

DSP STAR Processor Module User's Manual

Revision 2.8

Literature Number: NDT051121

November 2005



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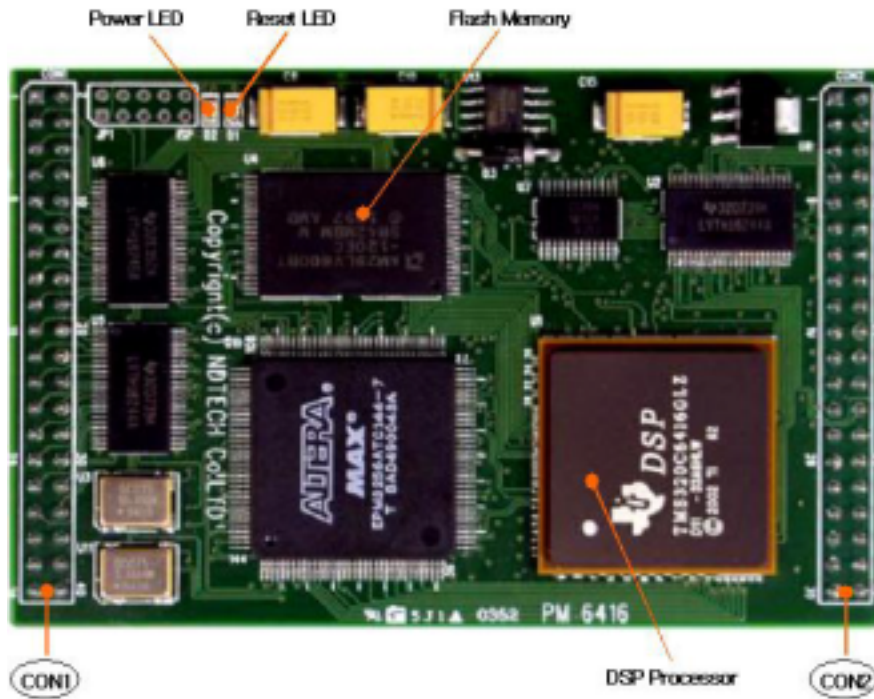
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Table 1. Processor Module Specifications

	PM6711D	PM6713	PM6203	PM6416
DSP	C6711	C6713	C6203	C6416
Math	Floating Point	Floating Point	Fixed Point	Fixed Point
Clock	200 MHz	300 MHz	300 MHz	600 MHz
ROM	1M-byte Flash Memory	1M-byte Flash Memory	1M-byte Flash Memory	1M-byte Flash Memory
Memory (SDRAM)	32M Byte	32M Byte	16M Byte	32MByte
Power	5V	5V	3V or 5V	5V
Size (mm)	85x55	85x55	85x55	85x55



(a) PM6711D



(b) PM6416

Figure 1. Real Images of DSP STAR Processor Module

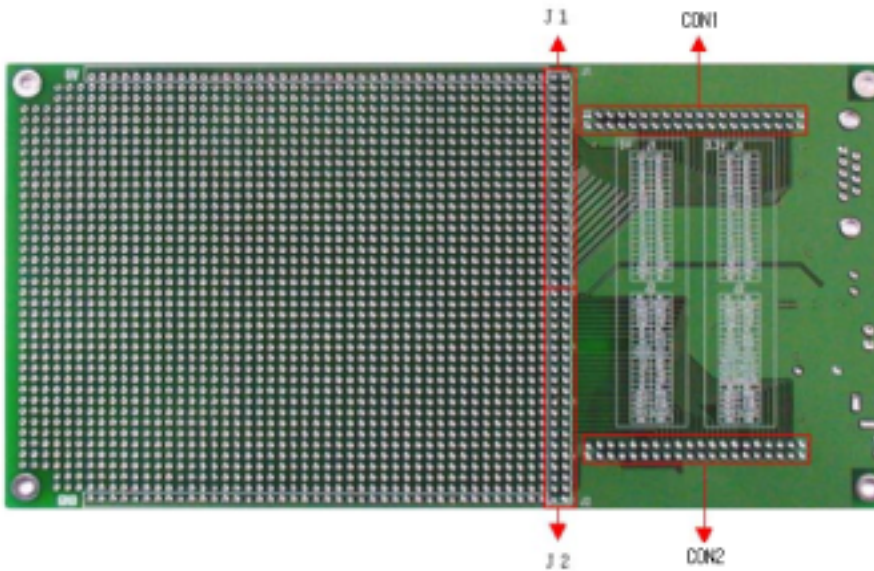


Figure 2. Real Images of Module Test Board (Bottom View)

