Purpose I/O Pin, Default O/D
26	GPIO6	I/O_{12}	General Purpose I/O Pin, Default O/D
27	GPIO5	I/O_{12}	General Purpose I/O Pin, Default O/D
28	Test/ASEL	$IN_{t-47k-up}$	Address Select Pin

Table1. Pin Description Table

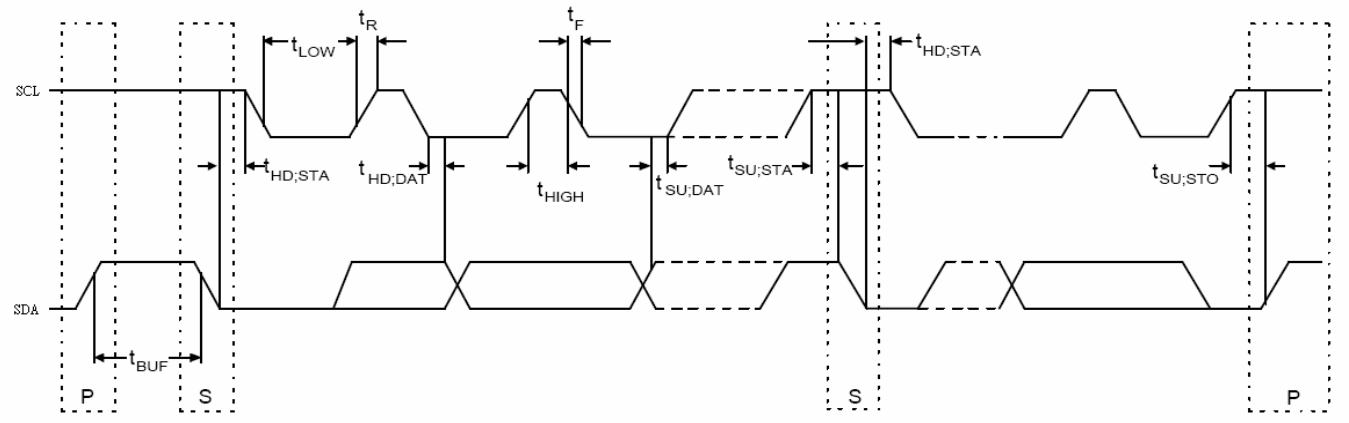
■ Electrical Characteristics

AC Specifications

Symbol	Parameter	Limits		Units
		Min	Max	
F_{SMB}	SMBus Operating Frequency	10	100	KHZ
T_{BUF}	Bus free time between Stop and Start Condition	4.7		μs
$T_{HD:STA}$	Hold time after (Repeated) Start Condition. After this period,the first clock is generated	4.0		μs
$T_{SU:STA}$	Repeated Start Condition setup time	4.7		μs
$T_{SU:STO}$	Stop Condition setup time	4.0		μs
$T_{HD:DAT}$	Data hold time	300		ns
$T_{SU:DAT}$	Data setup time	250		ns
$T_{TIMEOUT}$	Clock low time-out	25	35	ms
T_{LOW}	Clock low period	4.7		μs
T_{HIGH}	Clock high period	4.0	50	μs
$T_{LOW:SEXT}$	Cumulative clock low extend time (slave device)		25	ms
$T_{LOW:MEXT}$	Cumulative clock low extend time (master device)		10	ms
T_F	Clock/Data Fall Time		300	ns
T_R	Clock/Data Rise Time		1000	ns

