


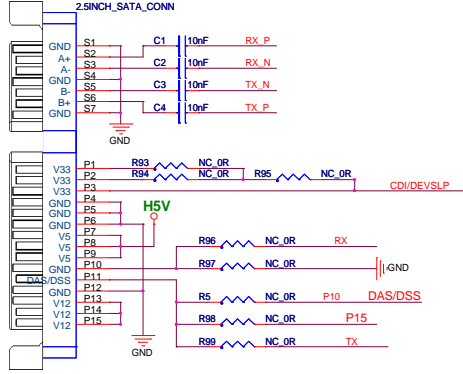
Revision History

Revision	Date	Reason for redrawing	Page Update	Drawed	Checked	Approved
01	2013.12.17	Preliminary	--	Barry Chang	Brian Lee	Austin Lin
02	2014.01.07	update NF install guide	4,5,6	Barry Chang	Brian Lee	Austin Lin
03	2014.05.07	1.Improve Voltage Detector withstand voltage 8V to 12V: Add D6 Zener diode, Change R25 to 5.1K. 2.Fixed ICE debug port hot plug reset issue: Add R9 100ohm	2	Barry Chang	Brian Lee	Austin Lin

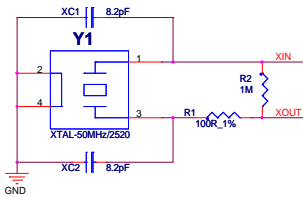
Page1	Cover_Page
Page2	Controller_BGA144_2.5INCH
Page3	Power_Host_5V
Page4	NF_BGA152x4 (CH0, CH1)
Page5	NF_BGA152x4 (CH2, CH3)
Page6	Flash Mounting Guide

		Silicon Motion, INC.	
PageTitle		Cover Page	
DOC.Number		<Doc>	
Sch.FileName		N0507A-SM2246AA_BGA144_2.5INCH_BGA152X8_DB_V03.DSN	
Date:	Thursday, October 23, 2014	Sheet	1 of 6
		Rev	0.3

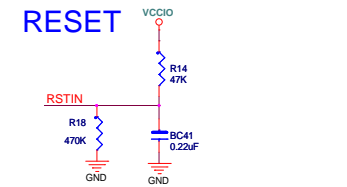
CON1 SATA PLUG 7P+15P CONNECTOR



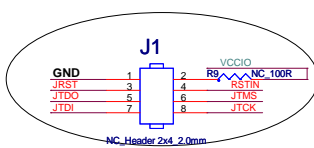
Crystal



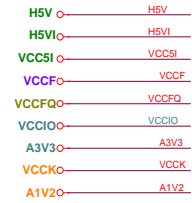
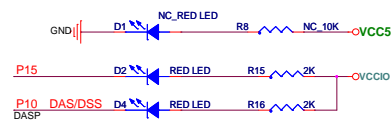
External VDT for Host Power



