

## SCHEMATIC LEARNING

### DEFINITION of TERM TECHNIQUE

Basic Terms	General Definitions
<b>AC</b>	Alternate Current
<b>DC</b>	Direct current
<b>AMPHERE</b>	Current flowing
<b>VOLTAGE</b>	Power Supply
<b>POWER/WATT</b>	The amount of voltage required
<b>RESISTOR</b>	Resistance
<b>LOAD</b>	Load

Voltage Definition	Definition	Signal
INPUT	Input	In
OUTPUT	Output	Out
NEGATIVE	Voltage have a value below 0	-
POSITIVE		+
GROUND		GND
CLOCK		CLK
RESET	Input confirmation	Reset
DATA	Communicate	PCI & etc

Term	Information	Term	Information
AC	<i>Alternating Current</i>	VTT	<i>Memory Termination Voltage</i>
ACDRV	<i>AC Adapter to System - Switch Driver Output</i>	VTERM	<i>Memory Termination voltage</i>
ACEDET	<i>Adaptor Current Detector</i>	VUSB	<i>Power</i>
ACGOOD	<i>Valid Adapter Active-Low Detect Logic Open-Drain Output</i>	VGA	<i>Power VGA (VGFX/VGPU/VCVOD)</i>

ACIN	<i>Adaptor Current Sensor Input</i>	VGFX	<i>Power Graphic Chip</i>
ACN	<i>Adaptor Current Sense Resistor</i>	VREF	<i>Voltage References</i>
ACOP	<i>Input Over-Power pPotection</i>	LCDV	<i>Lcd Power</i>
ACOV	<i>Input Over Voltage Protection</i>	ODD	<i>Output Disc Driver</i>
ACP	<i>Adapter Current Sense Resistor,Positive Input</i>	PCI	<i>Peripheral Component Interconnect</i>
ADP+	<i>Adapter Positive Supply</i>	PGOOD	<i>Power Good Open Drain Output</i>
ADP_ID	<i>Adapter Indentity</i>	PIR	<i>Product Improved Reco</i>
AGND	<i>Anallog Ground</i>	PSI#	<i>Current Indicator Input</i>
ALWP	<i>Always Power</i>	PVCC	<i>Ic Power Positive Suppl</i>
B+	<i>Ac or Bat Power Rail for Power Circuit</i>	RSMRST	<i>Resume Reset</i>
BATT	<i>Battery</i>	RTC	<i>Real Tme Clock</i>
BAT+	<i>Bat Power Rail for Power Circuit</i>	SB	<i>South Bridge</i>
BAT_DRV	<i>Bat Fet Gate Driver</i>	SHDN	<i>Shut Down</i>
BAT_V	<i>Battery Voltage</i>	SYS_SDN	<i>System Shutdown</i>
BT_EN	<i>Bluetooth Enable</i>	SPI	<i>Serial Peripheral Interf</i>
BUZER	<i>Connected</i>	TD	<i>Death Time</i>
BYP	<i>Bypass</i>	THRM	<i>Themal Sensor</i>
BOM	<i>Bill of Material Management</i>	TMDS	<i>Transition Minimized Difflerential signaling (TRANSMISI DATA TEKNOLOGY)</i>
BT	<i>Button</i>	TP	<i>Tes Point</i>
F	<i>FUSE</i>	TD	<i>Death Time</i>
FSEL	<i>Frequency Select Input</i>	THRM	<i>Thermal Sensor</i>
CHGEN	<i>Charge Enable Active-Low Logic Input</i>	TP	<i>Tes Point</i>