■ Electrical Characteristics

Timing Measurements



■ DC Specifications

Electrical Characteristics of other pins

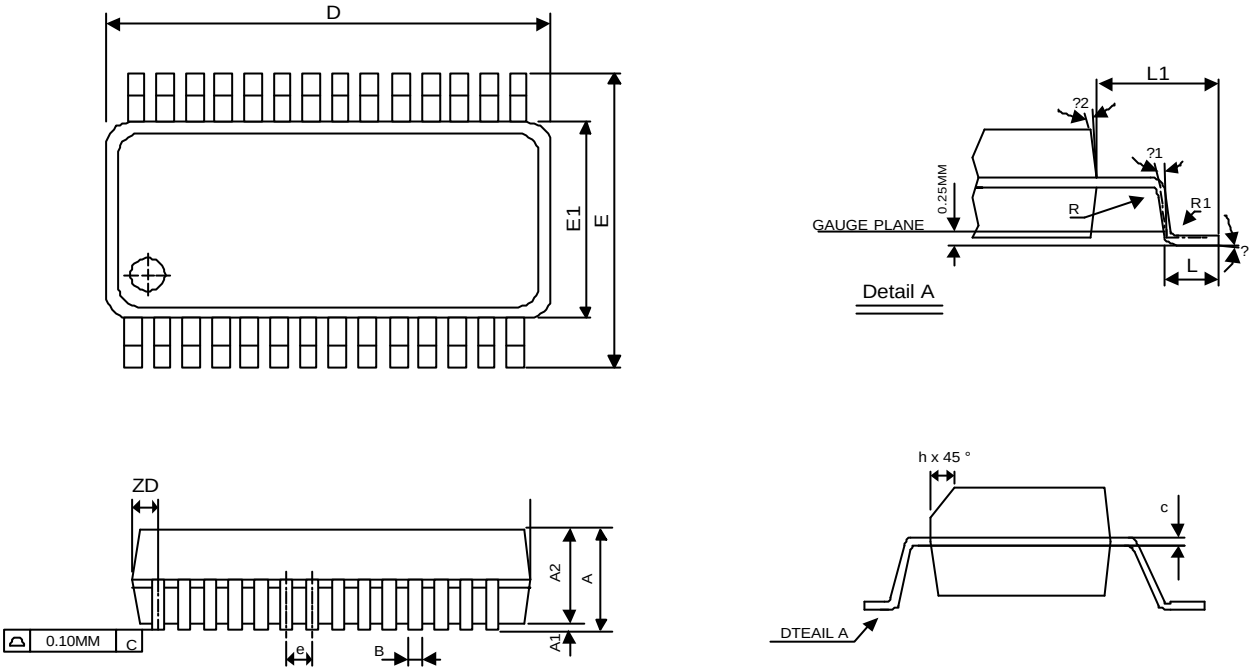
symbol	Description	Min.	Typ.	Max.	Unit
VBAT	Power	4.5	5	5.5	V
3VSB	Power	3	3.3	3.6	V
ViL	Input Low voltage	-	-	0.8	V
ViH	Input High voltage	2.2	-	-	V
VoL	Output Low voltage	-	-	0.4	V
VoH	Output High voltage	2.4	-	-	V
IoL	Output Low current	-	12	-	mA

■ Ordering Information

Part Number	Package	Special Feature
ATXP6	SSOP-28	Commercial Standard
ATXP6G	SSOP-28	Green Device with Commercial Standard

■ Package Information

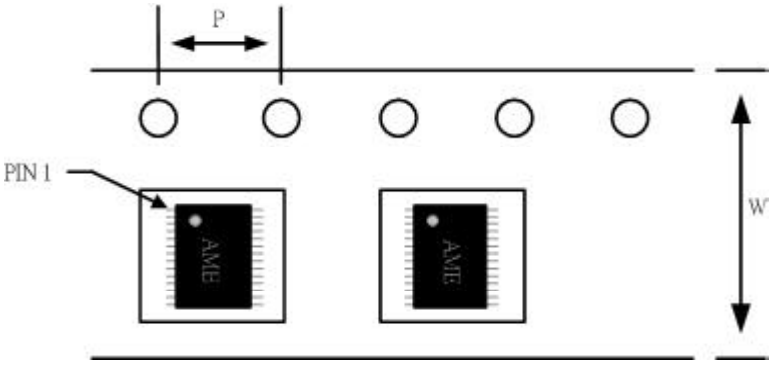
SSOP-28



SYMBOLS	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.35	1.75	0.053	0.069
A1	0.10	0.25	0.004	0.010
A2	-	1.50	-	0.059
b	0.20	0.30	0.008	0.012
D	9.80	10.00	0.386	0.394
E1	3.81	4.00	0.150	0.157
e	0.635BASIC		0.025BASIC	
E	5.80	6.20	0.228	0.244
h	0.380BASIC		0.015BASIC	
L	0.41	1.27	0.016	0.500
P	0^o	8^o	0^o	8^o

■ Tape and Reel Dimension

SSOP-28



Package	Carrier Width (W)	Pitch (P)	Part Per Full Reel	Reel Size
SSOP-28	16.0±0.1 mm	4.0±0.1 mm	2500pcs	330±1 mm

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