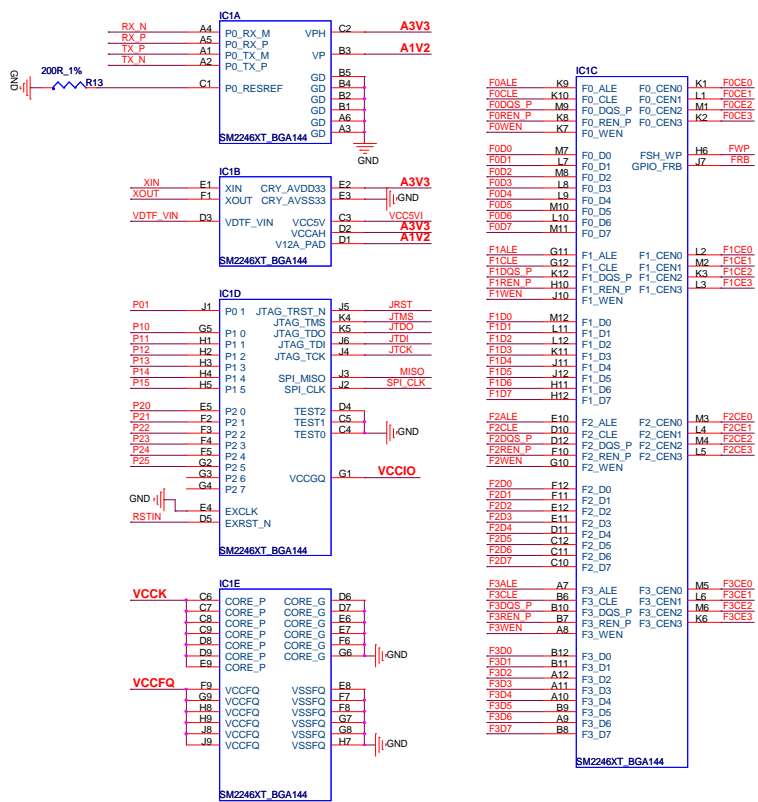
JTAG Port



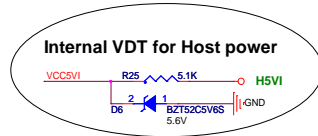
LED function



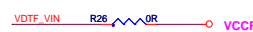
Controller



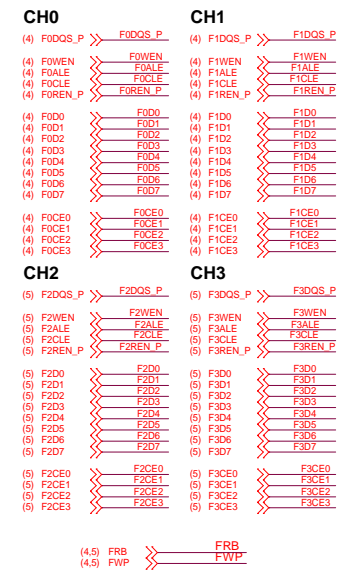
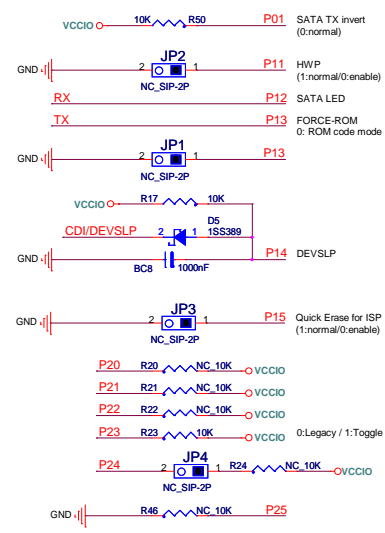
Voltage Detector



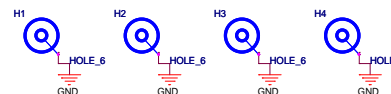
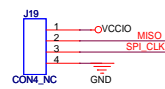
Internal VDT for NF IO



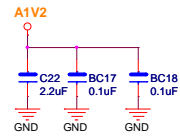
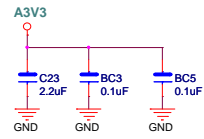
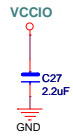
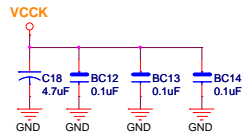
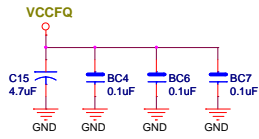
GPIO Definition



