

- 1_POWER**
1_POWER.SCH
- nRESET
 - EINT8-GPG0
 - SYS_ON
 - DC_DET
 - CHARGE_DET
 - nBATFLT
 - CHARGE_CON
 - XBREQ-GPB6
 - EINT19-GPG11
 - PWREN
 - AINO

- 2_CPU_POWER**
2_CPU_POWER.SCH
- CAMDATA[0..7]
 - CAMPCLK
 - EINT0-GPF0
 - EINT8-GPG0
 - LCDPOWEREN
 - DC_DET
 - CHARGE_DET
 - VIDEO_DET
 - CAM_ICCLK
 - CHARGE_CON
 - VIDEOIN_DET

- 3_CPU_IO**
3_CPU_IO.SCH
- VD[0..23]
 - SADDR[0..15]
 - SDATA[0..31]
 - nRCS1
 - SCKE
 - SCLK
 - SWE
 - nSCLK
 - DQS1
 - DQS0
 - DQM0
 - DQM1
 - nFRB
 - nFCE
 - nFRE
 - nFWE
 - ALE
 - CLE
 - XBREQ-GPB6
 - XBACK-GPB5
 - XDREQ1-GPB8
 - XDACK1-GPB7
 - DATA[0..15]
 - nBATFLT
 - nRESET
 - PWREN
 - SDDATA0
 - SDDATA1
 - SDDATA2
 - SDDATA3
 - SDCMD
 - SDCLK
 - SD-CD
 - SD-WP
 - nSS0-GPL13
 - nSS1-GPL14
 - SPICK0-GPE13
 - SPIMOS0-GPE12
 - SPIMIS00-GPE11
 - SPICK1-GPL10
 - SPIMOS11-GPL11
 - SPIMIS01-GPL12
 - TOUT0-GPB0
 - IICSDA
 - AINO
 - TSYM
 - TSYP
 - TSXM
 - TSXP
 - IISCLK-AC97BITCLK
 - IISLRCK-AC97SYN
 - CCLK-AC97RESET
 - IISDDO-AC97SDATAOUT
 - VCLK
 - VLINE
 - VFRAM
 - VM-VDEN
 - SYS_ON
 - TXD3
 - RXD3
 - TXD1-GPH4
 - RXD1-GPH5
 - BT_PWEN
 - BT-RESET
 - TXD0-GPH2
 - RXD0-GPH3
 - VIDEO_PWN
 - AUDIO_CON
 - DNI
 - DP1
 - A20
 - A21
 - nSRAS
 - nSCAS
 - nSCS0
 - GPA14
 - TXD2
 - RXD2
 - RSTOUT
 - EINT0-GPF0

- 4_MEMORY**
4_MEMORY.SCH
- DQM0
 - DQM1
 - nFRB
 - nFRE
 - nFCE
 - CLE
 - ALE
 - nFWE
 - SDATA[0..31]
 - SADDR[0..15]
 - SCKE
 - SCLK
 - nSCS0
 - nSRAS
 - nSCAS
 - SWE
 - DQS0
 - DQS1
 - nRCS1
 - nSCLK
 - A20
 - A21
 - RSTOUT
 - DATA[0..15]

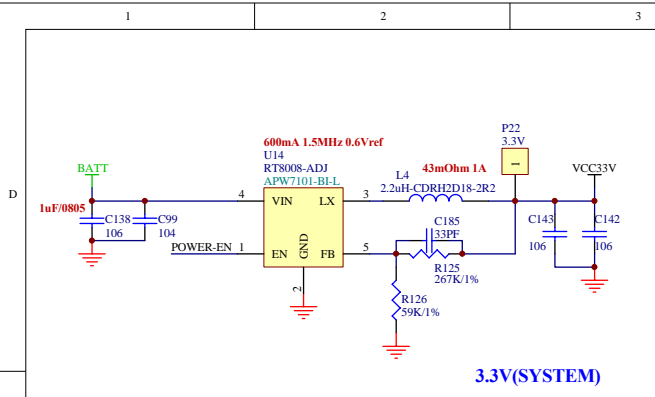
- 5_AUDIO**
5_AUDIO.SCH
- XBACK-GPB5
 - VIDEO_DET
 - VOICE-BT
 - FM-AUL
 - FM-AUR
 - AUDIO_CON
 - IISDDO-AC97SDATAOUT
 - IISCLK-AC97BITCLK
 - IISLRCK-AC97SYN
 - CCLK-AC97RESET
 - EXT_TMC
 - CVBS1
 - VIDEOIN_DET

- 6_BLUETOOTH**
6_BLUETOOTH.SCH
- BT-RESET
 - TXD0-GPH2
 - RXD0-GPH3
 - VOICE-BT
 - BT_PWEN

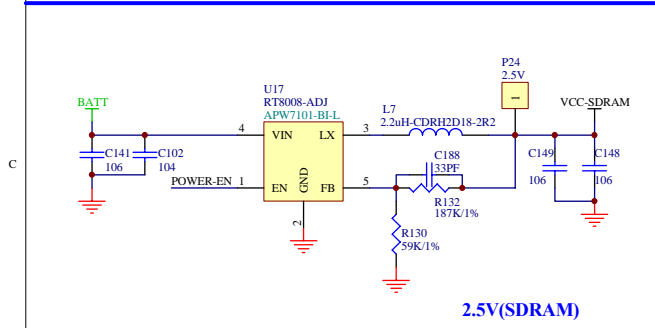
- 7_SD_UART_KEY_USB**
7_SD_UART_KEY_USB.SCH
- SD-WP
 - SDATA1
 - SDATA0
 - SDCLK
 - SDCMD
 - SDDATA3
 - SDDATA2
 - SD-CD
 - XDACK1-GPB7
 - EXT_TMC
 - FM-AUL
 - FM-AUR
 - DNI
 - DP1
 - TXD2
 - RXD2
 - TXD3
 - RXD3
 - CHARGE_CON
 - RXD1-GPH5
 - TXD1-GPH4

- 8_TFTDRIVE**
8_TFTDRIVE.SCH
- TSYM
 - TSYP
 - TSXM
 - TSXP
 - VD[0..23]
 - LCDPOWEREN
 - VCLK
 - PWREN
 - IICSDA
 - CAMDATA[0..7]
 - CVBS1
 - VIDEO_PWN
 - XDREQ1-GPB8
 - CAMPCLK
 - CAM_ICCLK
 - TOUT0-GPB0
 - VM-VDEN
 - VFRAM
 - VLINE

