BACKGROUND:
- Add auto-switching USB circuitry and change USB connector to Mini-AB
- Add pullup resistor and capacitors to reset signals to improve ESD immunity
- Add series resistors and ESD protection devices to reset signals coming from expansion connector
- Change diode in supercap circuit to low forward drop to improve backup longevity
- Change WiFi module to Gainspan

DESCRIPTION OF CHANGE:
1. Change the following components to be loaded (to support the USB Auto Switching capability)
   R52, R53, U18, C97, C98, R54, R55, & R56
2. Change P1 to USB Mini-AB, PN DX3R005HN2E700
3. Add USB auto-switch circuitry: U23, U25, C102, C105, C106, C107, & C108 – using USB_ID from USB connector to select

Reason for change:
1. Add/change USB circuit to support auto-switching
2. ESD & EMI Enhancements
3. Change to Gainspan module

Disposition/Affectivity
- Use as is: X
- Rework to ECO
- Scrap & Rebuild
- Record Change Only: X
<table>
<thead>
<tr>
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<th>Disposition/Affectivity</th>
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<tr>
<td>1. Add/change USB circuit to support auto-switching</td>
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<tr>
<td>4. Add 10K pull-up resistor (R81) to RESET_INn signal</td>
<td>Record Change Only</td>
</tr>
<tr>
<td>5. Add 0.1uf capacitors to ‘RESETN’ (C100) and ‘RESET_INn’ (C99) signals</td>
<td>X</td>
</tr>
<tr>
<td>6. Add optional 0.01uf capacitor to ‘RESET_OUTn’ (DNL)</td>
<td></td>
</tr>
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**POWER-ON RESET CIRCUIT**

**Diagram showing circuit with components and labels.**

**Table showing engineering change order details:**

<table>
<thead>
<tr>
<th>TITLE</th>
<th>DWG NO.</th>
<th>CURRENT REV</th>
<th>NEW REV</th>
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</thead>
<tbody>
<tr>
<td>uEZGUI7.0</td>
<td>uEZGUI-1788-70WVT-BA</td>
<td>3.3</td>
<td>4</td>
</tr>
</tbody>
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**Prepared by:** MH  
**Date:** 1/10/13

**Approved by:**  
**Date:**

**Approved by:**  
**Date:**

**Approved by:**  
**Date:**
7. Add 33ohm series resistors to RESET_OUTn (R101) and RESET_INn (R102)
8. Add OPTIONAL ESD protection device (D14, PN: PESD3V3S2UT) to signals RESET_OUTn & RESET_INn

9. Change diode D5 to PN BAS40-05
10. Change WiFi circuit from Redpine (U13) to Gainspan (U27), Module PN: GS1011M series, in 48-pin package, add support circuitry (U26, U28, etc) as shown below;

11. Add external serial EEPROM circuitry for Gainspan module: U29, R84, R140, C92, & R139

Reason for change:
1. Add/change USB circuit to support auto-switching
2. ESD & EMI Enhancements
3. Change to Gainspan module

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