

Hardware User Manual for G8 Q7M i.Mx51 Module Rev 1.0

Hardware User Manual for G8 Q7M i.Mx51 Module iW-PRDUQ-UM-01-R1.0 REL1.0 11th Nov, 2011





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Table of Contents

1. INTRODUCTION	6
1.1 Purpose 1.2 Scope 1.3 Acronyms and Abbreviations	
2. HARDWARE DETAILS	7
2.1 BOARD CONFIGURATIONS AND DEFAULT FEATURES 2.2 POWER RATING 2.3 GUIDELINES TO INSERT THE PROCESSOR BOARD INTO CARRIER BOARD	
3. I.MX51 Q7 MODULE CONNECTOR PIN ASSIGNMENTS	9
 3.1 I.Mx51 Q7 MODULE TOP	9 10 11 11 12 17 19 21 21 22 23 24
5. HYPER TERMINAL SET UP & BOOT OS FROM NAND FLASH	
5.1 Hyper Terminal Set up 5.2 Default Configuration Setup 5.3 Power ON and Launch WinCE from NAND Flash	
6. REFERENCE DOCUMENTS/LINKS	
7. TECHNICAL SUPPORT	



List of Figures

8
9
10
21
22
25
26
27
28
29
30
31
31
32

List of Tables

Table 1: Acronyms and Abbreviations	6
Table 2: Board Configurations	7
Table 3: Micro SD connector pin assignment	11
Table 4: JTAG Connector pin assignment	11
Table 5: 230pin Edge Connector pin assignment 1	12
Table 6: 80pin Expansion Connector-1 pin assignments	17
Table 7: 80pin Expansion Connector-2 pin assignment 1	19



1. Introduction

1.1 Purpose

The purpose of this document is to explain the procedure about the user interface, Power ON procedure for i.Mx51 Q7 Module.

1.2 Scope

This document describes the Hardware details, ATK flash programming and setting up Serial communication with PC/Laptop & ATK Flash programming for i.Mx51 Q7 Module.

1.3 Acronyms and Abbreviations

Acronyms	Description.		
ATK	Advanced Tool Kit		
CAN	Controller Area Network		
LCD	Liquid Crystal Display		
DDR	Double Data Rate		
FAQ	Frequently Asked Question		
HT	Hyper Terminal		
MMC	Multi Media Card		
PC	Personal computer		
RS232	Recommended Standard 232		
SATA	Serial Advanced Technology Attachment		
SD	Secure Digital		
UART	Universal Asynchronous Receiver Transmitter		
USB	Universal Serial Bus		
VGA	Video graphic Array		

Table 1: Acronyms and Abbreviations



2. Hardware Details

2.1 Board Configurations and Default Features

Board Configuration	Default	Optional
Feature	Configuration	Configurations
DDR2	128MB	512MB
NANDF ⁽¹⁾	128MB	2GB
Micro SD slot	YES	YES
USB Host x4	YES	YES
USB OTG x1	YES	YES
Ethernet PHY	YES	YES
LVDS transmitter (RGB to LVDS)	YES	YES
80Pin Expansion Conn1	YES	YES
80Pin Expansion Conn 2	YES	YES
CAN Controller (SPI interface)	NO	YES
PATA to SATA bridge ⁽¹⁾	NO	YES
SPI NOR Boot Flash	NO	YES

 Table 2: Board Configurations

Note (1): Both NANDF & SATA interfaces are not accessible simultaneously. Both interfaces are sharing same IO lines from CPU

2.2 Power Rating

Input supply to the Q7 module form MXM connector should meet below power & tolerance requirement.

Input Voltage: $5V \pm 5\%$

Input Current: 1A



2.3 Guidelines to insert the Processor board into Carrier board

- Make sure that the carrier board is completely powered off.
- Insert the Q7 module in to the MXM connector at an angle of 45° as shown in Figure 3.
- Check the Notch position of Q7 module is proper while inserting.
- Insert the Q7 module as shown in below.
- Once the Q7 module is inserted to the MXM connector properly, press the board vertically down as shown below, such that the board is fixed firmly into the expansion connectors.



