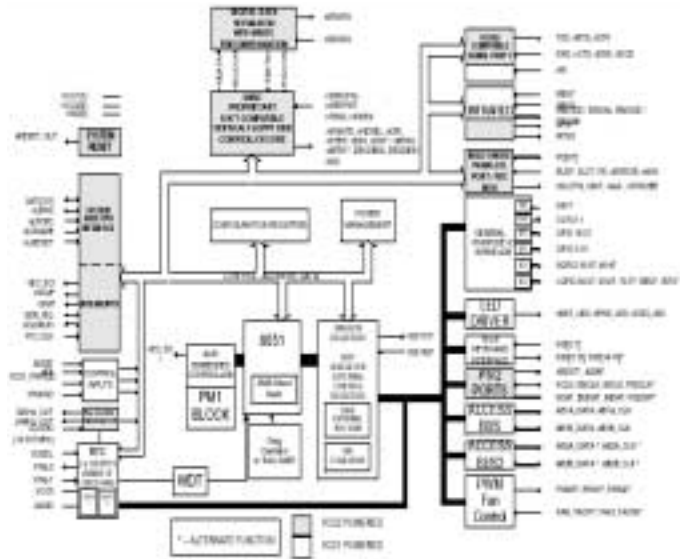


KeyPRO™ For SM₅C Kahuna (LPC47N252)

Full-Featured Keyboard Controller Firmware And Development Tools

■ Key Features

- 4 Generic PS/2 Ports For Keyboard and Mouse
- Hot Insertion of PS/2 Device
- Active PS/2 Multiplexing
- 4 Sets of Keyboard Matrix
- EC BIOS Flash Utility
- Keyboard Configuration Utility
- Debug Tool Support



Insyde Software has the PC industry's most advanced firmware solution for the SMSC's Kahuna (LPC47N252) Keyboard/Embedded controller. Insyde Software's Keyboard/Embedded controller firmware is highly flexible in supporting the most complex hardware designs in multiple environments (e.g., legacy and ACPI) without sacrificing and features, system performance, or requiring extra development.

With Insyde Software's advanced keyboard architecture and Keyboard Configuration Utility, and OEM can greatly reduce the keyboard firmware porting customization time. For example, with the Keyboard Configuration Utility, any "trigger event" (e.g., hot key sequence) can be mapped to one or a sequence of "control function" (e.g., put the system in standby or enter quick lock).

AT and PS/2 8042 Compatible

- Host interface configured to provide exact IBM PS/2 and AT compatibility
- All defined host commands are available
- Supports secondary Host interface for power management or other use
- IRQ1 and IRQ12 support
- Fast Gate A20 and Fast Host Reset via firmware
- Internal TouchPad supported
- Supports external device Hot Plugged
- Supports Mobile System wake-up Control and external wake-up events
- Three generic PS/2 ports support either a pointing device or a keyboard device
- Standard mouse driver loads even if mouse is not present
- Support 3 mouse modes, standard, wheel mouse, active PS/2 multiplexing

Scanned Keyboard

- Assign any key to any scan code or scan code string with Insyde Software's Keyboard Configuration Utility
- Overlay mode controlled by
 - Host
 - Hot keys
 - Num Lock LED
 - External keyboard presence
- Any combination of control keys - [Fn, Shift, Alt, Ctrl, Overlay, Num Lock] + [Any Key], can be mapped to any Scan Code, Control Function, or Hot Key
- Allows for four scan matrix tables to be appended to ROM
- Download OEM scan matrix into RAM for easy customization

Smart Battery (SMB)

- Smart or control method battery
- Any SMB/I²C device is accessible in legacy or ACPI mode
- Polling for battery to charger and battery to host alarms
- Polling of selector and charger for battery/AC change

ACPI

- Full support of EC (Embedded Controller) Command Set
- Virtual Host Interface
- PM interface port through 62/66h
- SMBus Host Controller Interface
- ACPI space overlap with configuration table
- SCI Event Generation
- External Events (e.g., Thermal, Lid, Battery Support etc.)

- Notification Management
- SMI Processing
- SCI/SMI Task Queuing
- Any port pin can be controlled by ACPI

Firmware-controlled Power Minimization

- Uses on-chip idle Mode between keystrokes and power down Mode in system Suspend

Keyboard Configuration Utility

- Insyde Software's Keyboard Configuration Utility allows the engineer to customize virtually any feature of Insyde Software's Keyboard Controller Firmware, minimizing the modification of source code.

```

File  Config_set  Port_pin  Scanner_key  custoM_func  Testing  Quit
contl  [contl]  ledpP  Mouse  Irqwk  acpiA  acpiB  acpiC  acpiD  Quit
Scanner Settings
*** Scanner Setting ***
Configuration          current setting
1. Scanner output mode (Direct,Decoder)  0  Direct
2. Direct Scanner output mode (Float,Drive)  0  Float
3. Decoder Scanner output polarity  0  Active Low
4. Decoder anykey detect (Disable,Enable)  0  Disable
5. Decoder anykey output Polarity  0  Active Low
6. Scanner Key
7. Scanner out
8. Scanner inp
9. Delay time
10. Debounce co
11. Debounce co
*** ACPI Port Pin Setting ***
Configuration          current setting
1. SCI Port Pin  F.7
2. SCI Port Pin Operation  4
3. SMI Port Pin  F.7
4. SMI Port Pin Operation  4
5. SCI Port Pin Pulse Width  07
6. SMI Port Pin Pulse Width  07
7. SMB Protocol value for 1st OEM SMB Command  00
8. SMB Slave Address for 1st OEM SMB Command  00
9. SMB Slave Command for 1st OEM SMB Command  00
10. SMB Active Trigger Compare Level for 1st  0000
11. SMB Arm Trigger Compare Level for 1st  0000
12. SMB Protocol value for 2nd OEM SMB Command  00
13. SMB Slave Address for 2nd OEM SMB Command  00
14. SMB Slave Command for 2nd OEM SMB Command  00
15. SMB Active Trigger Compare Level for 2nd  0000
16. SMB Arm Trigger Compare Level for 2nd  0000
↓          Next Field          ↑          Previous field
←          Cursor left          →          Cursor right (text)
<Enter>   Popup menu          <Escape>   Exit
    
```

Any Trigger Event can be mapped to any control function



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