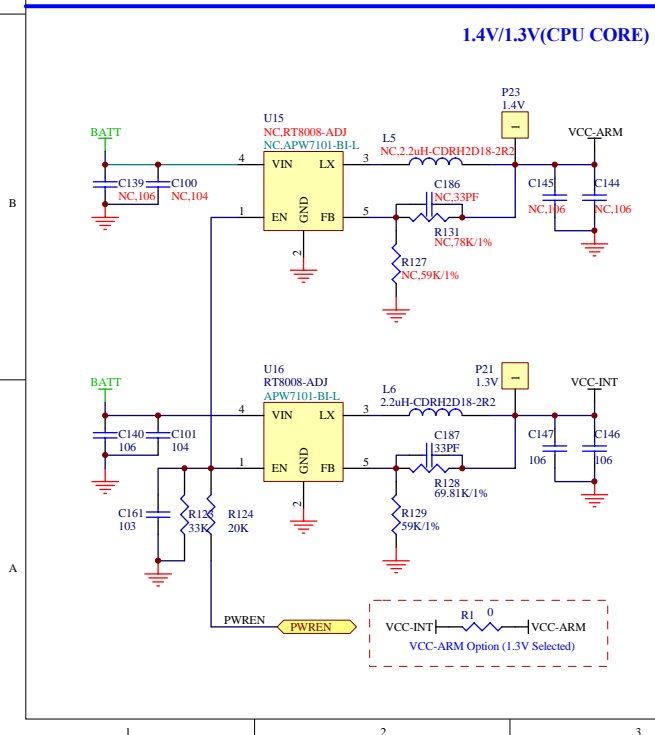
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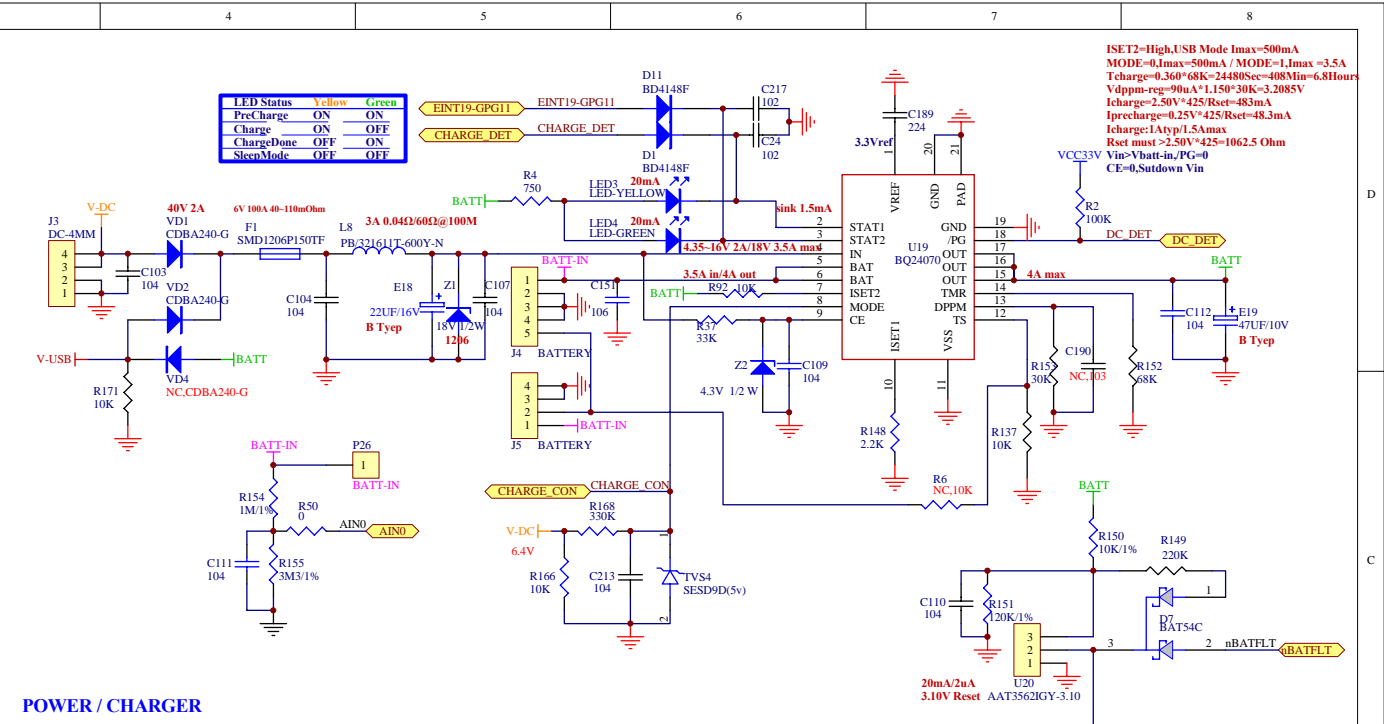
3.3V(SYSTEM)



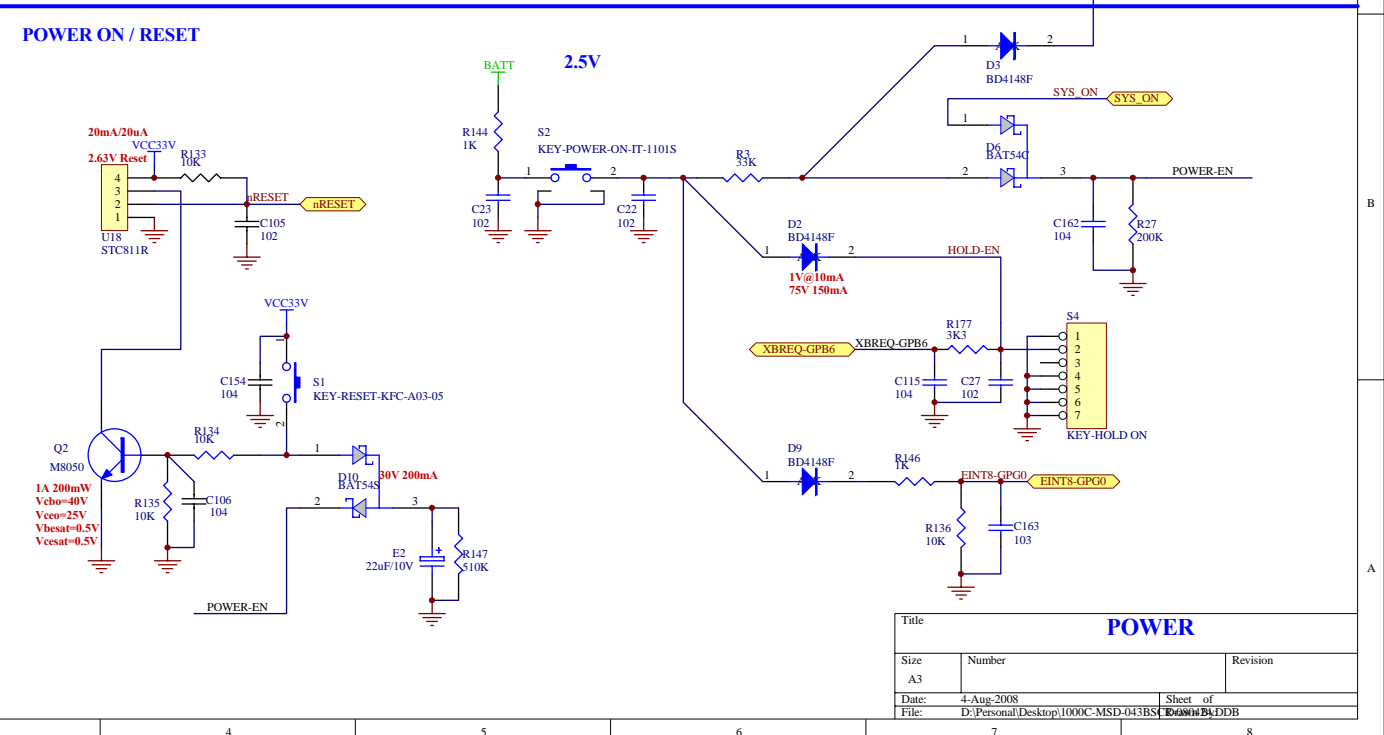
2.5V(SDRAM)



1.4V/1.3V(CPU CORE)

