



威盛GMB策略聯盟

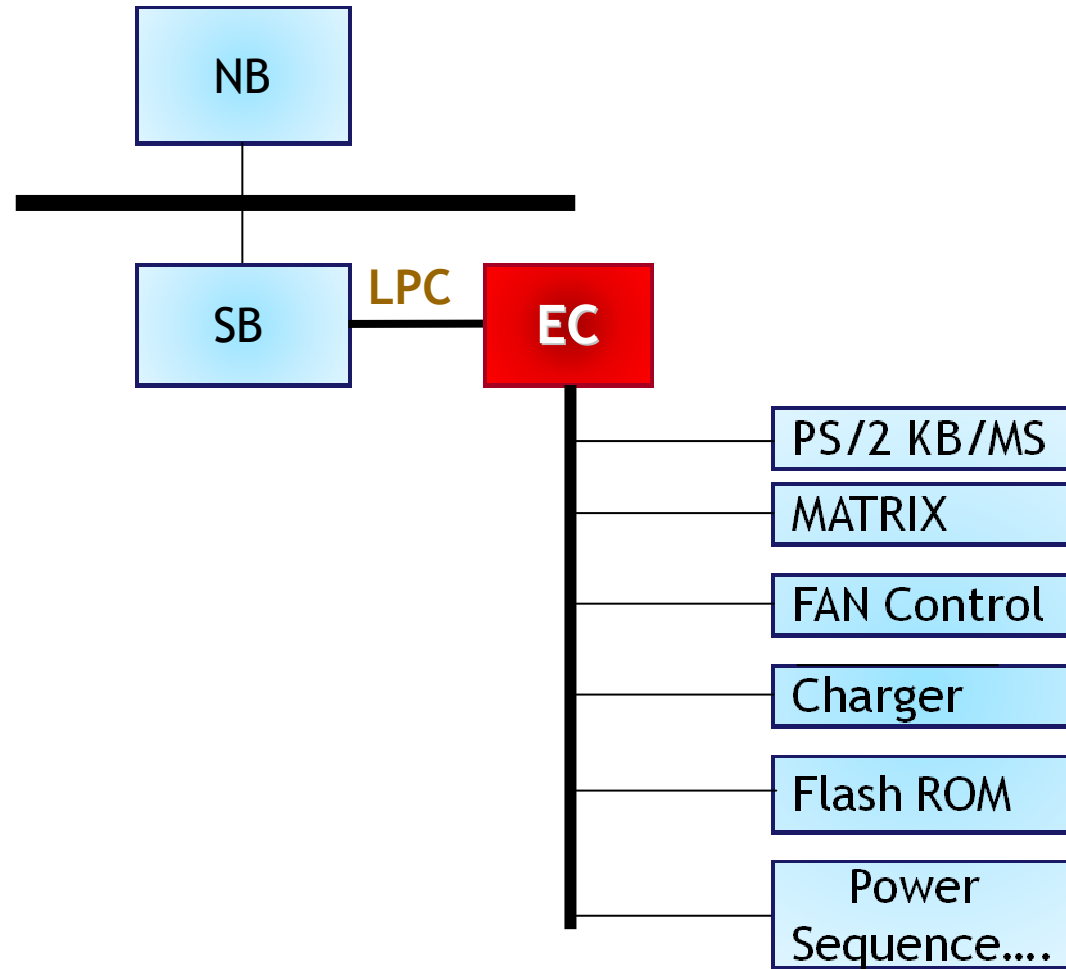
Embedded Controller

上网本的应用

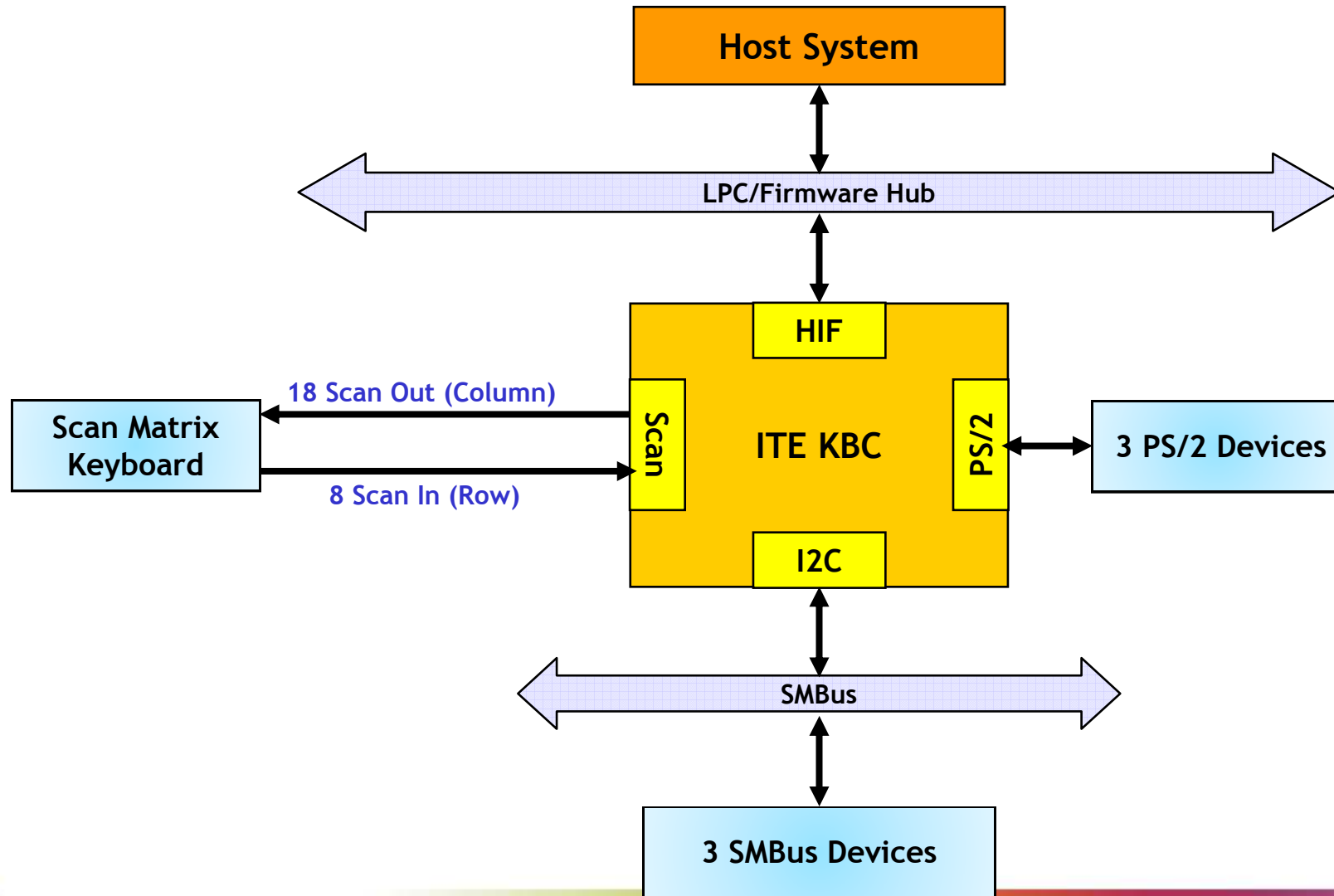
王忠贤 Bill Wang 产品经理



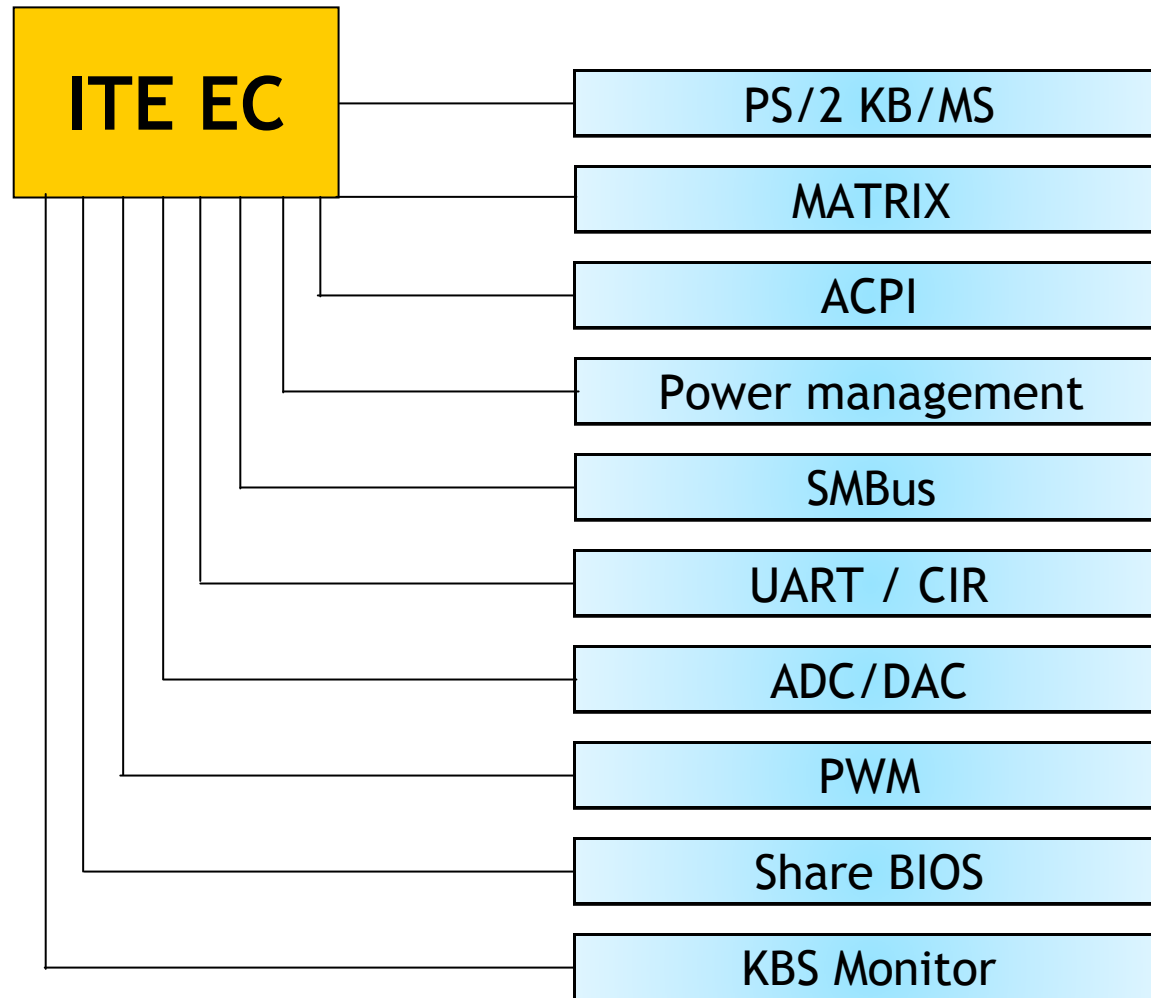
系统架构



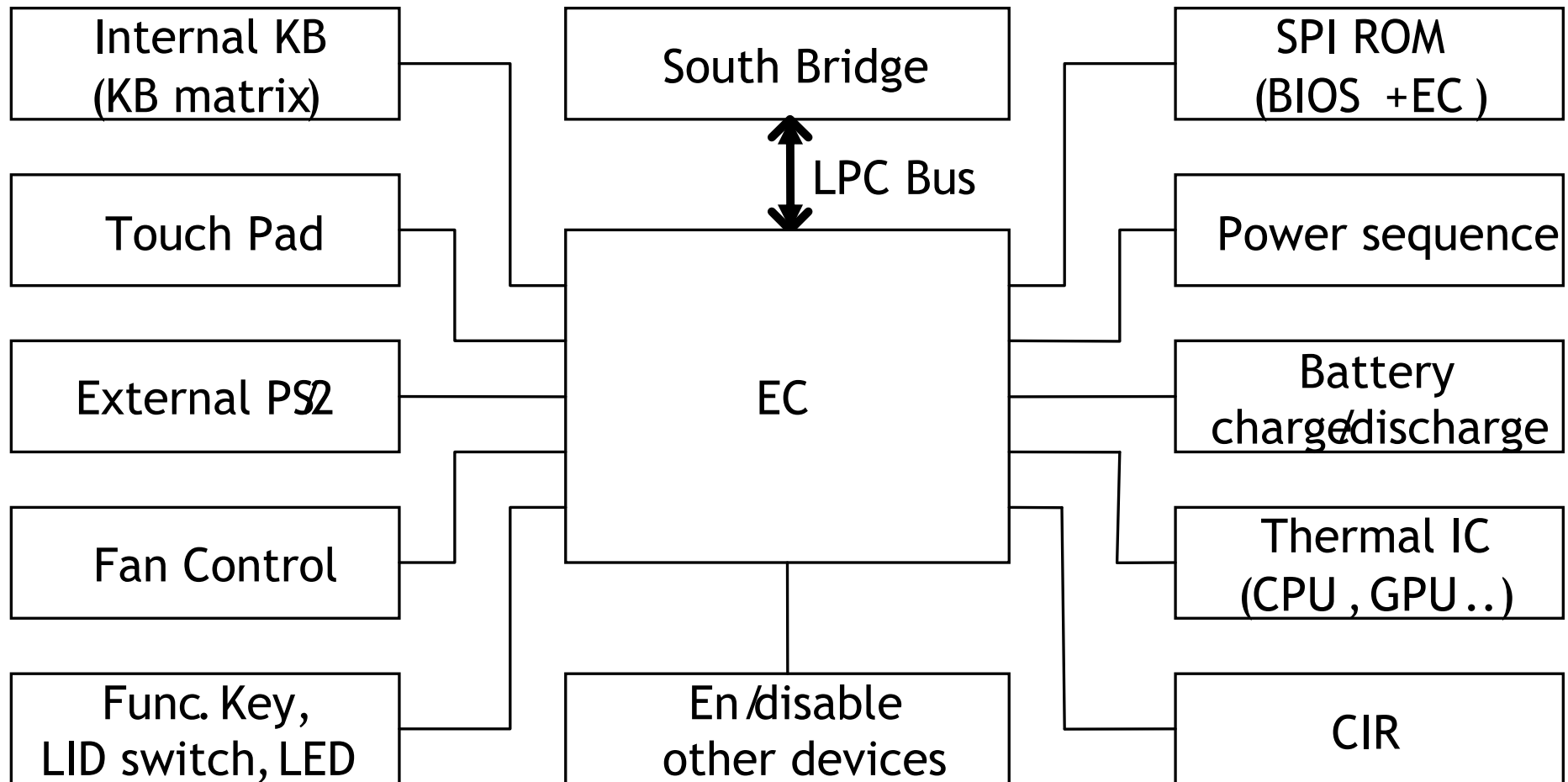
Keyboard Controller Overview



EC的功能特色



EC 在上网本中的功能



ITE如何支持威盛GMB联盟伙伴



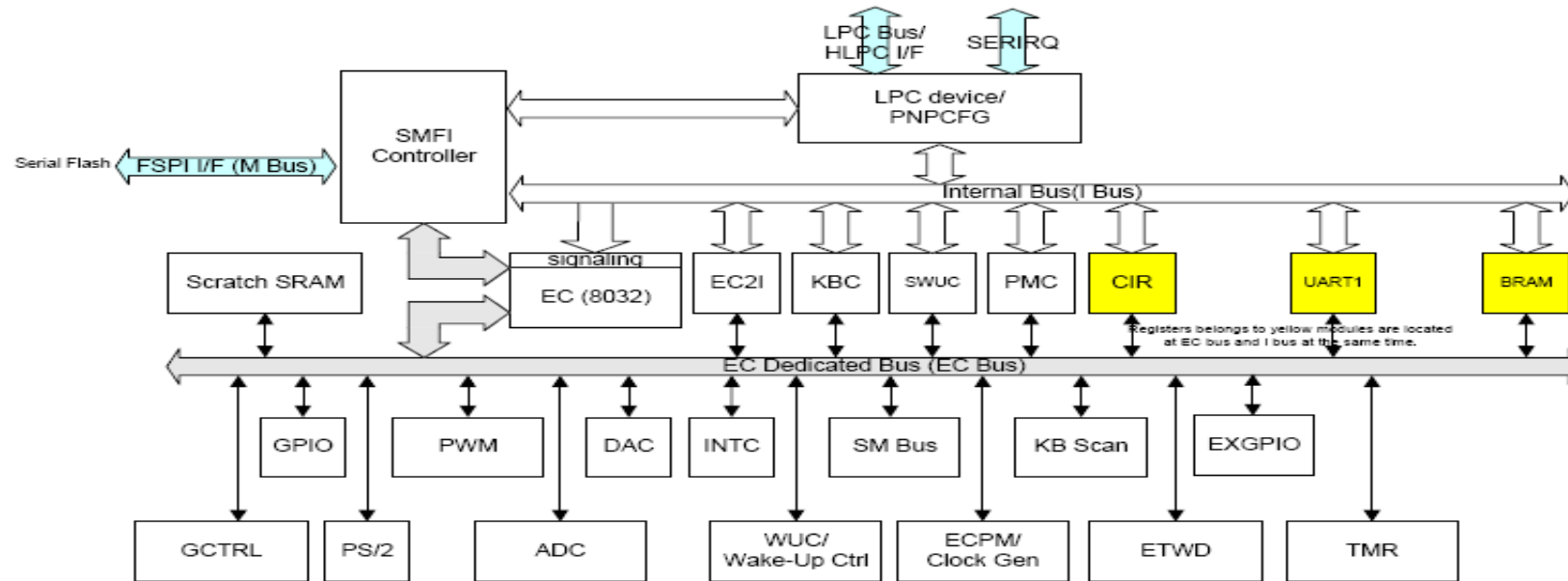
威盛GMB策略聯盟