Figure 1: Q7 Module Insertion procedure



3. i.Mx51 Q7 Module Connector Pin Assignments

3.1 i.Mx51 Q7 Module Top





Above Figure Shows the CPU module connector reference numbers on top side. Following are the list of Connectors on Top side

- Micro SD slot (J1)
- JTAG Connector (J2)
- Stand alone Power connector (P1)
- Power Jack(J3)
- 230pin Edge connector Top (U22)
- BOOT Switch (S1)



3.2 i.Mx51 Q7 Module Bottom





Above Figure Shows the CPU module connector reference numbers on bottom side.

Following are the list of Connectors on Bottom side.

- 80pin Expansion connector 1 (U23)
- 80pin Expansion connector 2 (U24)
- 230pin Edge connector Bottom (U22)



3.3 Micro SD Connector pin assignment

Pin	Signal Name	Direction	Description
1	SD1_DATA2	ΙΟ	Data2 Signal
2	SD1_DATA3	ΙΟ	Data3 Signal
3	SD1_CMD		Command Signal
4	VSD	Power	3.15V power
5	SD1_CLK	Output	Clock signal
6	VSS1		Ground
7	SD1_DATA0	ΙΟ	Data0
8	SD1_DATA1	ΙΟ	Data1
9	SD1_CD	Input	Card Detect
10	VSS1		Ground

Table 3: Micro SD connector pin assignment

3.4 JTAG Connector pin assignment

Table 4:	JTAG	Connector	pin	assignment
1 4010 11		connector	P	assignment

Pin	Signal Name	Direction	Pin	Signal Name	Direction
1	1V8_DDR		2	JTAG_TRST_B	IO
3	JTAG_TDI	IO	4	JTAG_TMS	IO
5	GND		6	VCC_3V3	IO
7	JTAG_DE_B	IO	8	JTAG_TCK	IO
9	JTAG_TDO	IO	10	GND	



3.5 230pin Edge Connector pin assignment

Table 5: 230pin Edge Connector pin assignment

Pin	Signal (bottom)	Pin	Signal (top)
1	GND	2	GND
3	NC	4	NC
5	NC	6	NC
7	LINK100#	8	NC
9	MDI1-/10,100Mbps Tx/Rx-	10	MDI0-/10,100Mbps Tx/Rx-
11	MDI1+/10,100Mbps Tx/Rx+	12	MDI0+/10,100Mbps Tx/Rx+
13	LINK#	14	ACT#
15	CTREF	16	NC
17	WAKE#/GPIO	18	SUS_S3#/GPIO
19	SUS_STAT#/GPIO	20	PWRBTN#
21	NC	22	NC
23	GND	24	GND
25	GND	26	PWRGIN/GPIO 5V CMOS INPUT
27	NC	28	RSTBN#/ INPUT
29	SATA0_TX+ *	30	NC
31	SATA0_TX- *	32	NC
33	SATA_ACT#/OC_OUTPUT *	34	GND
35	SATA0_RX+ *	36	NC
37	SATA0_RX- *	38	NC
39	GND	40	GND
41	NC	42	SDIO_CLK#
43	SDIO_CD#	44	SDIO_LED
45	SDIO_CMD	46	SDIO_WP
47	SDIO_PWR/GPIO OUTPUT	48	SDIO_DAT1



49	SDIO_DAT0	50	SDIO_DAT3
51	SDIO_DAT2	52	SDIO_DAT5 *
53	SDIO_DAT4 *	54	SDIO_DAT7 *
55	SDIO_DAT6 *	56	RSVD
57	GND	58	GND
59	HDA_SYNC (AC'97)	60	NC
61	HDA_RST/GPIO OUTPUT	62	NC
63	HDA_BITCLK (AC'97)	64	NC
65	HDA_SDI (AC'97)	66	I2C_CLK
67	HAD_SDO (AC'97)	68	I2C_DAT
69	NC	70	WDTRIG#
71	NC	72	WDOUT
73	GND	74	GND
75	NC	76	NC
77	NC	78	NC
79	NC	80	USB_4_5_OC#
81	NC	82	USB_P4-
83	NC	84	USB_P4+
85	USB_2_3_OC#	86	USB_0_1_OC#
87	USB_P3-	88	USB_P2-
89	USB_P3+	90	USB_P2+
91	USB_CC	92	USB_ID
93	USB_P1-/OTG-	94	USB_P0-
95	USB_P1+/OTG+	96	USB_P0+
97	GND	98	GND
99	LVDS_A0+	100	NC
101	LVDS_A0-	102	NC
103	LVDS_A1+	104	NC