The following tables in Table 2 ~ Table 7 describes interface connector and pin descriptions. In the Table 2, Table 4 and Table 6, CON1/2 (Module) indicates connector 1/2 in the processor module and CON1/2 (MTB) and J1/2(MTB) indicate connector 1/2 and J1/2 in the Module test board. The dashed line marked by --- indicates the connectedness between two connectors.

Table 2. Interface Connector for PM6416

CON1 (Module)			CON1 (MTB)			J1 (MTB)	
Pin No.	Pin Name		Pin No.		Pin No.	Pin Name	
1	GND	---#	1		1	+5V	
2	GND	---	2		2	+5V	
3	AED0	---	3	---	3	D0	
4	AED1	---	4	---	4	D1	
5	AED2	---	5	---	5	D2	
6	AED3	---	6	---	6	D3	
7	AED4	---	7	---	7	D4	
8	AED5	---	8	---	8	D5	
9	AED6	---	9	---	9	D6	
10	AED7	---	10	---	10	D7	
11	AED8	---	11	---	11	D8	
12	AED9	---	12	---	12	D9	
13	AED10	---	13	---	13	D10	
14	AED11	---	14	---	14	D11	
15	AED12	---	15	---	15	D12	
16	AED13	---	16	---	16	D13	
17	AED14	---	17	---	17	D14	
18	AED15	---	18	---	18	D15	
19	AEA3	---	19	---	19	A0	
20	AEA4	---	20	---	20	A1	
21	AEA5	---	21	---	21	A2	
22	AEA6	---	22	---	22	A3	
23	AEA7	---	23	---	23	A4	
24	AEA8	---	24	---	24	A5	
25	AEA9	---	25	---	25	A6	
26	AEA10	---	26	---	26	A7	
27	AEA11	---	27	---	27	A8	
28	AEA12	---	28	---	28	A9	
29	AEA13	---	29	---	29	A10	
30	AEA14	---	30	---	30	A11	
31	AEA15	---	31	---	31	A12	
32	AEA16	---	32	---	32	A13	
33	AEA17	---	33	---	33	A14	
34	AEA18	---	34	---	34	A15	
35	/AACE1	---	35	---	35	/XCE1	
36	/AARE	---	36	---	36	/RE	
37	/AAWE	---	37	---	37	/WE	
38	AARDY	---	38	---	38	READY	
39	GND	---	39		39	NC	
40	GND	---	40		40	NC	

Indicates Connectedness

CON2 (Module)			CON2 (MTB)			J2 (MTB)	
Pin No.	Pin Name	---	Pin No.	---	Pin No.	Pin Name	
1	GND	---	1	---	40	GND	
2	GND	---	2	---	39	GND	
3	EXT_INT4	---	3	---	38	/INT0	
4	RS232RX	---	4	---	37	CLKOUT	
5	EXT_INT5	---	5	---	36	/INT1	
6	RS232TX	---	6	---	35	CLKIN	
7	EXT_INT6	---	7	---	34	/INT2	
8	CB_TXD	---	8	---	33	HTXD	
9	EXT_INT7	---	9	---	32	/INT3	
10	CB_RXD	---	10	---	31	HRXD	
11	+5V	---	11	---	30	NC	
12	+5V	---	12	---	29	NC	
13	CLK0	---	13	---	28	CK	
14	DX0	---	14	---	27	RXD	
15	FS0	---	15	---	26	FS	
16	DR0	---	16	---	25	TXD	
17	CLK1	---	17	---	24	CK1	
18	DX1	---	18	---	23	DR1	
19	FS1	---	19	---	22	FS1	
20	DR1	---	20	---	21	DX1	
21	Reserved	---	21	---	20	/XCE0	
22	/AACE3	---	22	---	19	/XCE3	
23	/AACE2	---	23	---	18	/XCE2	
24	Reserved	---	24	---	17	ALE	
25	TINP0	---	25	---	16	IN0	
26	TOUT0	---	26	---	15	OUT0	
27	TINP1	---	27	---	14	IN1	
28	TOUT1	---	28	---	13	OUT1	
29	+5V	---	29	---	12	NC	
30	+5V	---	30	---	11	NC	
31	JTMS	---	31	---	10	JTMS	
32	JTDI	---	32	---	9	JTDI	
33	JTDO	---	33	---	8	JTDO	
34	JTCK	---	34	---	7	JTCK	
35	EMU0	---	35	---	6	EMU0	
36	EMU1	---	36	---	5	EMU1	
37	/TRST	---	37	---	4	/TRST	
38	/RESET	---	38	---	3	/RESET	
39	GND	---	39	---	2	NC	
40	GND	---	40	---	1	NC	