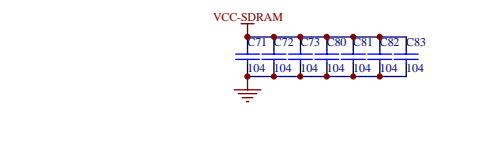
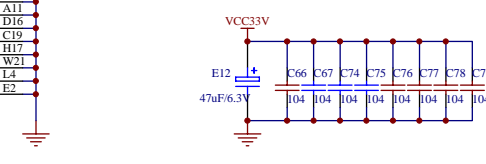
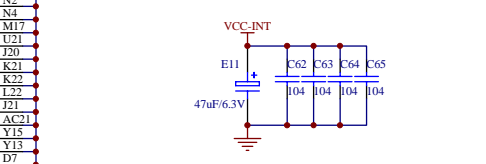
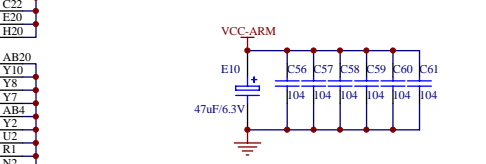
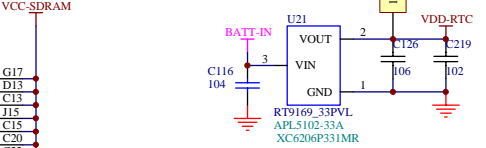
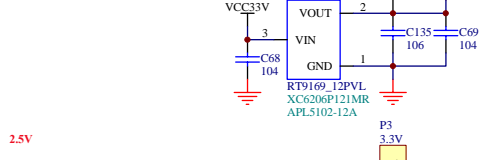
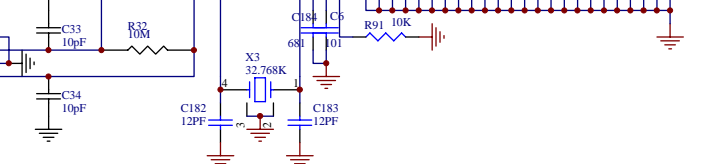
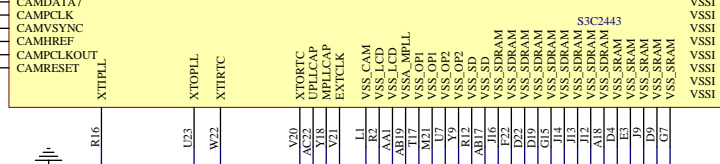
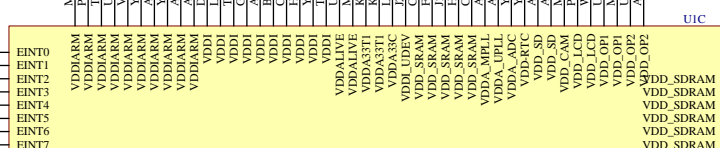
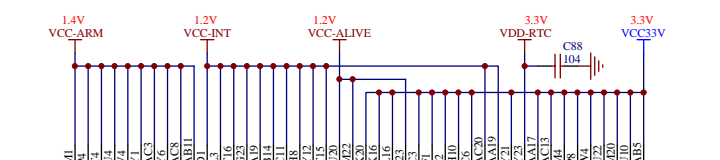
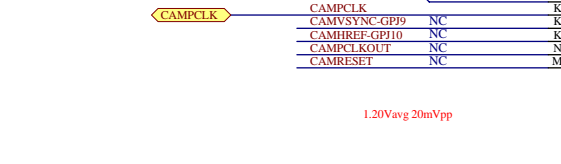
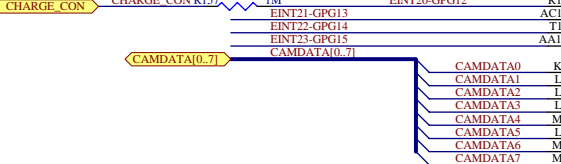
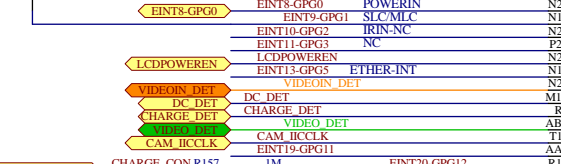
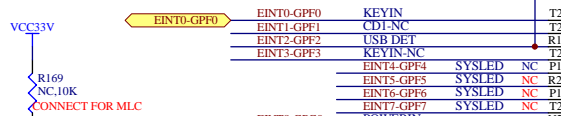
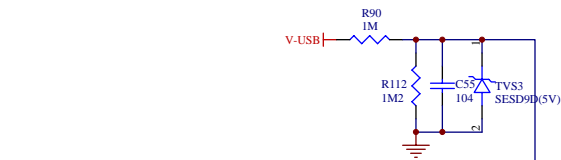


POWER / CHARGER



POWER ON / RESET

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Size	Number	Revision			
A3					
Date:	4-Aug-2008	Sheet of			
File:	D:\Personal\Desktop\1000C-MSD-043BS\1000C-MSD-043BS.DDB				



CPU POWER

Title		
CPU_POWER		
Size	Number	Revision
A3		
Date:	4-Aug-2008	Sheet of
File:	D:\Personal\Desktop\1000C-MSD-043BS	1000C-MSD-043BS.DDB

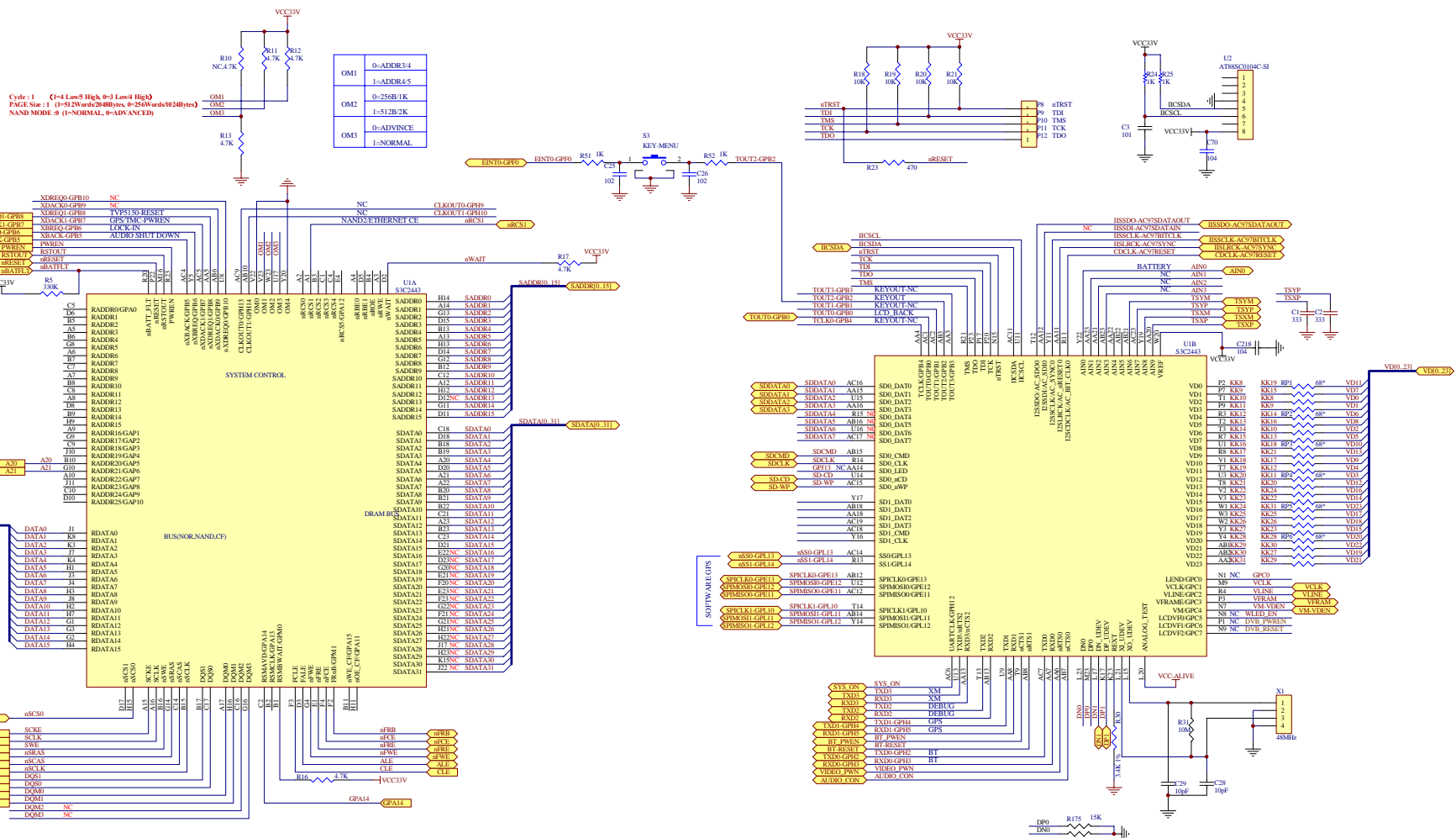
Cycle 1 (T=1 Low 5 High 0=3 Low 4 High)
 PAGE Size 1 (T=51 Low 0=280 Bytes 9=255W and 0=240 Bytes)
 NAND MODE 0 (1=NORMAL, 0=ADVANCED)