105	LVDS_A1-	106	NC
107	LVDS_A2+	108	NC
109	LVDS_A2-	110	NC
111	LVDS_PPEN/GPIO OUTPUT	112	LVDS_BLEN/GPIO OUTPUT
113	LVDS_A3+	114	NC
115	LVDS_A3-	116	NC
117	GND	118	GND
119	LVDS_A_CLK+	120	NC
121	LVDS_A_CLK-	122	NC
123	LVDS_BLT_CTRL/GP_PWM_OUT0/ PWM0	124	RSVD
125	LVDS_DID_DAT/GP_I2C_DAT/TBD(I2C DATA)	126	LVDS_BLC_DAT/TBD(I2C DATA)
127	LVDS_DID_CLK/GP_I2C_CLK/TBD(I2C CLK)	128	LVDS_BLC_CLK/TBD(I2C CLK)
129	CAN0_TX *	130	CAN0_RX *
131	NC	132	NC
133	NC	134	NC
135	GND	136	GND
137	NC	138	NC
139	NC	140	NC
141	GND	142	GND
143	NC	144	NC
145	NC	146	NC
147	GND	148	GND
149	NC	150	/NC
151	NC	152	NC
153	NC	154	NC
155	NC	156	NC



157	NC	158	NC
159	GND	160	GND
161	NC	162	NC
163	NC	164	NC
165	GND	166	GND
167	NC	168	NC
169	NC	170	NC
171	NC	172	NC
173	NC	174	NC
175	NC	176	NC
177	NC	178	NC
179	NC	180	NC
181	NC	182	NC
183	GND	184	GND
185	NC	186	NC
187	NC	188	NC
189	NC	190	NC
191	NC	192	NC
193	VCC_RTC	194	SPKR / GP_PWM_OUT2/PWM1
195	NC	196	FAN_PWMOUT/GP_PWM_OUT1
			/TBD (OUTPUT)*
197	GND	198	GND
199	SPI_MOSI	200	SPI_CS0#
201	SPI_MISO	202	SPI_CS1#
203	SPI_SCK	204	NC
205	VCC_5V_SB	206	VCC_5V_SB
207	NC	208	UART_RX
209	UART_TX	210	NC



211	VCC	212	VCC
213	VCC	214	VCC
215	VCC	216	VCC
217	VCC	218	VCC
219	VCC	220	VCC
221	VCC	222	VCC
223	VCC	224	VCC
225	VCC	226	VCC
227	VCC	228	VCC
229	VCC	230	VCC

Note (*): Optional feature and not supported in default configuration due to of pin multiplexing.

