



Bear Technologies

www.beartech.com.tw

Section 1: Introduction



1. Product Feature

- 1.1. USB3.0/USB2.0 Function Test (2 Ports)

2. Specifications

- 2.1. USB3.0 Super Speed/ USB 2.0 High Speed

3. Compatibility

- 3.1. Motherboards, Notebook, IPC, Server, Hub & USB Express Card

4. Testing Introduction

- 4.1. DOS Mode (USBT30.COM)
- 4.2. Only requires one program to conduct fully test USB 3.0 & USB 2.0
- 4.3. Only require one test screen to display the results of USB 3.0 & USB 2.0 Function Test
- 4.4. Using Asmedia USB 3.0 chip (ASM1051, which is downward compatible to USB 2.0) to physically transmit data with the test target
- 4.5. Auto switch between USB 3.0 & 2.0

5. Testing Material

- 5.1. Control Transfer
- 5.2. Bulk Transfer
- 5.3. D+/D-, TX+/TX-, RX+/RX-
- 5.4. VCC/GND

6. Testing Procedure

- 6.1. Connect USBT30 Test card with the target
- 6.2. Boot the screen to DOS platform
- 6.3. Execute **USBT30.com**

Section 2: Common Program Syntax

1-1> Filename: USBT30.COM

```
USB3.0 Test Ver 1.1 Bear Technologies 03/24/2011 (USBT30 ? ..Help)
Base_addr Vendor SW1 Result
01 FBCF8000h Etro/3.0 1 Pass XHCI 0
02 FBCF8000h Etro/3.0 0 Pass XHCI 0
03 FBCF8000h Etro/2.0 1 Pass XHCI 0
04 FBCF8000h Etro/2.0 0 Pass XHCI 0

Group Max.Ports PSC1 PSC2 PSC3 PSC4 PSC5 PSC6 PSC7 PSC8
01 04(01-04) 0002A0 Z202A0 021203 021203 ?????? ?????? ?????? ??????

Event Deq. PTR : 000612A0h 103> USB3.0 (Exp./Pass)(04/04): Pass
03/29/2011 17:39:22 Lap Count:00001 USB3.0(Retry):000 USB2.0(Retry):00000
```

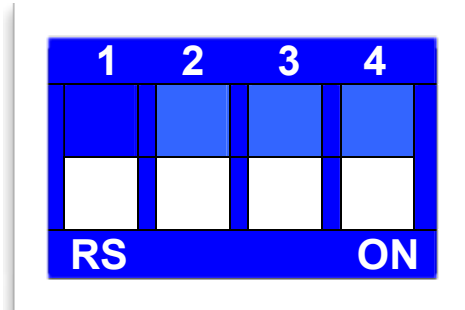
```
USB3.0 Test Ver 1.1 Bear Technologies 03/24/2011 (USBT30 ? ..Help)
USBT30 [T1 .. T99][R][?]

USBT30 ; 4 USB3.0/2.0 Ports Pass
USBT30 T2 ; 2 USB3.0/2.0 Ports Pass
USBT30 T6 ; 6 USB3.0/2.0 Ports Pass
USBT30 T8 ; 8 USB3.0/2.0 Ports Pass
USBT30 T10 ; 10 USB3.0/2.0 Ports Pass
USBT30 ? ; Help Message
```

Section 3: Testing Principle

1. LED & SWITCH

SW1



Bit 1: S_SW3 (ON -> S_SW3 = 0, OFF -> S_SW3 = 1)

Bit 2: S_SW2 (ON -> S_SW2 = 0, OFF -> S_SW2 = 1)

Bit 3: S_SW1 (ON -> S_SW1 = 0, OFF -> S_SW1 = 1)

Bit 4: S_SW0 (ON -> S_SW0 = 0, OFF -> S_SW0 = 1)

S_NO	SW3	SW2	SW1	SW0
0H	0	0	0	0
1H	0	0	0	1
2H	0	0	1	0
3H	0	0	1	1
4H	0	1	0	0
5H	0	1	0	1
6H	0	1	1	0
7H	0	1	1	1
8H	1	0	0	0
9H	1	0	0	1
AH	1	0	1	0
BH	1	0	1	1
CH	1	1	0	0
DH	1	1	0	1
EH	1	1	1	0
FH	1	1	1	1

2. Test Results

2.1. The chips that have been tested

● NEC	D720200F1
● Asmedia	ASM1042
● Fresco	FL1000
● Etron	EJ168
● VIA	VL800

Section 4: Support



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