EAH6950 (C204PI)Repair Guide

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CSC-GRMA

ASUS Model name	EAH6950 DCII/2DI4S/2GD5
ASUS P/N	80-C1CQ80-S0A01
Graphics Engine	AMD Radeon HD 6950
GPU P/N	02G050006600
Bus Standard	PCI Express 2.1
Video Memory	GDDR5 2GB
Engine Clock	810 MHz
Memory Clock	5000 MHz (1250 MHz GDDR5)
RAMDAC	400 MHz
Memory Interface	256-bit

Page1. Basic Information about the Model

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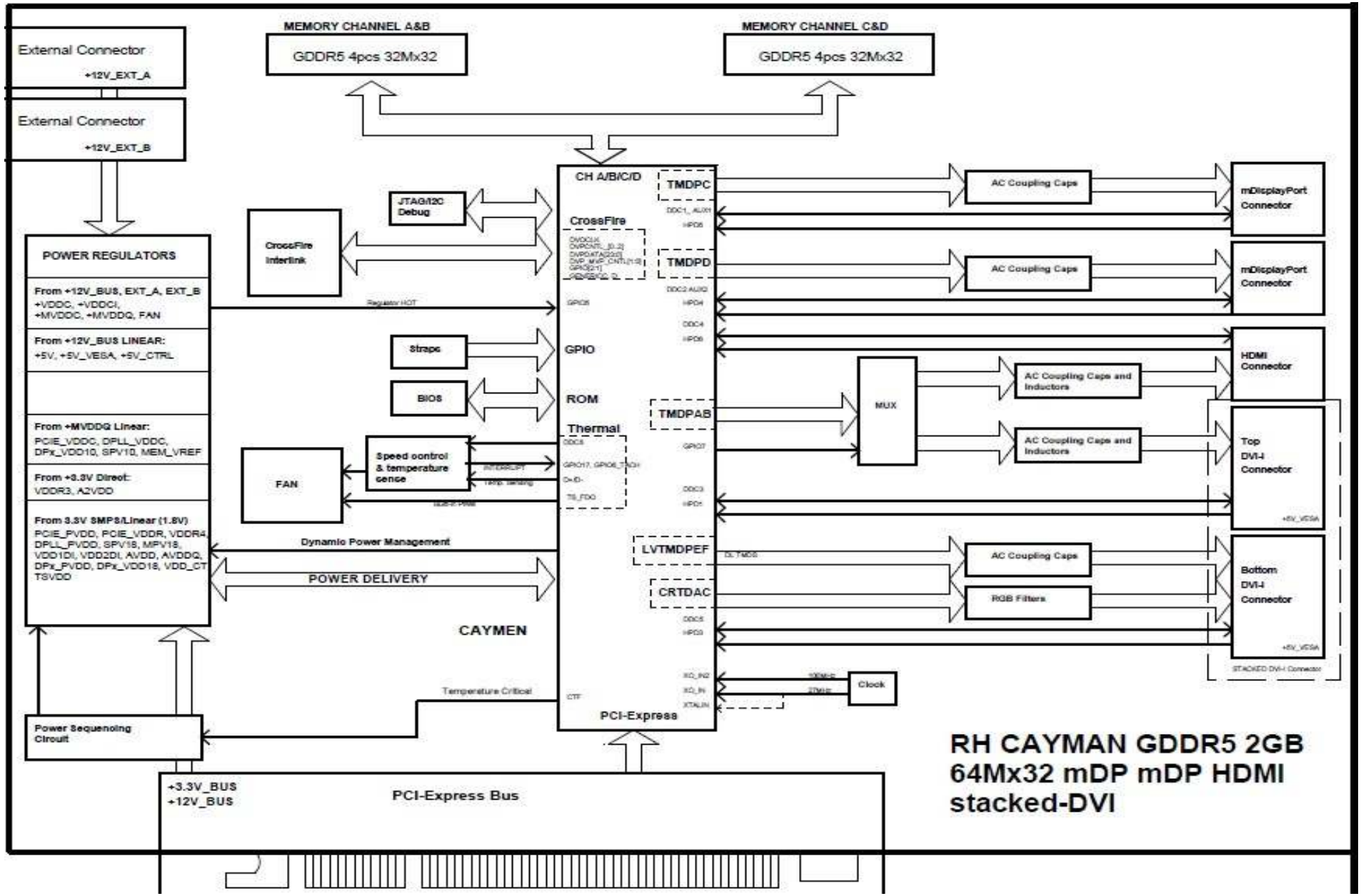
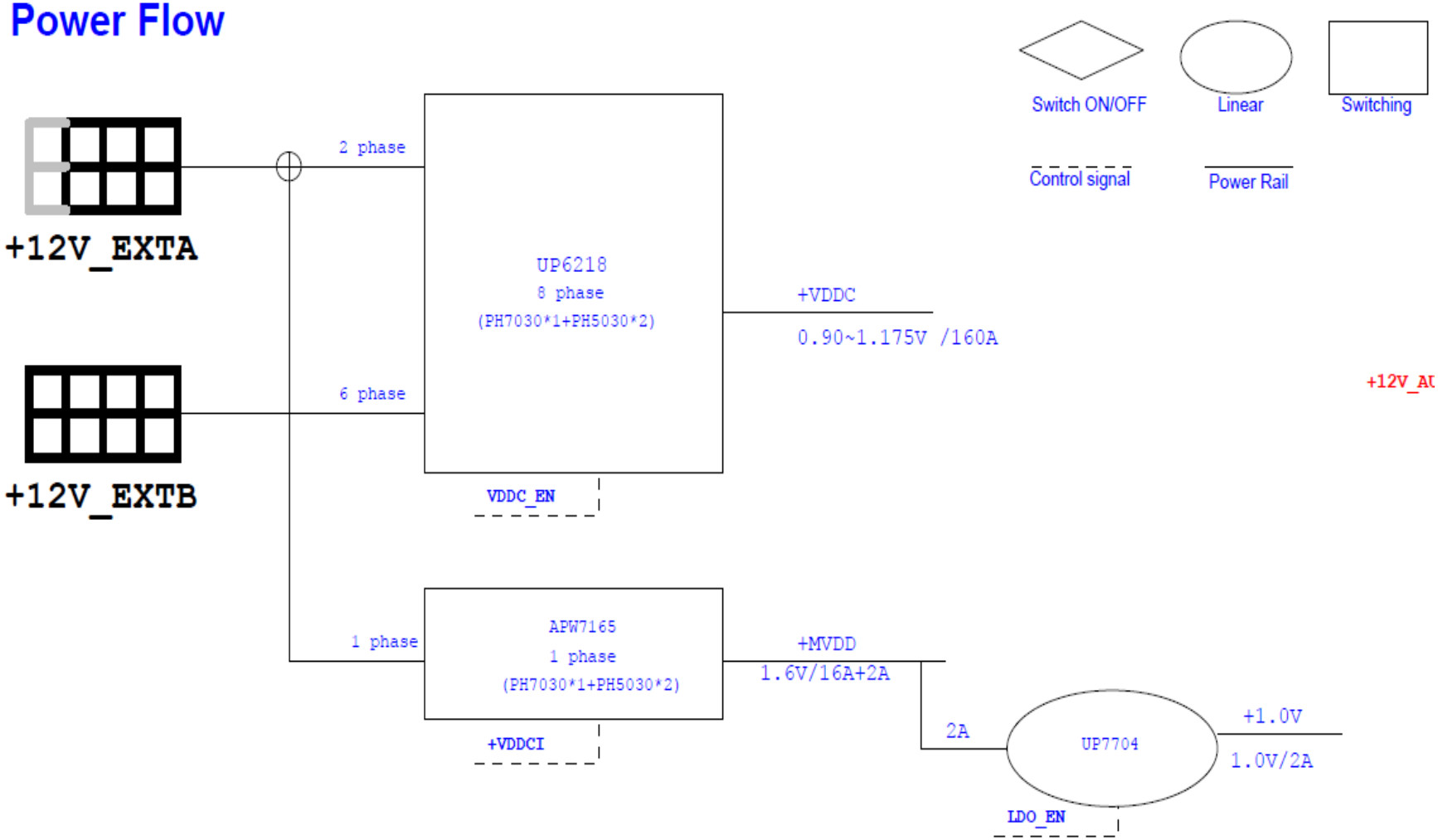
Page4. Power Sequence and Power Flow