Note: If not specified, default IO level is 3V3



3.6 80pin Expansion Connector-1 pin assignment

Pin	signal	Instants	Pin	signal	Instants
#	0		#	0	
1	GND		2	B_GPIO0	
3	B_GPIO1		4	B_GPIO2	
5	B_GPIO3		6	B_GPIO4	
7	B_GPIO5		8	B_GPIO6	
9	B_GPIO7	CPIO	10	B_GPIO8	GPIO
11	B_GPIO9	0110	12	B_GPIO10	
13	B_GPIO11		14	B_GPIO12	
15	B_GPIO13		16	B_GPIO14	
17	B_GPIO15		18	B_GPIO16	
19	PWM	PWM	20	B_GPIO20	
21	B_GPIO21		22	B_GPIO22	CPIO
23	B_GPIO23	GPIO	24	B_GPIO24	0110
25	B_GPIO25		26	B_GPIO26	
27	GND		28	B_GPIO27	GPIO
29	B_GPIO28	GPIO	30	B_GPIO29	0110
31	B_GPIO30	0110	32	GND	
33	AI_MCLK	SSI Input	34	AI_LRCK	SSI Input
35	AI_BCLK	oor mpat	36	AI_DATA	boi input
37	GND		38	GPIO	GPIO
39	GND		40	B_LVDS_BLEN	LVDS Backlight control
41	TS_INT#	Touch screen interrupt	42	GND	
43	GPIO	GPIO Input	44	GND	
45	AO_DATA	SSI Output	46	AO_BCLK	SSI Output
47	AO_LRCK	551 Output	48	AO_MCLK	551 Output
49	GND		50	B_UART1_TX	IIAPT
51	B_UART1_RT	UART	52	B_UART1_RX	UNKI

Table 6: 80pin Expansion Connector-1 pin assignments

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Page 17 of 34



	S				
53	B_UART1_CT S		54	GND	
55	B_GPIO31	GPIO	56	B_GPIO32	GPIO
57	B_GPIO33	0110	58	B_GPIO34	0110
59	GND		60	UART3_TXD	UART
61	GPIO	GPIO	62	GPIO	GPIO
63	UART3_RXD	UART	64	B_CSI1_MCLK	
65	B_CSI1_PCLK		66	B_CSI1_HSYN C	
67	B_VCLK		68	B_CSI1_VSYN C	Camera Interface
69	B_CSI1_DAT0	Camera Interface	70	B_CSI1_DAT1	
71	B_CSI1_DAT2		72	B_CSI1_DAT3	
73	B_CSI1_DAT4		74	B_CSI1_DAT6	
75	B_CSI1_DAT7		76	B_CSI1_DAT5	
77	B_GPIO17	GPIO Bidirectional	78	B_GPIO18	GPIO Bidirectional
79	B_GPIO19	GI IO Dianoctional	80	GND	

Note: If not specified, default IO level is 3V3



3.7 80pin Expansion Connector-2 pin assignment

Pin#	signal	Instants	Pin#	signal	Instants
1	TSX2	Tauch interface	2	TSX1	Touch interface
3	TSY2	Touch interface	4	TSY1	Touch interface
5	GND		6	GND	
7	KP_ROW0		8	KP_ROW1	
9	KP_ROW2	Keypad (4x4)	10	KP_ROW3	Keypad (4x4)
11	KP_COL0	(2V775 IO Level)	12	KP_COL1	(2V775 IO Level)
13	KP_COL2		14	KP_COL3	
15	GND		16	GND	
17	EIM_DA1		18	EIM_DA0	
19	EIM_DA3		20	EIM_DA2	
21	EIM_DA5	EIM Interface	22	EIM_DA4	
23	EIM_DA7		24	EIM_DA6	
25	EIM_DA9		26	EIM_DA8	
27	EIM_DA11		28	EIM_DA10	EIM Interface
29	EIM_DA13	$(1 \vee 0 \text{ IO Level})$	30	EIM_DA12	(1V8 IO Level)
31	EIM_DA15		32	EIM_DA14	
33	GND		34	GND	
35	EIM_RW		36	EIM_CS0	
37	EIM_BCLK		38	EIM_CRE	
39	EIM_EB1		40	EIM_WAIT	
41	AUD6_RXD	Audio Interface	42	EIM_EB0	
43	AUD6_TXFS	(1V8 IO Level)	44	AUD6_TXD	Audio Interface(1V8 IO Level)
45	AUD6_TXC		46	GND	
47	GND		48	CSI2_D13	
49	CSI2_D12		50	CSI2_D15	Camara? interface
51	CSI2_D14	Camera2 interface	52	CSI2_D17	$(2\sqrt{775} \text{ Interface})$
53	CSI2_D16	(2V775 IO Level)	54	CSI2_D18	$(2 \times 115 \text{ IO Level})$
55	CSI2_D19		56	CSI2_HSYNC	