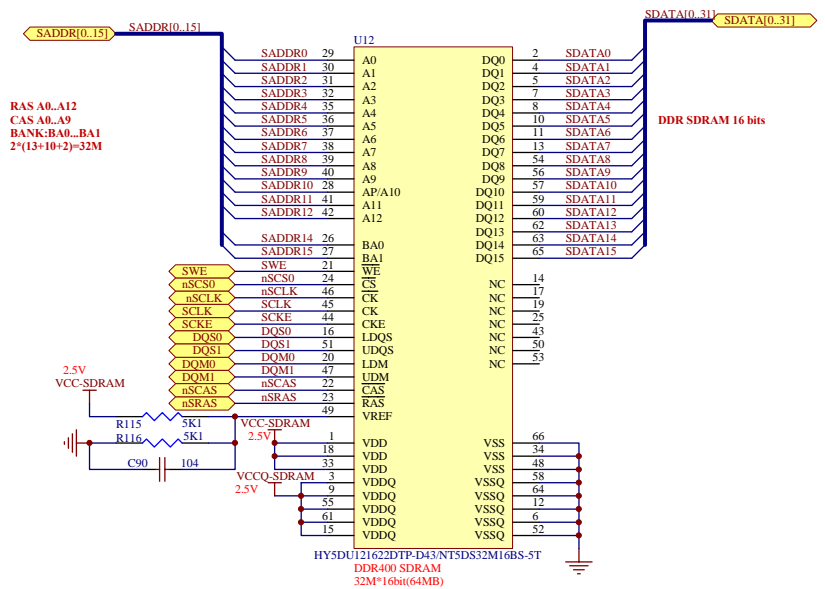
OM1	0-ADDR3:4
OM2	1-ADDR4:5
OM3	0-256B:1K
	1-512B:2K
	0-ADVANCE
	1-NORMAL

CPU IO

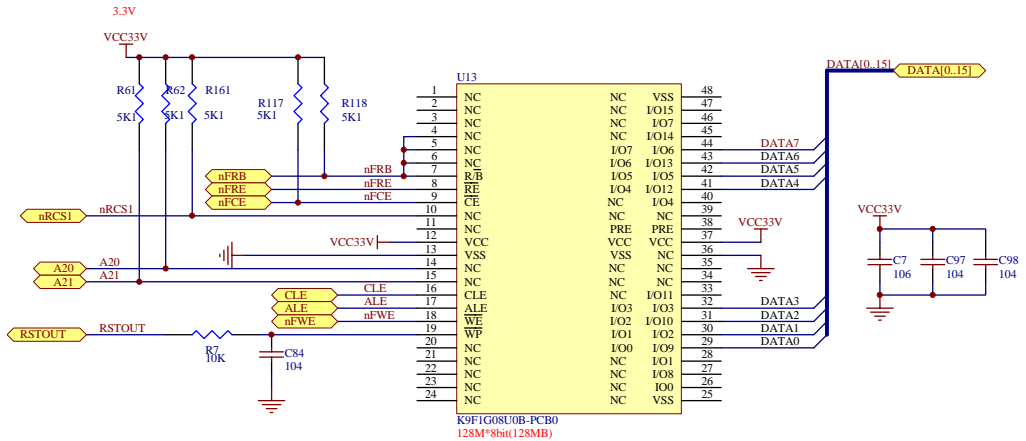
CPU_IO

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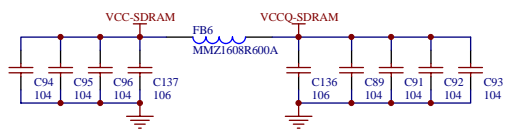




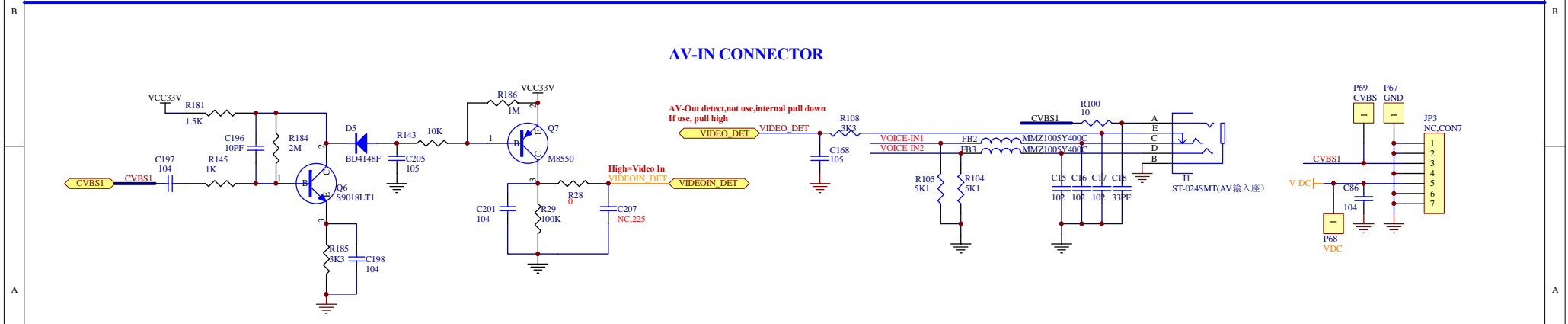
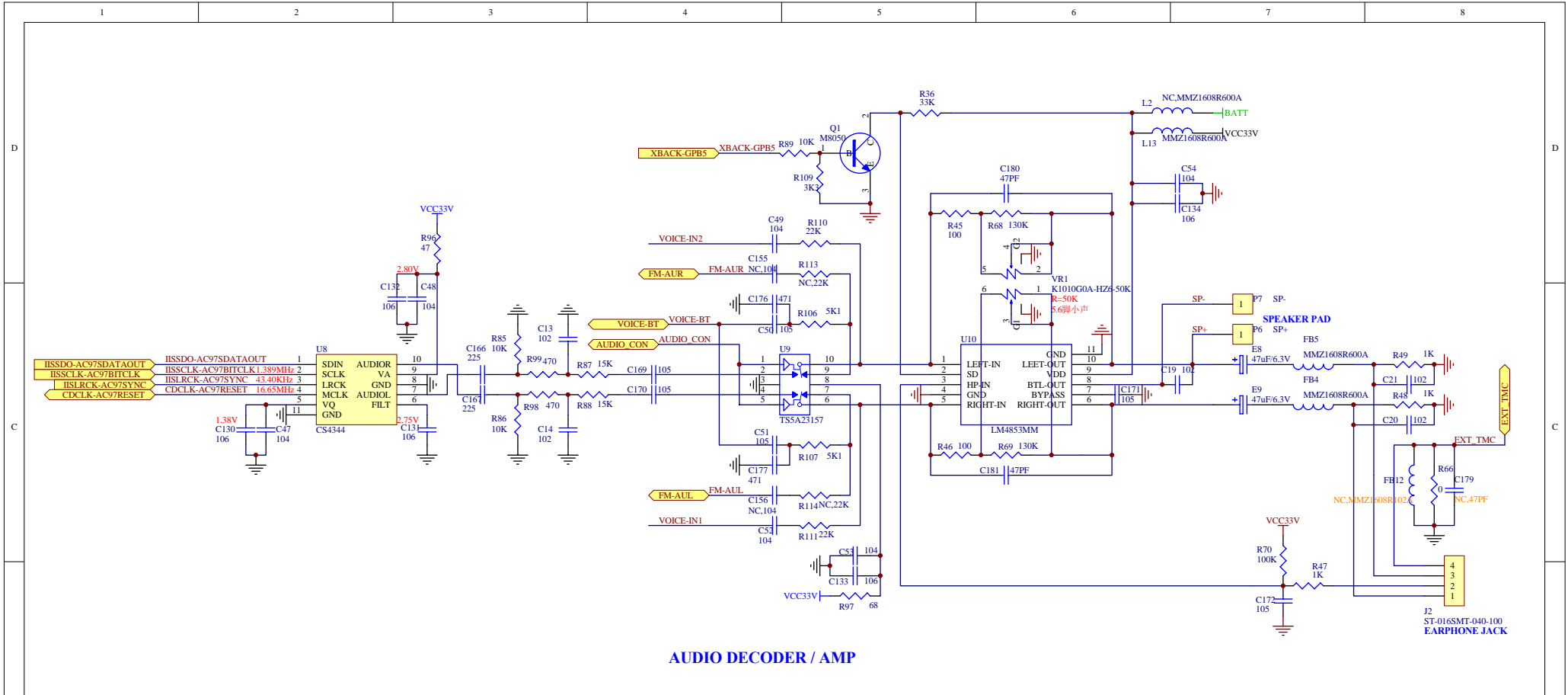
DDR SDRAM