Reserve Interface

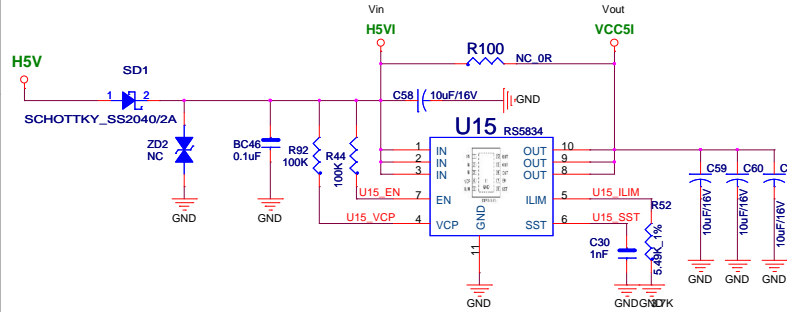


SM2246AA Bypass Capacitors

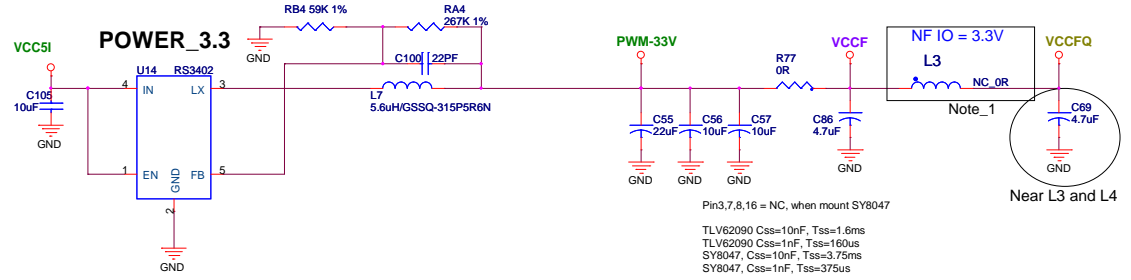


A3V3= 3.0 / 3.3 / 3.6 (V) For AIP power
 A1V2=VDDTX_PHY=VDDRX_PHY= 1.14 / 1.2 / 1.26 (V) For AIP power
 VCCK = 1.2 (V) For SM2246AA core power
 VCC = 3.3 / 1.8 (V) For General IO power
 VCCF = 3.3 (V) For NAND flash Core Power
 VCCFQ = 3.3 / 1.8 (V) For NAND flash IO Power