ITE KBS Download Board and Develop tools



Block Diagram

3.1 Block Diagram



- **Host Domain:**
LPC, PNPCFG, host parts of SMFI/SWUC/KBC/PMC logical devices and host parts of EC2I.
- **EC Domain:**
EC 8032, INTC, WUC KB Scan, GPIO, ECPM, SMB, PS/2, DAC, ADC, PWM, HWS, ETWD, EC2I, GCTRL, BRAM, EGPC, DBGR, EC parts of SMFI/SWUC/KBC/PMC and EC parts of EC2I.
- **Double-mapping Module:**
CIR, BRAM and UART1.

Note:

There are two SPI functions in EC. One of them is master and one is slave.
1. SPI memory master (abbreviated as FSPI) is connected to the SPI flash.



ITE KBS D2EC access RAM

ITE EC Register Utility v3.0.0.7 for D2EC

EC REGA EC REGB EC RAM LPC REG Setup Quit

Refresh + Reconnect EC

In-system Debugger

Reset CPU

80Port

CO

Set Break Point

0 Set

0 Clear

0 Go

Single Step

Break At Any Instruction
 Break At Any MOVX
 Break At Any Branch
 Break At Any Branch Except DJNZ/CJNE
 Break At Any NOP

Next Exit

EC CPU Address

80 Port

BB

85

86

87

8C

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	00	00	00	00	05	06	07	08	09	0A	0B	0C	0D	0E	0F
10	00	00	00	00	00	00	0F	00	00	00	00	00	00	00	00
20	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30	00	00	00	00	00	00	00	FF	01	00	00	00	00	00	00
40	00	00	00	00	20	FF	AB	20	9E	B2	20	D3	89	20	00
50	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
60	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
70	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
80	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
90	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Register Detail