1 able 7. ouplin Expansion Connector-2 pin assignment	Table 7	7:8	30pin	Ext	oansion	Conne	ctor-2	pin	assignr	nent
-------------------------------------------------------	---------	-----	-------	-----	---------	-------	--------	-----	---------	------



57	CSI2_VSYNC		58	CSI2_PIXCLK	
59	GND		60	GND	
61	NC		62	TV_OUT_RED	
63	NC	Leave no connect	64	GND	
65	NC	Only for test purpose	66	TV_OUT_GRN	
67	NC	only for test purpose	68	GND	TV out
69	NC		70	TV_OUT_BLU	
71	ADIN7	ADC inputs from PMIC	72	GND	
73	ADIN6	Leave no connect	74	TP	Leave no connect
75	ADIN5	Leave no connect	76	ТР	Only for test purpose
77	GND		78	GND	
79	NC	Leave no connect	80	NC	Leave no connect
19	IIC	Only for test purpose	00	ne	Only for test purpose



4. Flash Programming using ATK

4.1 Instructions to install Advanced Toolkit

- 1. Install the Advanced Toolkit by double clicking the file FSL_ATK_TOOL_WINS_STD_INSTALL_1_67.exe
- 2. After installing setup, double click on Advanced Tool Kit V1.67 to get the window

Advanced ToolKit Config	uration Version: 1.67	
	Device Setting i.MX CPU: Device memory initial O DDR2 MDDR O DDR2 MDDR O Custom Initial File Host Setting Communication Channel Image: Serial Port: COM1 Image: Bypass the settings Bypass the settings	Go

Figure 4: ATK Window



4.2 Programming i.MX51 board using Advanced Tool Kit

- 1. Connect USB Cable between USB OTG (mini AB, J26) port of Q7 carrier card and PC.
- 2. Set the Bootstrap mode in the Processor board as mentioned in picture below (DIP switch to ON position for bootstrap). Don't change the switch setting while power is ON.
- 3. After changing the switch position, Power On the system.

Both Switch to Right position for booting from NAND



Both Switch to Left position for ATK Programming

Figure 5: Switch Position for Boot Strap Mode

- 4. Run the Open Advanced Toolkit application by double clicking the "Advanced Tool Kit V1.67" located in Desktop.
- 5. In Device Setting select the i.MX CPU as iMX51 TO2.
- 6. In Device Initial File select the Custom Initial file and Browse the Custom DDR initialization file "ddr_0to15.txt".
- 7. In Host Setting, select Communication channel as "USB".
- 8. Click Next to Continue

Advanced ToolKit Configuration Version: 1.67	
Device Setting i.MX CPU: i.MXS1_T02 Device memory initial DDR DDR DDR SDRAM Custom Initial File C:\Documents and Set Host Setting Communication Channel Serial Port: COM1 USB Bypass the settings Ket Next> Cancel	

9. Select Flash Tool and Click Go button.



Select Advanced toolkits		
	Welcome to Advanced ToolKit Collection Please select the toolkit you want to use, then	click Go
	Flash Tool	
	Image Format Convert Tool	
	< Back Next> Cancel	Go

4.3 Flash Programming the Boot Code

- 1. In the next screen select below things.
- 2. Select Flash model as Custom model.
- 3. Click Browse button (under Flash model) and Select the given Binary File ("mx51to2_nand.bin")
- 4. In Operation type Select Program.
- 5. In Operation settings, type Address as "0".
- 6. Click Browse button (Under image) and select the image file ("imx51_diag.bin").
- 7. Click Program button.



🛛 Advanced Toolkit (Flash Tool)	
Operation type C Download C Dump Image: Strate of the s	Flash Device Flash model Custom model G:\New Folder\Diag\mx51to2_nand.t Browse
Operation settings Address: 0x 0 Size: 0x	
Image File (Download/Program input, Dump output) G:\New Folder\Diag\imx51_diag.bin Finished! Read back check enabled!	Browse
Flash program successful!	<u>~</u>
Silicon Security Type (HAB_TYPE): Development/Disable F	lash Capacity: 131072 KB
< Quit Exit Load Save	Program Stop

8. Next NK.bin has to be programmed.

Flash Programming the WinCE Image

- 1. In the next screen select below things.
- 2. Select Flash model as Custom model.
- 3. Click Browse button (under Flash model) and Select the given Binary File ("mx51to2_nand.bin").
- 4. In Operation type Select Program.
- 5. In Operation settings, type Address as "100000".
- 6. Click Browse button (Under image) and select the image file ("NK.bin").
- 7. Click Program button.
- 8. After successful programming, switch off the power supply & put the DIP switch in Boot mode.