CIN	<i>Input Capasitor</i>	TPAD	<i>Thermal Pad</i>
CRT	<i>Cathode Ray Tube</i>	V	<i>Rail (POWER)</i>
CSIN	<i>Current Sensor Input Negatif</i>	V+	<i>Positive Vortage</i>
CSIP	<i>Current Sensor Input Positif</i>	VADJ	<i>Output Regulation Vort</i>
DC	<i>Direct Current</i>	VALW	<i>Always on Power</i>
DRAM	<i>Dynamic RAM: Random- Access Memory that uses a continuous clock</i>	VAWLP	<i>Valw Pad</i>
DOCK	<i>Docking Socket</i>	VBAT	<i>Battery Power</i>
EC	<i>Embedded Controler</i>	VCCP	<i>Power Chip (Ic Graphic Chips)</i>
EC_ON	<i>Embedded Controle Enable</i>	VCORE	<i>Power Processor</i>
EN	<i>Enable</i>	VDD	<i>Control Power Supply</i>
ENTRIP	<i>Enable Terminal</i>	VDDR	<i>Power ddr (VDRAM/VRAM/VMEM)</i>
LCDV	<i>Lcd Power</i>	VDS	<i>Voltage Drain Source</i>
LDO	<i>Linear Oiver output</i>	VFB	<i>Freedback Inputs Powe</i>
LGATE	<i>Lower-Side Mosfet Gate Signal</i>	VGS	<i>Voltage Gate Source</i>
LPC	<i>Low Pin Court</i>	VIN	<i>Input Vortage Range</i>
LVDS	<i>Low-Voltage Diflerential Signaling (SYSTEM PENSIGNALAN)</i>	VIN	<i>Adapter Power Supply (vol_in)</i>
MBAT	<i>Main Batteray</i>	VL	<i>Power Lock</i>
ODD	<i>Output Disc Driver</i>	VL	<i>Vortage</i>
PCI	<i>Peripheral Component Interconnect</i>	VLDOIN	<i>Power Supply of the VT VTTREF Output Stage (to powerMOS)</i>
PGOOD	<i>Power Good Open-Drain Output</i>	VOT	<i>Volt _Out</i>
PIR	<i>Product Improved Record</i>	VRAM	<i>Power Memory</i>

PSI#	<i>Current Indicator Input</i>	VREF	<i>Power References Schema Reference Permintaan schema</i>
PVCC	<i>Ic Power Positive Supply</i>	VS	<i>Switch Power</i>
RSMRST	<i>Resume Reset</i>	VS+	<i>Support Voltage Positive</i>
SYS_SDN	<i>System Shutdown</i>	VSB	<i>Power Switch Bottom</i>
VIN	<i>Input Voltage Range</i>	VSS	<i>Signal Ground</i>
VIN	<i>Adapter Power Supply (vol_in)</i>	VSW	<i>Power Switch</i>
VL	<i>Power Lock</i>	VTT	<i>Memory Termination Voltage</i>
VL	<i>Voltage</i>	VTERM	<i>Memory Termination Voltage</i>
VLDOIN	<i>Power Supply of the Vtt and Vtref Output Stage (to powerMOS)</i>	VUSB	<i>Power usb</i>
VOT	<i>Volt _Out</i>	VGA	<i>Power vga (VGPX/VGPU/VCVOD)</i>
VRAM	<i>Power Memory</i>	VGFX	<i>Power Graphic Chip</i>
VREF	<i>Power References Schema References Permintaan Schema</i>	VREF	<i>Voltage References</i>
VS	<i>Switch Power</i>	HDMI	<i>High-definition Multimedia Interface</i>
VS+	<i>Support Voltage Positive</i>	ID	<i>Continuous Drain Current</i>
VSB	<i>Power Switch Bottom</i>	IDM	<i>Pulsed Drain Current</i>
VSS	<i>Signal Ground</i>	IIN	<i>Operating Supply Current</i>
VSW	<i>Power Switch</i>	SPI	<i>Serial Peripheral Interface</i>
VRM	<i>Circuit konfirmasi</i>	IIN (SHDN)	<i>Shutdown Supply Current</i>
GATE	<i>Trigger Gate</i>	IIN (STBY)	<i>Standby Supply Current</i>
GND	<i>Ground</i>	IS	<i>Continuous Source Current (diode conduction)</i>

GP	Ground Pin	IPIN	Battery Supply Current VIN pin
GPI	General Power Input	JP	JUMPER POINT
GPIO	General Power Input Output	KBC	Keyboard Controller
		EMII	Elektromagnetik Interfe (GANGGUAN ELEKTROMAGNETIK)

Term of Circuit	Definition
<b>Voltage divider</b>	Divider voltage
<b>Rectifier</b>	Rectifier circuit
<b>Rectifier</b>	AC To DC
<b>DC Converter</b>	DC to Dc
<b>Converter</b>	DC to DC
<b>Detector</b>	Detector load
<b>Filter</b>	Filter
<b>Step Down</b>	Lowering voltage
<b>Step Up</b>	Riser voltage
<b>OP-Amp</b>	Amplifier

Term Circuit Motherboard	Definition
DC IN & BATTERY CHARGER	Circuit for battery charging and power jack circuit in t initial gate power