Register Monitor

1300 : 4B 0 : 00

400 : 00 0 : 00

0599 : 00 0 : 00

900 : 09 0 : 00

0 : 00 0 : 00

0 : 00 0 : 00

Emulated KeyBoard

One Key Scan all key

Log

LPC I/O Monitor ON

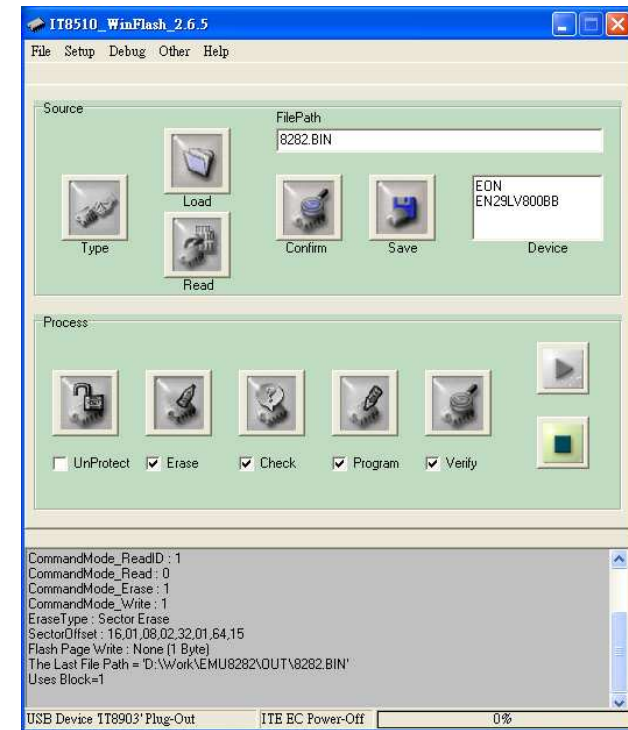
Register Log ON

EC_REGA : Base Address (0x1000) -> SMFI Refresh : ON USB Device IT8903' Plug-In : Version=02.00.02.00