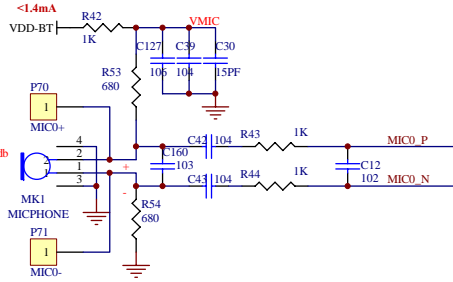
NAND FLASH



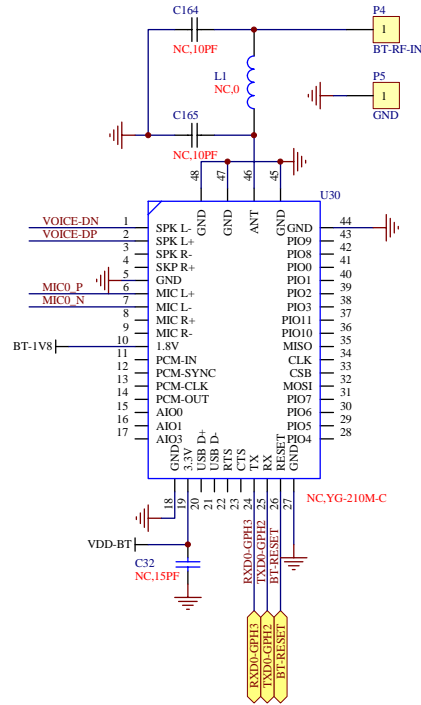
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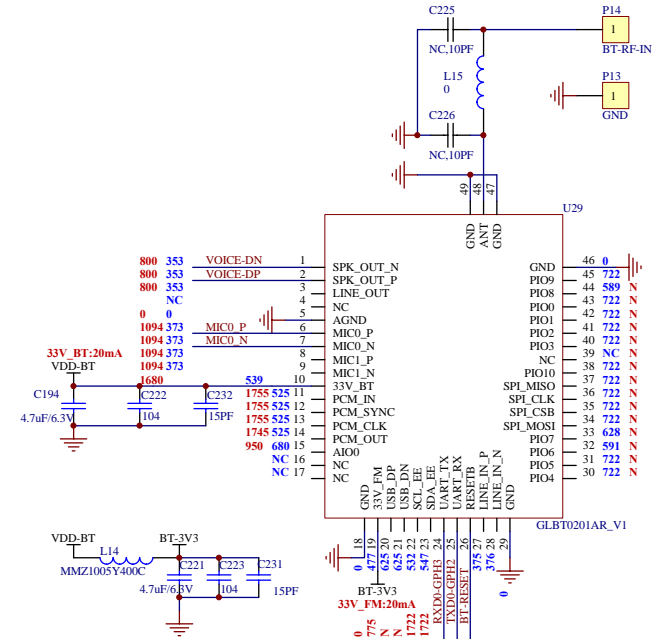
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Size	Number	Revision	
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Date:	4-Aug-2008	Sheet of	
File:	D:\Personal\Desktop\1000C-MSD-043BS\1000C-MSD-043BS.DDB		



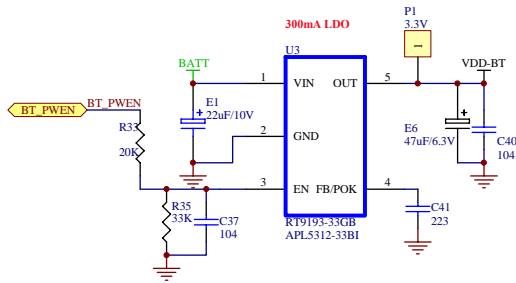
BLUETOOTH MIC



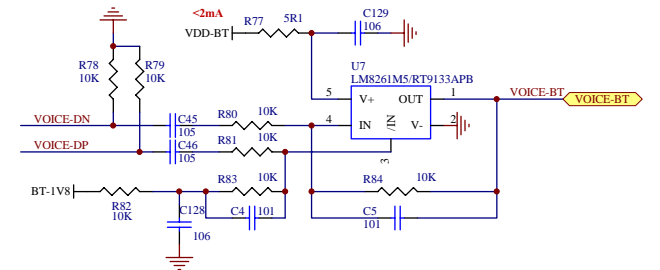
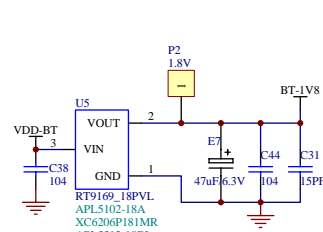
BC03 BLUETOOTH MODULE