5. Hyper Terminal Set up & boot OS from NAND Flash

5.1 Hyper Terminal Set up

- 1. Insert one end of the serial cable to PC/Laptop COM port (DB9 Male Connector.)
- 2. Connect the other end of the serial cable to serial connector of the Board.
- 3. Open the HyperTerminal on the PC/Laptop as mentioned below
- 4. Go to Start -> Programs -> Accessories -> Communication -> HyperTerminal on the host PC/Laptop.
- 5. In hyperterminal,Go to Files ->Properties
- 6. Select COM1 or COM2 port depending on which port you have connected the serial cable as shown below.

RainboW-G3 - HyperTerminal (I	Inlicensed)	
File Edit View Call Transfer Help		
D 🚅 🍙 🌋 🗈 🍋 😭		
	RainboW-G3 Properties Connect To Settings Settings Country/region: India (91) Enter the area code without the long distance prefix. Area code: 050 Phone number: Configure Image: Configure Image: DK Cancel	
Disconnected Auto detect	115200 8-N-1 SCROLL CAPS NUM Capture Print echo	

Figure 6: HyperTerminal settings-1



7. Now Click Configure button and do Port Settings as below..

Bits per Second (Baud Rate)	:115200
Data bits	:8
Parity	:None
Stop Bits	:1
Flow Control	:None

e Edit View Call Transfer Help	
	RainboW-G3 Properties
	Connect To Settings Port Settings Image: Settings Image: Settings Country/region: India (31) Image: Settings Country/region: India (31) Image: Settings Enter the area code without the long-distance prefix. Image: Settings Area code: 1000 Phone number: Image: Settings Connect using: CDM1 Image: Settings Image: Settings Image: Settings Image: S
	OK Cancel Apply

Figure 7: HyperTerminal settings-2

- 8. Go to File -> Properties -> Settings -> ASCII Setup.
- 9. Now Select 'Echo typed characters locally' has to be enabled as shown below
- 10. Go to Call -> Call to connect.







Figure 8: Enable Echo typed characters

12. The UART console messages will appear on the HT as shown below.



🗞 iWave - HyperTerminal	×
File Edit View Call Transfer Help	
UsbHost : New Hub [address(1) / layer(0)] ERROR: E:\WINCE600\PLATFORM\iMX51-EVK-PDK1_7\SRC\DRIVERS\IPUV3\DISPLAY\.\dvi.cpp line 463: I2CReadNBytes:I2C Write to DVI fail! - ERRORCode:-12 USBHost : Hub [address(1) / layer(0)] SUSPEND OK ERROR: E:\WINCE600\PLATFORM\iMX51-EVK-PDK1_7\SRC\DRIVERS\IPUV3\DISPLAY\.\dvi.cpp line 463: I2CReadNBytes:I2C Write to DVI fail! - ERRORCode:-12 Open hDLSUIActive Event Fail	~
Enter reset Pin reset Pin Press space bar with in 2 seconds for diagnostics menu Launching WINCE fromNAND MAN ID is ec DEVICE ID is f1 ####################################	
Loading image onto RAM_	
1	~

Figure 9: UART Console Window



5.2Default Configuration Setup

• Power the Board, the below diagnostics Menu will appear in the hyper terminal.