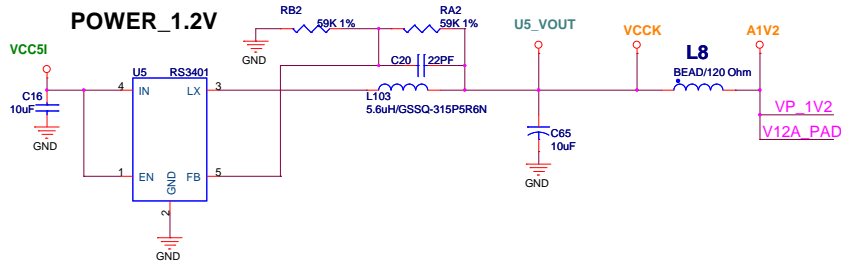
OVP Circuit



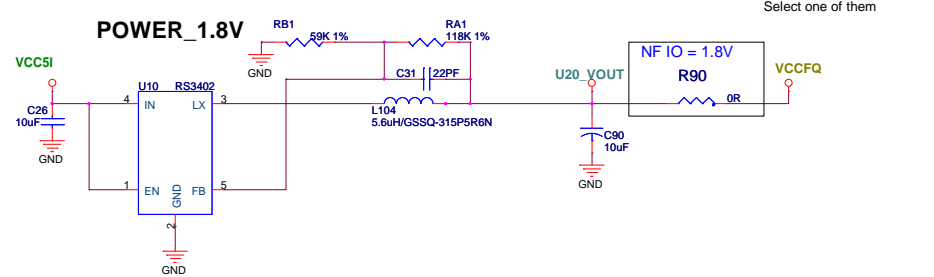
PWM_2 for Flash Die Power 3.3V



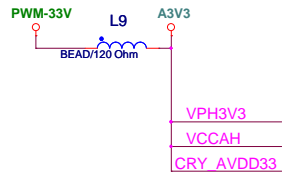
PWM_1 for VCCK/A1V2 1.2V



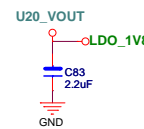
PWM_3 for Flash I/O 1.8V



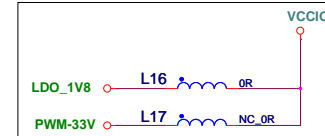
LDO_2: Analog Power 3.3V



LDO_3: VCCIO Power 1.8V



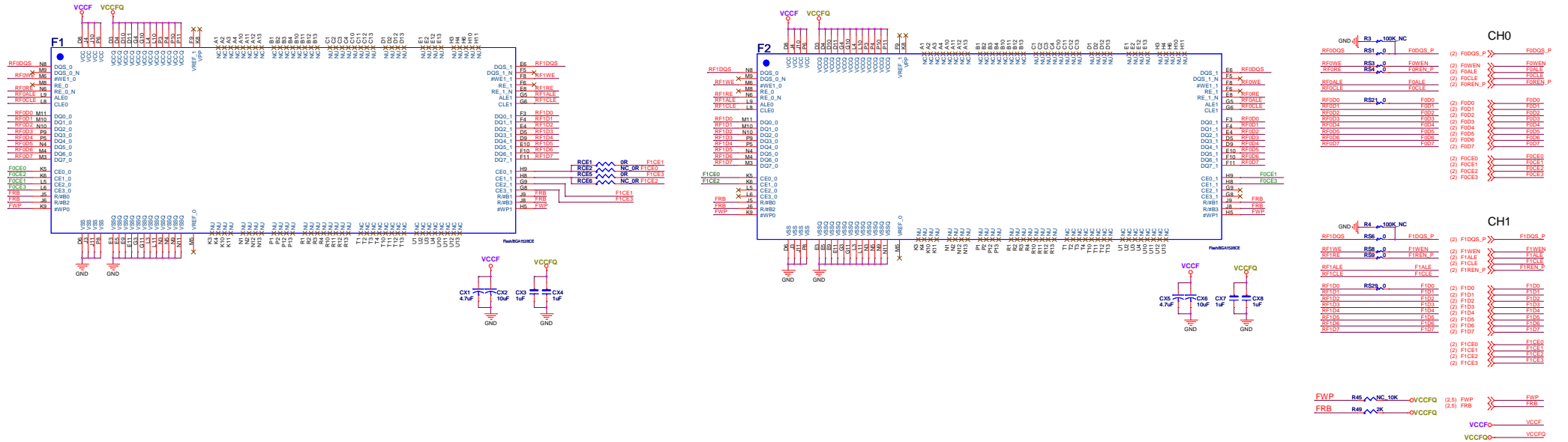
Note_2



Note_2:
 VCCIO(GPIO VCC) power supply option circuit
 1.With DEVSLP Low Power SPEC
 Flash I/O =3.3V, select L16 or L15
 Flash I/O =1.8V, select L16
 2.Without DEVSLP Low Power SPEC
 Flash IO=3.3V or 1.8V, Select L17

- H5V — H5V
- H5VI — H5VI
- VCC5I — VCC5I
- VCCF — VCCF
- VCCFQ — VCCFQ
- VCCIO — VCCIO
- A3V3 — A3V3
- VCCK — VCCK
- A1V2 — A1V2

Channel 0 & 1



Silicon Motion, INC.

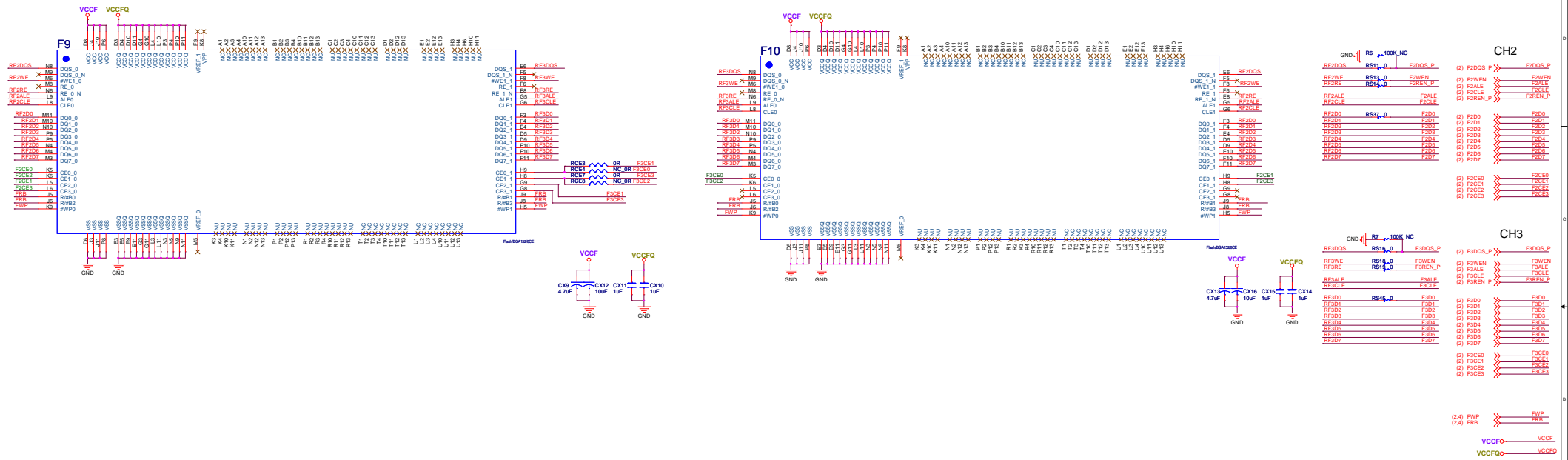
Page Title: NF_BGA152x4 (CH0, CH1)