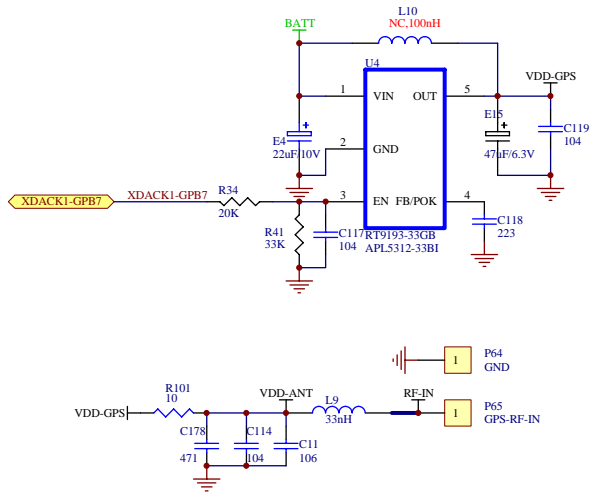
BC04 BLUETOOTH MODULE



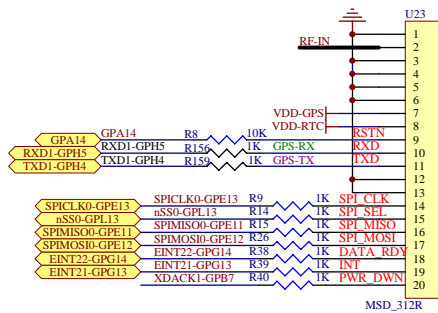
BLUETOOTH POWER / AMP



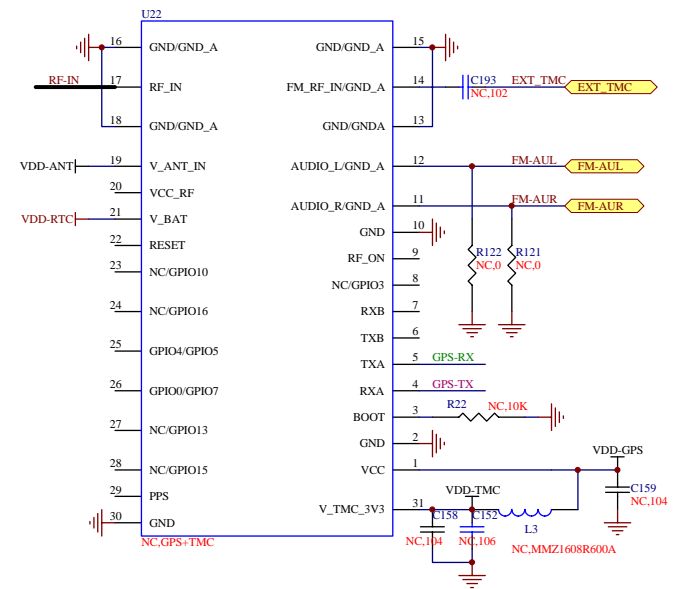
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BLUETOOTH		
Size	Number	Revision
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Date:	4-Aug-2008	Sheet of
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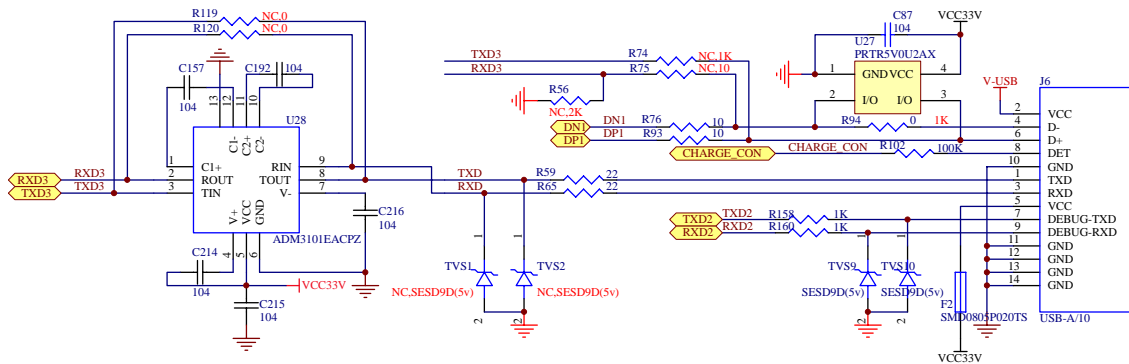
GPS POWER / ANT



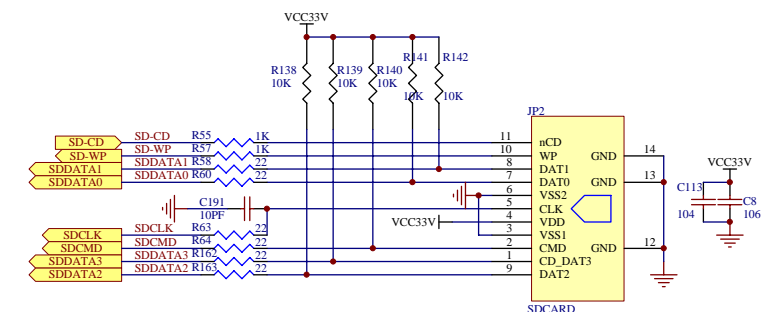
GPS MODULE



TMC MODULE

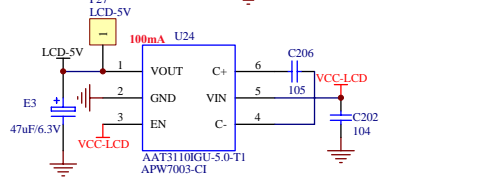
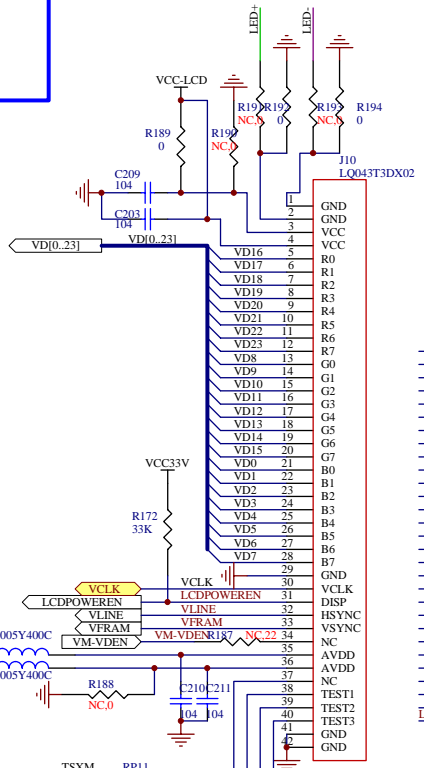
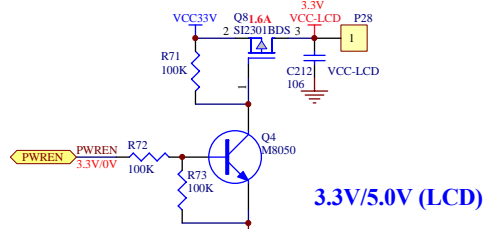
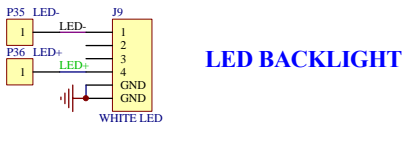
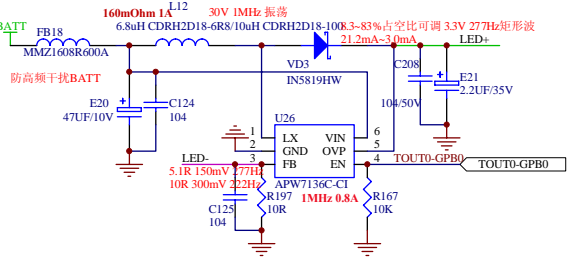
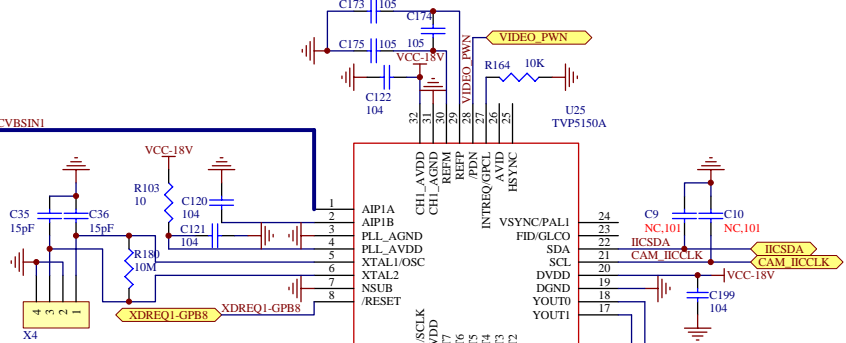
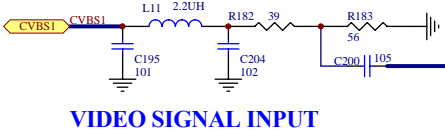
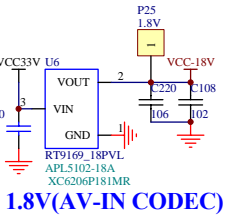


