Reset Latch

POR

To 10/100 Ethernet Transformer
FPGA with 5000 LUTs

Boot Straps

<table>
<thead>
<tr>
<th>Mode 2</th>
<th>Boot's From</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NAND Flash</td>
</tr>
<tr>
<td>0</td>
<td>SD Card</td>
</tr>
</tbody>
</table>

- MODE1 and MODE2 states and Board ID bits are locked prior to UN-RESET.
- MODE1 and MODE2 have PC lockout.

MODE1:
- UN-RESET rising edge, deselects CPU Reset. It has a pull-down resistor - always pull low.
- EN_SD_POWER should initialize high.

MODE2:
- MODE2's pull-down resistor should be high.
- These do have weak pull-downs.

- PROGRAM pin should be high when using Flash memory.
- DONE must be high when using Flash memory.

Set CONFIG_MODE to NONE for bare-metal boot.

During FPGA flash programming, the PROGRAM pin should be high.

Power Supplies can be sequenced in any order but must be monotonic.

All I/O lines are tri-stated during power cycling.

Page 37 of Data Sheet (180–180) for more details.

For more information, refer to Page 4 of TN1141.
Micro SD Card Socket

512 Mbyte or 2GB NAND Flash

64 Mbyte DDR1 SDRAM

RTC
3.3V Power Supply

1.2V Regulator

1.8V Regulator

2.5V Regulator

Temp Sensor
All DIO use 3.3V levels
Do not drive higher than 3.5V!

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**Boot Straps**

Mode 1

1. NAND/Flash
2. SD Card

Mode 2

1. UART0
2. UART1
3. UART2
4. UART3

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**Two 100-pin Off-board Connectors**

- POWER pins supply all power to the module
- Apply 5.5V to 3.8V to these pins
- Current drain is approximately 400 mA (less than 2 Watts)

EXT_RESET# is an Output used to reboot the CPU
- Do not drive active high (not open drain)

SD Card signals on connector are used in parallel with
SD card codec. Only one can be populated with SD card

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**Notes**

- Do not drive active high
- Use open drain

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**CPU JTAG**

- DIO_22 = UART2_TXD
- DIO_23 = UART2_RXD
- DIO_24 = UART3_TXD
- DIO_25 = UART3_RXD
- DIO_26 = UART4_RXD
- DIO_27 = UART4_TXD

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**Serial Ports or DIO**

- UART0: DIO_28
- UART1: DIO_29
- UART2: DIO_30
- UART3: DIO_31
- UART4: DIO_32

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**Two 100-pin Off-board Connectors**

- Connect a 1.5K ohm resistor from DIO_25 to OFF BD_RESET#
- SD card socket. Only one is wired in parallel with SD card signals on connector.