

ALW POWER ASSERT

Insert AC adapter only, then without press power button



Power Plan:
 0. RTC power plane.
 1. Always power plane.
 2. SUS power plane.
 3. RUN power plane.

ACPI Power State:
 1. S0: System Full On, All power planes are ON.
 2. S3: Suspend to RAM, RUN power off.
 3. S4: Suspend to Disk, RTC and Always power ON.(AC)
 4. S5: Soft Off, power state like S4.

PS_ID
 PS_ID is to confirm that insertion of AC adapter 65W or 90W

PWR_SRC
 +RTCSRC is generated by PWR_SRC through D40

U9
 Pin 1
 +RTCSRC will be input of MAXIM 1615, then +RTC_PWR is the output of MAXIM 1615

U13
 Pin 1
 +RTCSRC will be input of MAXIM 1615, then +3.3VRTC is the output of MAXIM 1615

Pin 3
 +RTC_PWR
 With either LIVE_ON_BATT or ACAV_IN existed, +RTC_PWR can convert to +5VALW through Q61

Pin 3
 +3.3VRTC
 With either LIVE_ON_BATT or ACAV_IN existed, +3.3VRTC can convert to +3VALW through Q62



If no ALW power, what should we do?
 A: Check all ACAV_IN relate circuit.

+5VALW

+3VALW
 Macallen

X7 XTAL 32.768K will oscillate after +3.3VRTC comes up high & U37.2 should driven high after +3VALW comes up.



Q: If no debug out pulse?
 1. Macallen.
 2. BIOS ROM.

Go!
 If Macallen is working. CN8 pin2 will have 1,2,3,4 pulse when AC adapter attached(DEBUG_OUT)



SUS POWER ASSERT

Insert AC adapter only, then press power button

POWER_SW#

After +3VALW , +5VALW, DEBUG_OUT were all come out. Macallen should assert SUS_ON.



If Macallen do not driven SUS_ON high
 1. Re-heat Macallen.
 2. Change one new Macallen.
 3. Still no SUS_ON, check BIOS ROM.

SUS_ON

SUS_ON and AUX_EN were initial trigger for **MAX1632**. It will result in producing +5VSUS , +3VSRC and DC_12CV.

AUX_EN from Macallen

+5VSUS

+5VSUS was initial trigger for **SC1486**. It will produce +2.5VSUS

+2.5VSUS

Q17

+3VSUS

+3VSUS was initial trigger for **MAX1644**. It will produce +1.5VSUS.

+1.5VSUS

With RUNPWROK asserts

Q DC_12V

+12V

Q60



Check All SUS power planes are in correct voltage level?

SUS_ON

2.5V_PWRGD

1632_3VOK



If these three signal driven high, then through U74 (AND gate) will produce SUSPWROK

SUSPWROK

RUN POWER ASSERT

If SUSPWROK is OK, it will drive to ICH4

SUSPWROK

When initialized ICH4, drives SLP_S3# which causes Macallen to drive RUN_ON.

RUN_ON

After approximate 10ms soft start delay, RUN power switches are turned on and connecting RUN planes with SUS planes

SUS POWER PLANES

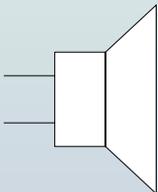
RUN POWER PLANES

+5VSUS

+5VSUS was initial trigger for **TPS793475**. It will produce +5VA

+5VA

4.75V for audio circuit.



+3VSUS

+3VSUS was initial trigger for **MAX1792**. It will produce +1.8VRUN

+1.8VRUN



Make sure all RUN power planes are in correct voltage level.

Delay 10ms

+5VSUS

Q55

+5VRUN

+3VSUS

Q18

+3VRUN

+1.5VSUS

Q69

+1.5VRUN

+5VRUN was initial trigger for **SC1486**. It will produce +1.25VRUN

+5VRUN

+1.25VRUN

1.25V_PWRGD

If these three signal assert, then through U20 (AND gate) will produce RUNPWROK



RUNPWROK

10ms after +5VRUN power plane comes up