USB/RS232/DEBUG



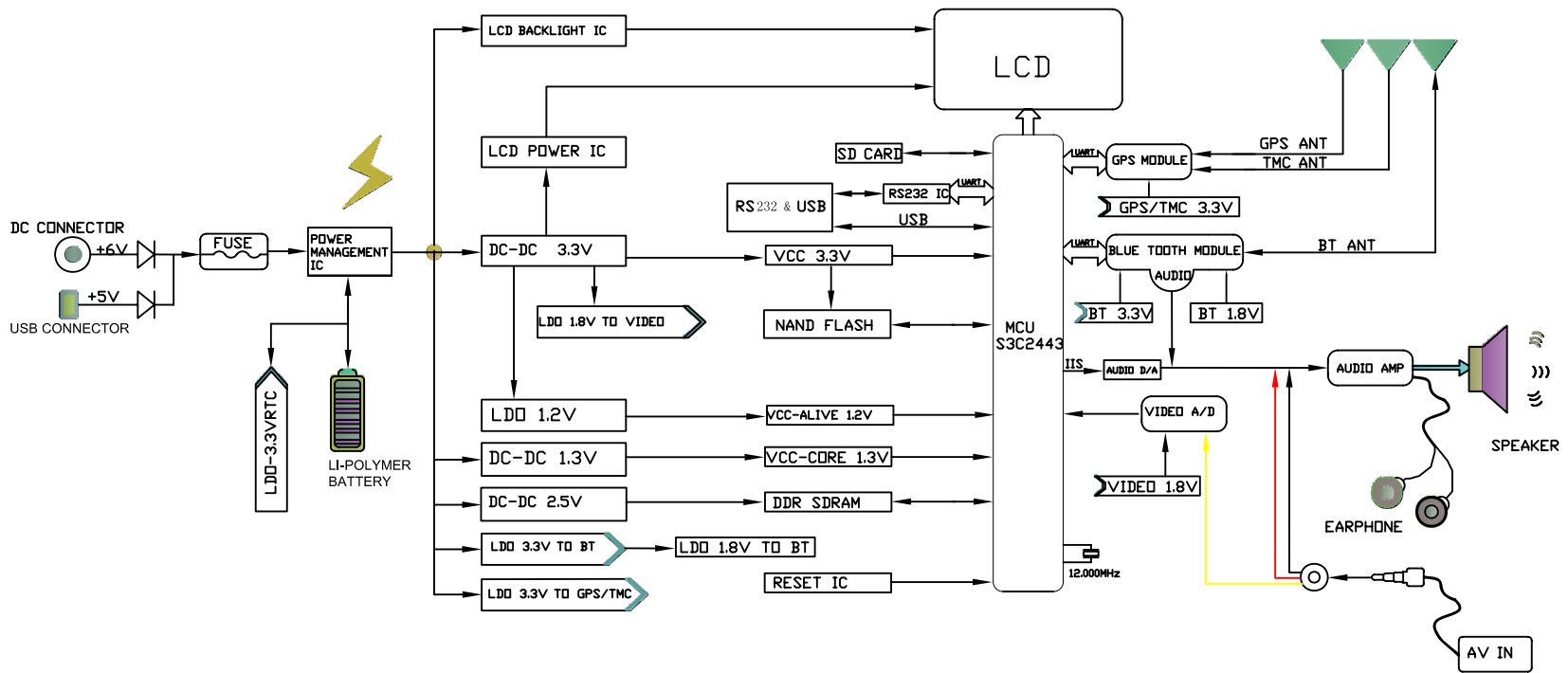
SD CARD CONNECTOR

Title			GPS_SDCARD_USB		
Size	Number			Revision	
A3					
Date:	4-Aug-2008	Sheet of			
File:	D:\Personal\Desktop\1000C-MSD-043BS	Sheet of			



PART	三星 (SAMSUNG)	群创 (INNOLUX)	夏普 (SHARP)
	LTE430WQ-F07	AT043TN13	LQ043T3DX02
R189	0	NC	0
R190	NC	0	NC
R191	NC	0	NC
R192	0	NC	0
R193	NC	0	NC
R194	0	NC	0
C209	104	NC	104
R187	22	22	NC
FB19	NC	MMZ1608R600A	MMZ1608R600A
FB20	NC	NC	MMZ1608R600A
R188	NC	0	NC
C210	NC	104	104
C211	NC	NC	104
RP11	NC	0	NC
R195	0	NC	0
R196	0	NC	0
J9	LED CONNECTOR	NC	LED CONNECTOR
J11	TOUCH CONNECTOR	NC	TOUCH CONNECTOR
RP12	NC	NC	0