ITE EC 的优势

- 功耗低
- 效能高
- 开发工具方便好用
- IC 规格可快速跟上
市场需要
- 针对不同笔记本电脑
产品档次推出符合系统
整体需要的 IC

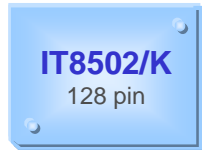


ITE在威盛GMB Reference Design上的应用

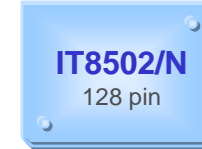


威盛GMB策略聯盟

IT8502E 各版本关键差异



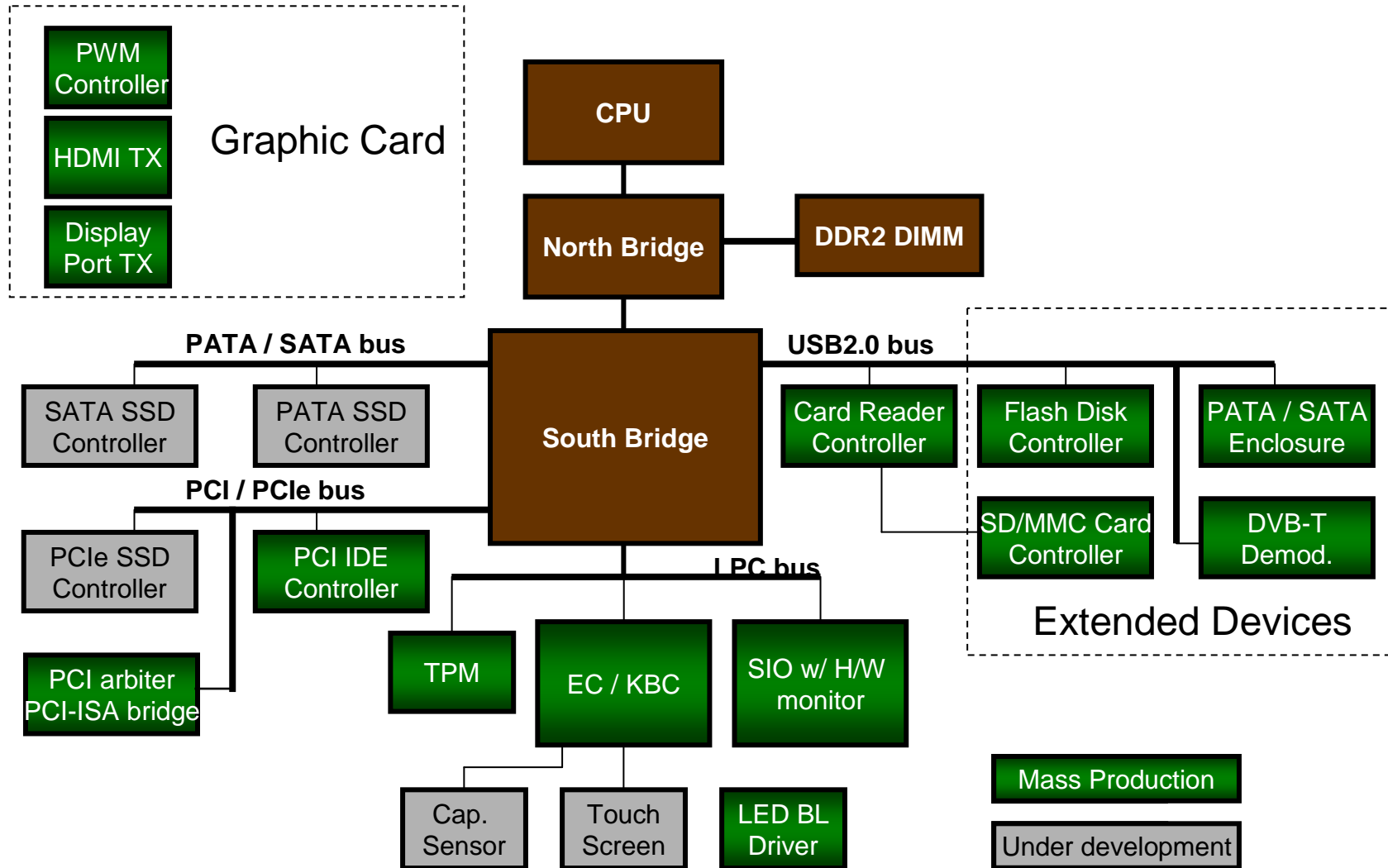
- SM Bus Master **x3**
- 73 GPIO
- 8 PWM Channel
- Battery-backed **64Byte** SRAM
- 8032TT MCU
- 4K SRAM
- LPC Interface
- Up to 16MB SPI Flash
- 12 ADC Channel, 10-bit
- 6 DAC Channel, 8-bit
- 3 PS/2 Channel
- 18 x 8 Keyboard Scan Matrix
- In-system Programming



- UART Device Interface **x1**
- SPI Device Interface **x1**, with a BUSY Pin
- SPI Flash Read/Write Protection
- A SM Bus Slave On Any Channel
- SM Bus Master **x4**
- 73 **+9** GPIO
- 8 **+4** PWM Channel
- Battery-backed **192Byte** SRAM
- 8032TT MCU
- 4K SRAM
- LPC Interface
- Up to 16MB Serial Flash
- 12 ADC Channel, 10-bit
- 6 DAC Channel, 8-bit
- 3 PS/2 Channel
- 18 x 8 Keyboard Scan Matrix
- In-system Programming



ITE Solution on PC/NB



ITE 的優勢

- 联华电子 (UMC) 关系企业
- 台湾股票上市公司
- 完整的产品组合
- 高市场份额 (Market Share)
- 稳定、大量的交货能力
- 强大、快速的产品开发能力
- 良好、稳定的量产品质控管能力
- 能满足客户全方位的需求



ITE如何与GMB及客户合作

ITE 将于4月及5月举办免费EC训练课程

Agenda :

ITE EC H/W 介绍 (1 hr)

ITE EC S/W 介绍 (3 hr)

Time: 4/10(Fri.) 13:30

Place: 深圳市福田区福中三路1006号诺德金融中心28楼(SAS)

報名方式: bill.wang@ite.com.tw or Sunny.liu@itechina.cn

每间厂商: 2人 (共25家客户,以50人为限)

報名截止日: 3/25 18:00

预计第二场举办EC训练课程

Time: 5/15(Fri.) 13:30



威盛GMB策略聯盟

ITE联络窗口

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