File Edit View Call Transfer Help Image: Second	🌯 iWave - HyperTerminal 📃 🗖	X
C C C C C C C C C C C C C C C C C C C	File Edit View Call Transfer Help	
6 atk_flash_lib_read : source addr is 0xe0000 dest addr is 0x94100000, size is 409 6 Enter reset Pin reset Pin ************************************		
6 atk_flash_lib_read : source addr is 0xe0000 dest addr is 0x94100000, size is 409 6 Enter reset Pin reset Pin ************************************		1^
<pre>************************************</pre>	6 atk_flash_lib_read : source addr is 0xe0000 dest addr is 0x94100000, size is 409 6 Enter reset Pin reset Pin	
<pre>* Main Menu * ***********************************</pre>	****	
A DDR2 Test B Read-Write Memory C PMIC Test D Download File L LCD Test E Board Configurations F Nand Flash Program R Run From Address M SD/MMC Test N NAND flash test H Launch Linux I Load WINCE Please select an option	* Main Menu *	
	A DDR2 Test B Read-Write Memory C PMIC Test D Download File L LCD Test E Board Configurations F Nand Flash Program R Run From Address M SD/MMC Test N NAND flash test H Launch Linux I Load WINCE Please select an option iMX51>	

Figure 10: Diagnostic Main Menu

• Press "E" for Board Configuration and enter the password as "aaabacad".



File Edit View Call Transfer Help Image: State St	🍣 iWave - HyperTerminal	
DBP = 3 DDP = 1 * Main Menu * Main Menu * Main Menu * Read-Write Memory C PMIC Test Beard Configurations F Nand Flash Program R R Run From Address M M SD/MMC Test NAND flash test H Launch Linux I I Load WINCE Please select an option Please select an option iMX51>e Before typing the password disable the echo Enter the password : aaabacad ************************************	File Edit View Call Transfer Help	
 Main Menu Main Menu Main Menu Main Memory PMIC Test B Read-Write Memory C PMIC Test D Download File L LCD Test E Board Configurations F Nand Flash Program R Run From Address M SD/MMC Test N NAND flash test H Launch Linux I Load WINCE Please select an option iMX51>e Before typing the password disable the echo Enter the password : aaabacad ************************************	D 🖆 🐲 🐉 📫 🗳	
L LCD Test E Board Configurations F Nand Flash Program R Run From Address M SD/MMC Test N NAND flash test H Launch Linux I Load WINCE Please select an option iMX51>e Before typing the password disable the echo Enter the password : aaabacad ************************************	* Main Menu * A DDR2 Test B Read-Write Memory C PMIC Test D Download File	
<pre>************************************</pre>	L LCD Test E Board Configurations F Nand Flash Program R Run From Address M SD/MMC Test N NAND flash test H Launch Linux I Load WINCE Please select an option iMX51>e Before typing the password disable the echo Enter the password : aaabacad	
Select an option :	<pre>************************************</pre>	

Figure 11: Board Configuration Menu

- In Board Configuration menu, again press "E" for Programming the Default Configuration.
- After Programming the Default Configuration reboot the board.

5.3 Power ON and Launch WinCE from NAND Flash

- Power on the system.
- Diagnostic Main Menu will appear in Hyper Terminal.



Rev 1.0



Figure 12: Diagnostic Main Menu

• Select "I" Option from Menu to load WINCE, the below menu will appear.



Figure 13: Launch WINCE



- Select "B" for Load WinCE from NAND flash.
- Wait for 1 min for WinCE 6.0 boots up, WinCE Desktop screen will be displayed in the LCD screen as shown below.







6. Reference Documents/Links

Q7 specification: http://www.qseven-standard.org/fileadmin/spec/Qseven-Spec_1.20.pdf Carrier card design guide: http://www.qseven-standard.org/fileadmin/spec/Qseven-DG_10_Release_Candidate.pdf Carrier card reference schematic: http://www.qseven-standard.org/fileadmin/spec/reference_carrier_schematics_sp31e900001.pdf Brochure & high level Block diagrams for iWave G8 Q7M i.Mx51 module: http://www.iwavesystems.com/i.MX51Q7SOM.htm Brochure & high level Block diagrams for iWave G7D Generic Q7 Carrier Card: http://www.iwavesystems.com/iW-RainboW-G7D.htm ATK User Guide:

ATK User's Guide Standard Version.pdf



7. Technical Support

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