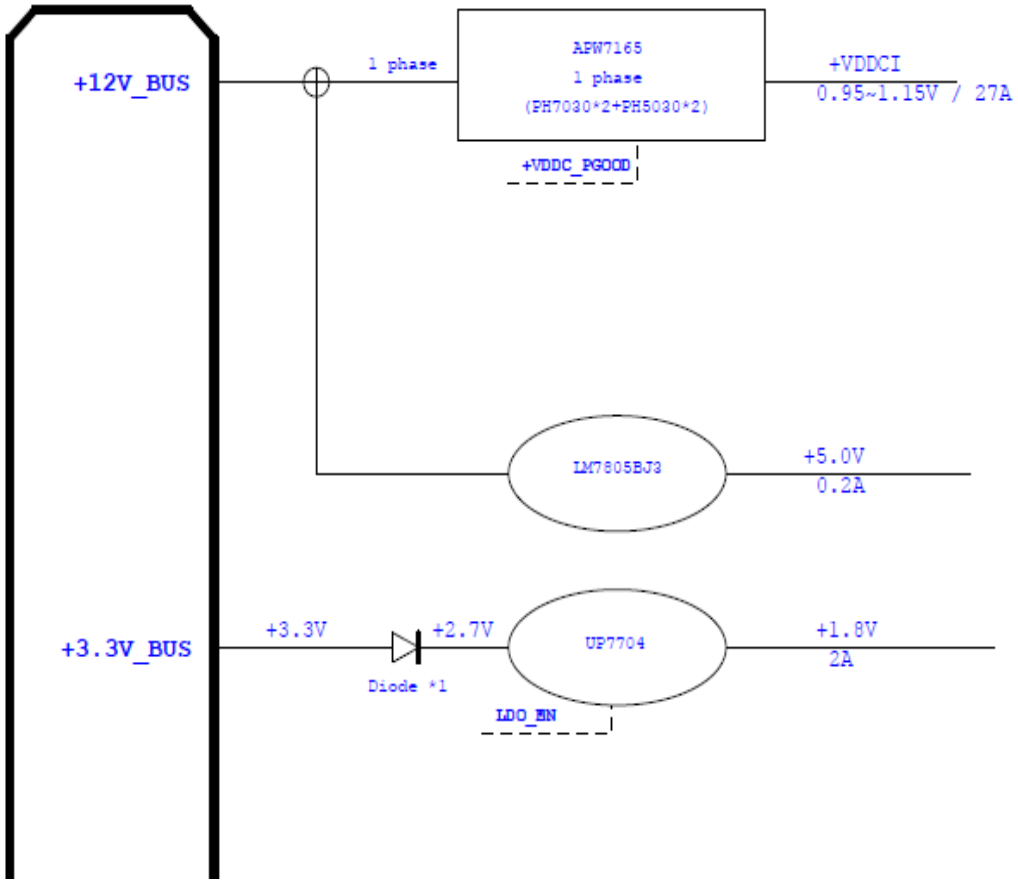
Page5. Important Signal map (Top side)

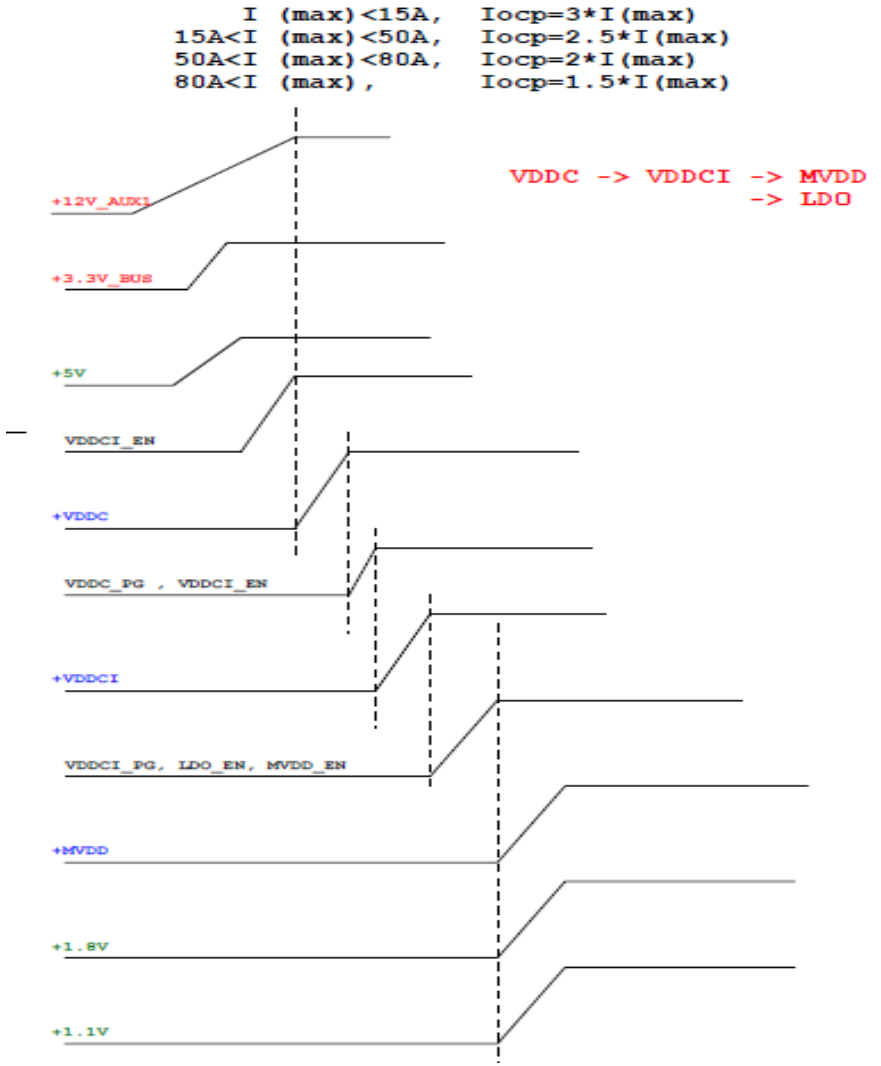
Page6. Important Signal map (bottom side)