DOC Number: *sdms*

Sch File Name: N:\07A-3M72-360A_NG1414_28INCH_NG152x4_DR_V03.dgn Rev: 0.3

Date: Thursday, October 23, 2014 Page: 4 of 6

Channel 2 & 3



NAND FLASH Mounting Guide

XT-BGA144 BGA152x8 NAND Flash Install Guide

NAND Flash Type	F01	F11	F02	F12	F21	F31	F22	F32	NF Config.	RCE1	RCE2	RCE3	RCE4	RCE5	RCE6	RCE7	RCE8	CE usage
Single CE flash x1	⊙	X	X	X	X	X	X	X	1CH/1CE	△	△	△	△	△	△	△	△	CE0
Single CE flash x2	⊙	⊙	X	X	X	X	X	X	2CH/1CE	△	△	△	△	△	△	△	△	CE0
Single CE flash x3	⊙	⊙	X	X	⊙	X	X	X	3CH/1CE	△	△	△	△	△	△	△	△	CE0
Single CE flash x4	⊙	⊙	X	X	⊙	⊙	X	X	4CH/1CE	△	△	△	△	△	△	△	△	CE0
Single CE flash x8	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	4CH/2CE	△	△	△	△	△	△	△	△	CE0,CE2
Dual CE flash x1	⊙	X	X	X	X	X	X	X	2CH/1CE	X	⊙	△	△	△	△	△	△	CE0
Dual CE flash x2	⊙	⊙	X	X	X	X	X	X	2CH/2CE	⊙	X	△	△	△	△	△	△	CE0,CE1
Dual CE flash x2	⊙	X	X	X	⊙	X	X	X	4CH/1CE	X	⊙	X	⊙	△	△	△	△	CE0
Dual CE flash x4	⊙	⊙	X	X	⊙	⊙	X	X	4CH/2CE	⊙	X	⊙	X	△	△	△	△	CE0,CE1
Dual CE flash x8	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	4CH/4CE	⊙	X	⊙	X	⊙	X	⊙	X	CE0,CE1,CE2,CE3
Quad CE flash x1	⊙	X	X	X	X	X	X	X	2CH/2CE	X	⊙	△	△	X	⊙	△	△	CE0,CE2
Quad CE flash x2	⊙	⊙	X	X	X	X	X	X	2CH/4CE	⊙	X	△	△	⊙	X	△	△	CE0,CE1,CE2,CE3
Quad CE flash x2	⊙	X	X	X	⊙	X	X	X	4CH/2CE	X	⊙	X	⊙	X	⊙	X	⊙	CE0,CE2
Quad CE flash x4	⊙	⊙	X	X	⊙	⊙	X	X	4CH/4CE	⊙	X	⊙	X	⊙	X	⊙	X	CE0,CE1,CE2,CE3
8 CE flash x1	⊙	X	X	X	X	X	X	X	2CH/4CE	X	⊙	△	△	X	⊙	△	△	CE0,CE1,CE2,CE3
8 CE flash x2	⊙	X	X	X	⊙	X	X	X	4CH/4CE	X	⊙	X	⊙	X	⊙	X	⊙	CE0,CE1,CE2,CE3

M0107A

⊙	Install
X	un-install
△	Don't care (it is fine if resistor mousing or not.)