Montania to Montania+ changes

1. Changed VR resistor to generate 1.35V for MGM+ core (R529, R530)

2. Changed R112 from 27.4 to 37.4 Ohm (changes HLSCOMP for MGM+)

3. Put R612, R613, R614 1K ohm

4. Need Changed PSWING, HLVREF for MGM+ if use MGM core
   (For Pebble don’t need change because we use +1.5VRUN)

5. Layout meet DDR333 require
   (For Pebble already done)
Banias CPU part number

- B9.00016.001  IC CPU BANIAS1.7G UFBCBGA
- B9.00017.001  IC CPU BANIAS1.6G UFBCBGA
- B9.00018.001  IC CPU BANIAS1.5G UFBCBGA
- B9.00019.001  IC CPU BANIAS1.4G UFBCBGA
- B9.00020.001  IC CPU BANIAS1.3G UFBCBGA

Place near CPU
Layout note:
Routing THERMDP and THERMDN at same layer.

SMBUS Address now is 30H
Place under DDR

Don't has +2.5VRUN!
For the TX[2:0] - , TX[2:0]+ and CLK- , CLK+ , keeping these trace short and matched.

Note:

- Place R126 close to pin35. DVI or TV out
- Place R127 close to pin19. Connect R126 and R127 to AGND pin34.

H/W settings are deleted once its default option has been determined by manufacturer. For NTSC/PAL and DVI/TV options can be changed by s/w after power up.

Layout note:
1. route TV out signals trace Zo=75ohm.
2. each GND pin should connect directly to its respective decoupling cap GND lead, then connected to the GND plane.
Within a given well, 5VREF needs to be up before the corresponding 3.3V rail.
Broadcom LAN
Gigabit
BCM5705M
HDD & SMART CARD CONNECTOR
Cable power states input:
390K due to 1294Vcc
if use 4pin 1294 connector

+3VSUS

PHY_CPS

DIAGRAM OF CARD BUS CONTROLLER

SD

PEBBLE--02203

20 40
Thursday, March 13, 2003

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
USB4

USB Common mode choke
MURATA PLW3216S900SQ2

USB Common mode choke
MURATA PLW3216S900SQ2

USB Port# Destination
0 BlueTooth
1 Power USB
4 Rear
5 D-Dock

ICU4 provides an output driver impedance of 45 Ohm and integrates 15K Ohm Pull-down R

Dual USB switch for USB0/Power USB

S.C.

USB Common mode choke
MURATA PLW3216S900SQ2

NS ESD suppressor
Place near CBH410

POWER USB

USB Common mode choke
MURATA PLW3216S900SQ2

Power USB

USB CONNECTOR
**Dock on sequence**

- BIOS requests through SMB to connect to PCI bus in the dock
- D-dock state machine generates REQ0
- ICH4 generates GNT0
- Notebook waits for next Idle bus cycle (IORDY# and FRAME#)
- DOCK_QNS_PCI is generated
- On rising edge of PCI clock REQ0 is deasserted and DOCK_PCI_EN# is asserted
- Q-switch is enabled and PCI goes through to the dock
- D-dock reports connection through SMB
- re-configuration is done by BIOS

**D Dock Buffer**

**Wistron Corporation**

21F, 8F, 1S, Huai Tai Wu Rd., Nang, Taipei Hsin 221, Taiwan, R.O.C.

**File**

D Dock Buffer

**Document Number**

PEBBLE-02203

**Date**

Thursday, March 13, 2003
Don't need PU on GPIO List???
KSO_17 and KSO for i button
KSO_17 and KSO16 for Audio_Mute button
KSO_17 and KSO14 for Volum Up button
KSO_17 and KSO15 for Volum down button

Macallen standard part need it,
also used to reset BIOS,
but special part can remove it.

**Macallen LPC47N254**
8Mbit (1M Byte), No PLCC type

ST: M29W008AB-90 "72.29008.C09"
MXIC: 29LV008BTC-90 "72.29008.B09"

SMBus address A2
User Password

ST: Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Haichih, Taipei Hsien 221, Taiwan, R.O.C.

Date: Thursday, March 13, 2003
### LED & BUTTON BD CONN

#### HDD LED
- 19 IDEACT#
- R43 (470R3)

#### POWER LED
- 28 BREATH_LED
- 9 SCR_LED#
- 47K (Q8, DTC144EUA)
- 47K (Q9, DTC144EUA)

#### BLUETOOTH LED
- 31 BT_ACTIVITY

#### BATTERY LED
- 26 BAT1_LED# (R100)
- 470R3 (R72)
- 470R3 (R75)

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<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>IDEACT#</td>
</tr>
<tr>
<td>2</td>
<td>BAT1_LED#</td>
</tr>
<tr>
<td>3</td>
<td>SC470P50V2KX</td>
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<tr>
<td>4</td>
<td>BT LED#</td>
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<td>5</td>
<td>SCR LED#</td>
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<tr>
<td>6</td>
<td>CAP LED#</td>
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<tr>
<td>7</td>
<td>+5VSUS</td>
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<tr>
<td>8</td>
<td>GND</td>
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<td>9</td>
<td>NUM LED#</td>
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<tr>
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<td>KSI_6</td>
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<tr>
<td>14</td>
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<td>15</td>
<td>+5VRUN</td>
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<tr>
<td>16</td>
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<td>19</td>
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<tr>
<td>22</td>
<td>GND</td>
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<tr>
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<td>INT MIC-</td>
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<td>NIM LED#</td>
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<td>KSI_5</td>
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<td>30</td>
<td>KSI_6</td>
</tr>
<tr>
<td>31</td>
<td>BT_ACTIVITY</td>
</tr>
</tbody>
</table>

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**Diagram Note:**
- BC32: SC470P50V2KX
- BC60: SC470P50V2KX
- BC77: SCD1U10V2MX-1
- BC74: SCD1U10V2MX-1
- BC76: SC470P50V2KX
- BC30: SC470P50V2KX
- BC29: SC470P50V2KX
- BC59: SC2200P50V2KX
- BC58: SC2200P50V2KX
- BC57: SC2200P50V2KX
- BC72: SC2200P50V2KX
- BC51: SC2200P50V2KX
- BC52: SC2200P50V2KX
- BC53: SC2200P50V2KX
- BC71: SC2200P50V2KX

**Additional Notes:**
- IDEACT#: 27
- SC470P50V2KX: 470R3
- BT LED#: 24
- BAT1_LED#: 26
- BAT2_LED#: 26
- SCR LED#: 21
- NUM LED#: 22
2.5V/1.25V DDR

RTC POWER

BRIDGE BATTERY
Charge & Discharge path

Wistron Corporation
21F, B8, Sec.1, Hsin Tai Wu Rd., Hsinchu,
Taipei Hsien 221, Taiwan, R.O.C.

Thursday, March 13, 2003
Adapter

Battery

Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., HsinHsin,
Taipei Hsien 221, Taiwan, R.O.C.

MAXIM Charger

Vmax=1645_Vmax * 4.5
VMAX set:
4cell=1.745V(PBID-4.8K to GND)
6cell=1.307V(PBID-NC)

Serial stream to Maxallen

Need close to Battery conn