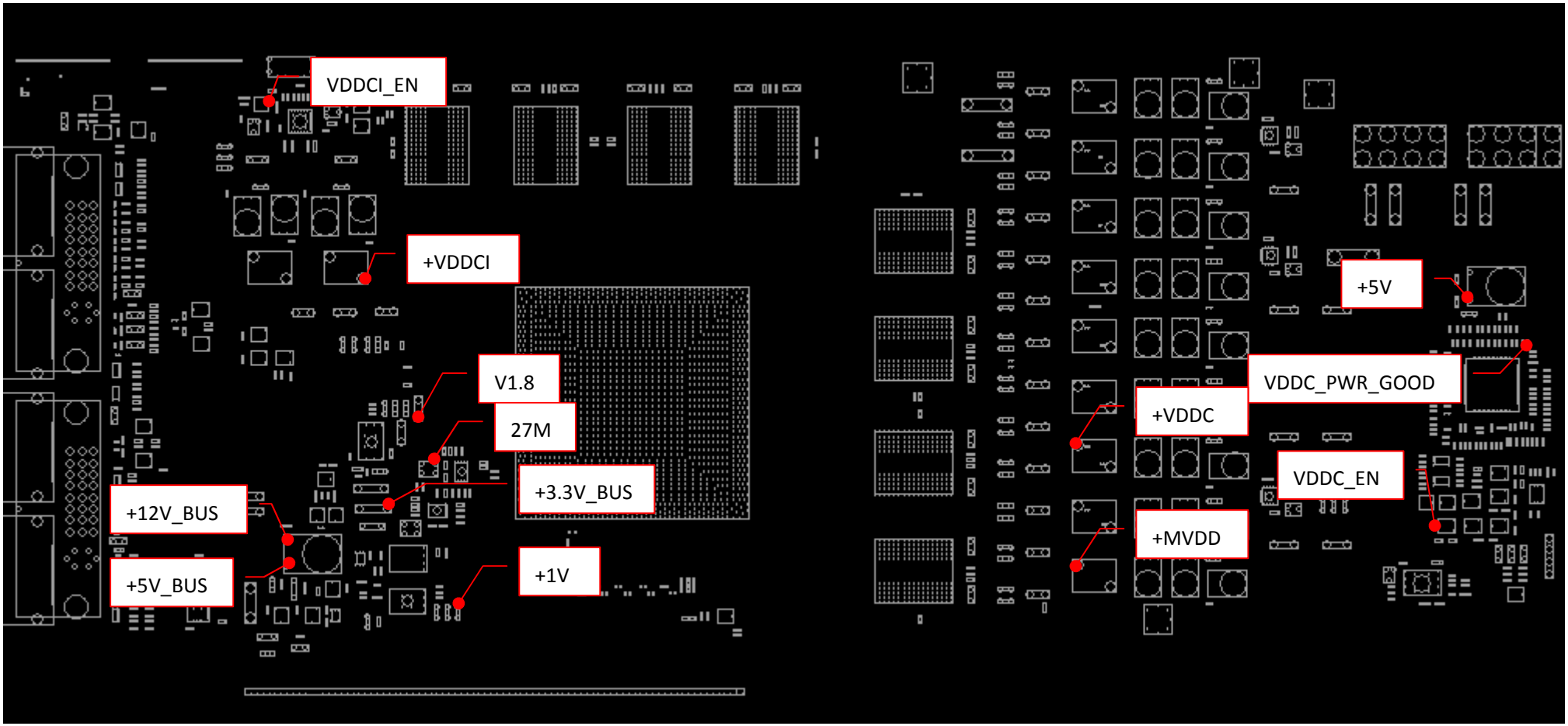

MEMORY CHANNEL A&B
GDDR5 4pcs 32Mx32
MEMORY CHANNEL C&D
GDDR5 4pcs 32Mx32
External Connector
+12V_EXT_A
External Connector
+12V_EXT_B
POWER REGULATORS
From +12V_BUS, EXT_A, EXT_B
+VDDC, +VDDCI,
+MVDDC, +MVDDQ, FAN
From +12V_BUS LINEAR:
+5V, +5V_VESA, +5V_CTRL
From +MVDDQ Linear:
PCIE_VDDC, DPLL_VDDC,
DPx_VDD10, SPV10, MEM_VREF
From +3.3V Direct:
VDDR3, A2VDD
From 3.3V SMPS/Linear (1.8V)
PCIE_PVDD, PCIE_VDDR, VDDR4,
DPLL_PVDD, SPV18, MPV18,
VDD1DI, VDD2DI, AVDD, AVDDQ,
DPx_PVDD, DPx_VDD18, VDD_CT
TSVDD
Power Sequencing
Circuit
JTAG/I2C
Debug
CrossFire
Interlink
Straps
BIOS
FAN
Speed control
& temperature
sense
Dynamic Power Management
POWER DELIVERY
CAYMEN
Temperature Critical
CH A/B/C/D
CrossFire
GPIO
ROM
Thermal
PCI-Express
TMDPC
TMDPD
TMDPAB
LVTMDPEF
CRTDAC
Clock
AC Coupling Caps
mDisplayPort
Connector
AC Coupling Caps
mDisplayPort
Connector
HDMI
Connector
MUX
AC Coupling Caps and
Inductors
AC Coupling Caps and
Inductors
Top