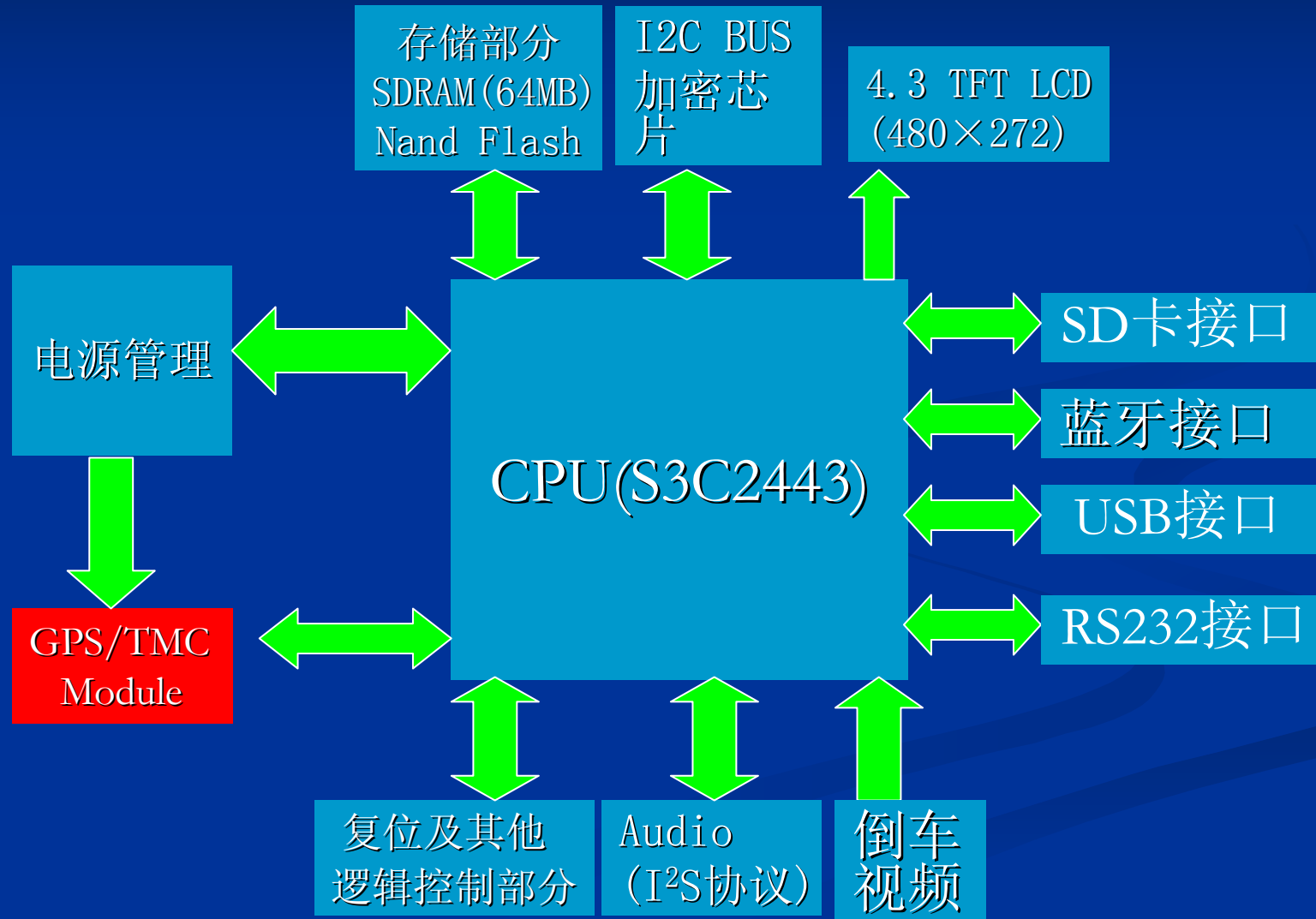
1000C-MSD-043BSCR HARDWARE DIAGRAM



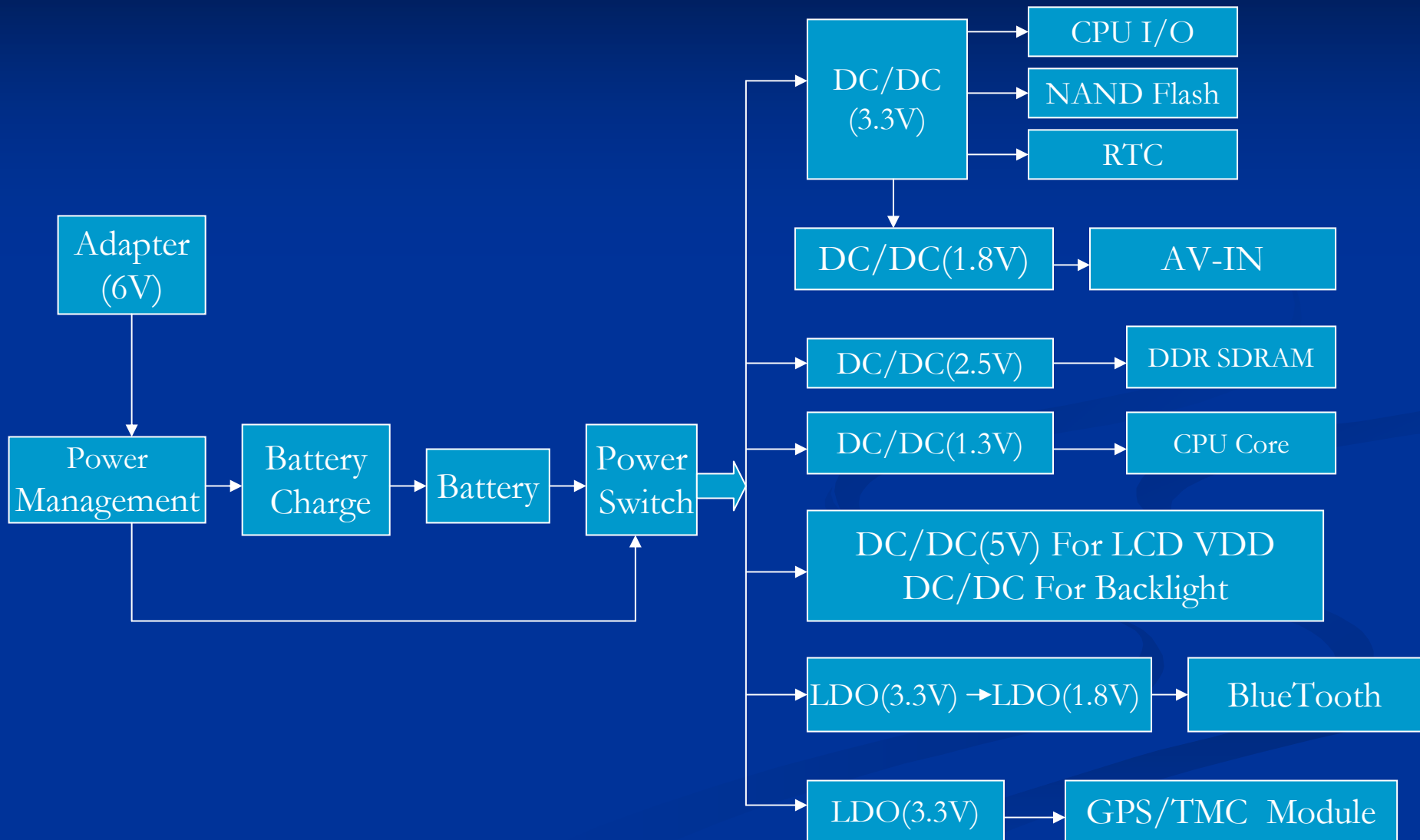
手持式智能型卫星导航仪 1000C-MSD-043BSCR 组成和原理简述

- 一、整体架构
- 二、电源管理
- 三、电源电路简述
- 四、基本系统简述
- 五、外围功能简述

一、整体架构



二、电源管理



三、电源电路简述

- 电源适配器将交流220V的市电转换为导航仪所需的6V直流电。BQ24070 (U19) 是电源管理IC, 负责对整个导航仪供电, 它可以在有外接电源时给内置电池充电, 在无外接电源时切换为电池供电。值得一提的是: 1000C-MSD-043BSCR可以由DC座供电, 也可以由USB口供电, 当用USB电缆连接PC和导航仪时, PC的USB口供电能力有限, 最大只能提供500mA的电流, 否则会导致PC死机或重起, 甚至烧毁PC主板的USB口。为了保护PC, 1000C-MSD-043BSCR有两种充电模式。当导航仪检测到连接的是电脑时, 会限制自身索取的电流在500mA之内; 当检测到连接的是直流电源适配器时, 则不限制自身索取的电流。BQ24070输出约4.4V的电压BATT, 它被分散到如下部分:
 - 通过DC/DC芯片RT8008转换为3.3V, 供给CPU的IO部分、NAND Flash和RTC。
 - 通过DC/DC芯片RT8008转换为1.3V, 供给CPU核心部分。
 - 通过电荷泵芯片APW7003转换为5V, 供给LCD。
 - 通过LDO芯片RT9193和RT9169转换为3.3V和1.8V, 供给蓝牙模块。
 - 通过LDO芯片RT9169转换为1.8V, 供给视频TVP5150A (U25)。
 - 通过LDO芯片RT9193转换为3.3V, 供给GPS模块和TMC模块。

四、基本系统简述

- 1000C-MSD-043BSCR的基本系统包括：电源、主CPU、CPU复位电路、晶振、SDRAM、NandFlash基本系统正常后，机器即可运行（外围功能不确定）。
- 三星2443为CPU，它通过外部数据总线与地址总线连接DDR SDRAM（U12）和NandFlash（U13）。其中NandFlash的容量为64M~2G，具体容量依客户的需求而定。X1(48MHz)为USB时钟晶体，X2（12MHz）为主时钟晶振，给CPU提供主时钟，X3（32.768KHz）为RTC时钟晶体。

五、外围功能简述

- 音频输出部分：CPU通过I2S接口连接到音频D/A芯片CS4344（U8），输出的模拟音频信号经过LM4853MM立体声功放放大后驱动喇叭或立体声耳机。
- 蓝牙部分：当导航仪开启蓝牙功能，并于蓝牙手机建立配对以后，导航仪会被手机识别为一个蓝牙耳机，用户可以通过导航仪接打电话。CPU通过串口0与蓝牙模块通信，当手机通过导航仪通话时，CPU会将导航仪自身发出的声音关断，以免干扰通话。
- AV-in：此功能的作用是倒车时，将车尾部的摄像头拍摄的图像在导航仪上显示出来，尤其是夜间倒车时，摄像头的红外补偿功能可以提供比后视镜更为清晰和宽广的视野。当有PAL/NTSC制式视频信号输入时，导航仪自动切换为AV-in模式，屏幕相当于监视器。
- LCD：480×272像素，65536色（16位），SHARP屏，全触摸操作。
- SD卡：SD卡接口包括卡电源（3.3V）、插入检测、写保护检测、卡数据（4位）、卡时钟、卡命令。
- GPS：采用ET-316模块，通过串口1与CPU通讯。
- TMC：采用RET3570模块，仍旧通过串口1与CPU通讯。
- RS232接口：CPU串口3经过RS232电平转换芯片ADM3101E（U28）转换电平后可跟RS232串口设备通讯（如PC串口）。