SYSTEM 3V/ 5V PCU	Step-down circuit for lowering 19V to 3V or 5V
GPU CORE	Circuit and voltage power supply for chip ( ICH/GMC
GPX CORE	Circuit for processor power supply
VCC CORE	Circuit for processor power supply
TERMAL PROTECTION	Circuit heat detector supply
DISCHARGE/+1,8 V	Circuit Suspend LDO
DDR1,5 V & 0.9	Circuit power supply for RAM
CLOCK GENERATOR	Circuit for produce clock signal
LVDS	Circuit for display on screen LCD
POWER BUTTON	Circuit switch on/off
CONN	Connector
RTC/CKT	Circuit CMOS & frequency generator CHIF
DIS	Circuit VGA External generator
UMA	Circuit VGA Internal generator
PWM	Circuit Pulse Widet Modulation controller
COMPARATOR	Circuit comparator
DMI	Digital Media Interference
LPC BUS	Circuit Communication
CRT	Circuit for external monitor and projector
SPI FLASH (KBC)	Circuit BIOS

## **DEFINITION OF MOTHERBOAR CIRCUIT**

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Power	Power pin	Controller Device
AC_IN	B+ AD +	AC Dock Input, (19V~24V)
+19V	VIN	Input Power all Regulator Motherboard
+0.9VS	SUSB#	DDR2 SODIM
+1.8V	SUSB#	Calistoga, DDR2 SODIMM
+1.8VS	SUSB#	G72M
+1.5VS	SUSB#	Calistoga, ICH7-M, MINI Card Socket, I Card Socket
+2.5VS	SUSB#	Calistoga, G72M
+3V	SUSB#	Thermal Sensor, Calitoga, System Clock Generator, DDR2 SODIMM SPD, G72M LVDS connector, TPM, blue tooth socket ICH7-M, PCI interface, super-IO control IrDA, keyboard controller, audio control GIGA LAN, MINI Card socket , Media co controller, New card socket, 1394 EEPR
+5V	SUSC#	USB, G913C, New card socket
+5VS	SUSB#	G72M, ICH7-M, HDD, CD-ROM, flash l keyboard controller, internal touchpad, A AMP, FN
+3VALWAYS	(AC IN)	ICH7-M, TPM
+5VALWAYS	(AC IN)	PST9013NR (protect over voltage)
+5VLCM	(AC/BAT IN)	Micro P (PIC16F57)
+5VCHG	(AC/BAT IN)	MAX8724ETI, power – ON/OFF logic
+VCORE	VID	CPU
+VCCP	VR_ON	CPU I/O
+12V	SUSC#	PCMCIA Slot 12V
+3V	SUSCH#	PCMCIA controller, PCMCIA Slot 3.3V, keyboard controller, LAN
+3VS	SUSB#	ICH4-M, Clock Generator,PCI intyrfac Super I/O,AC97 CODEC, FWH, Therma sensor,IR
+5V	SUSC#	PCMCIA Slot 5V , USB
+5VS	SUSB#	HDD, CD-ROM, Internal Touch Pad, Au


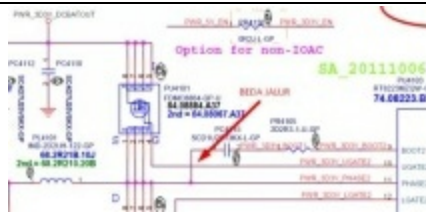

		AMP
+5VALWAYS	AC_BAT_SYS	ICH4_M (Resume Well) LAN (WOL in S-
RTCVCC		ICH4-M (RTC)
+V1.5S	SUSB#	GMCH+, ICH4-H
+V1.8S	SUSB#	CPU VCCA
+V2.5	SUSC#	DDR, SODIMM, GMCH LVDS
+V1.2S	SUSB#	GMCH
+V1.25S	SUSB#	DDR Termination

**VOLTAGE – SIGNAL NAME – POWER CONTROL PIN AND CONTROL DEVICE**

**UNDERSTANDING BASIC CODE OF SCHEMATIC PATH**

Schematic diagrams are always synonymous with code and symbols.

Memorize some of the symbols below:

Path	Schematic diagram application	Information
		A path that only passes and does not have a relationship. And in principle the lane is a path connecting one components and others that connect one pin and others.
		Every time there is a dot