DVI-I
Connector
AC Coupling Caps
RGB Filters
Bottom
DVI-I
Connector
STACKED DVI-I Connector
+3.3V_BUS
+12V_BUS
PCI-Express Bus
RH CAYMAN GDDR5 2GB
64Mx32 mDP mDP HDMI
stacked-DVI

Power Flow


Switch ON/OFF
Linear
Switching
Control signal
Power Rail
+12V_EXTA
+12V_EXTB
2 phase
6 phase
UP6218
8 phase
(PH7030*1+PH5030*2)
+VDDC
0.90~1.175V /160A
VDDC_EN
+12V_AU
1 phase
APW7165
1 phase
(PH7030*1+PH5030*2)
+MVDD
1.6V/16A+2A
+VDDCI
2A
UP7704
+1.0V
1.0V/2A
LDO_EN


+12V_BUS
1 phase
APW7165
1 phase
(PH7030*2+PH5030*2)
+VDDCI
0.95~1.15V / 27A
+VDDC_PGOOD
LM7805BJ3
+5.0V
0.2A
+3.3V_BUS
+3.3V
+2.7V
Diode *1
UP7704
+1.8V
2A
LDO_EN


I (max)<15A, Iocp=3*I(max)
15A<I (max)<50A, Iocp=2.5*I(max)
50A<I (max)<80A, Iocp=2*I(max)
80A<I (max), Iocp=1.5*I(max)
VDDC -> VDDCI -> MVDD
-> LDO
+12V_AUX1
+3.3V_BUS
+5V
VDDCI_EN
+VDDC
VDDC_PG , VDDCI_EN
+VDDCI
VDDCI_PG, LDO_EN, MVDD_EN
+MVDD
+1.8V
+1.1V


VDDCI_EN
+VDDCI
V1.8
27M
+3.3V_BUS
+12V_BUS
+5V_BUS
+1V
+5V
VDDC_PWR_GOOD
+VDDC
VDDC_EN
+MVDD