Table 3. Pin Descriptions (PM6416)

Pin Name	Description
GND	Ground
AED [0:15]	External Data Bus
AEA [3:18]	External Address Bus
/AACE1	EMIFA CE1 Memory Space Enable
/AARE	EMIFA Asynchronous Memory Read Enable
/AAWE	EMIFA Asynchronous Memory Write Enable
AARDY	Asynchronous Memory Ready Input
EXT_INT[4:7]	External Interrupt 4, 5, 6, 7
RS232RX	USER RS232 Rx Data
RS232TX	USER RS232 Tx Data
CB_TXD	Serial Transmit Port for Code Builder
CB_RXD	Serial Receive Port for Code Builder
+5V	VCC (5V)
CLK0	CLKX0 and CLKR0 Wired Or
DX0	McBSP Port 0 Tx Data
FS0	FSX0 and FSR0 Wired Or
DR0	McBSP Port 0 Rx Data
CLK1	CLKX1 and CLKR1 Wired Or
DX1	McBSP Port 1 Tx Data
FS1	FSX1 and FSR1 Wired Or
DR1	McBSP Port 1 Rx Data
/AACE3	EMIFA CE3 Memory Space Enable
/AACE2	EMIFA CE2 Memory Space Enable
TINP0	Timer 0 or General-purpose input
TOUT0	Timer 0 or General-purpose output
TINP1	Timer 1 or General-purpose input
TOUT1	Timer 1 or General-purpose output
JTMS	J-TAG, Test Mode Select
JTDI	J-TAG, Test Data Input
JTDO	J-TAG, Test Data Output
JTCK	J-TAG, Test Clock(10.368MHz)
EMU0	J-TAG, Emulation Pin 0
EMU1	J-TAG, Emulation Pin 1
/TRST	J-TAG, Test Reset
/RESET	Board Reset

Table 4. Interface Connector for PM6203

CON1 (Module)			CON1 (MTB)			J1 (MTB)	
Pin No.	Pin Name		Pin No.			Pin No.	Pin Name
1	GND	---	1			1	+5V
2	GND	---	2			2	+5V
3	ED0	---	3		---	3	D0
4	ED1	---	4		---	4	D1
5	ED2	---	5		---	5	D2
6	ED3	---	6		---	6	D3
7	ED4	---	7		---	7	D4
8	ED5	---	8		---	8	D5
9	ED6	---	9		---	9	D6
10	ED7	---	10		---	10	D7
11	ED8	---	11		---	11	D8
12	ED9	---	12		---	12	D9
13	ED10	---	13		---	13	D10
14	ED11	---	14		---	14	D11
15	ED12	---	15		---	15	D12
16	ED13	---	16		---	16	D13
17	ED14	---	17		---	17	D14
18	ED15	---	18		---	18	D15
19	EA2	---	19		---	19	A0
20	EA3	---	20		---	20	A1
21	EA4	---	21		---	21	A2
22	EA5	---	22		---	22	A3
23	EA6	---	23		---	23	A4
24	EA7	---	24		---	24	A5
25	EA8	---	25		---	25	A6
26	EA9	---	26		---	26	A7
27	EA10	---	27		---	27	A8
28	EA11	---	28		---	28	A9
29	EA12	---	29		---	29	A10
30	EA13	---	30		---	30	A11
31	EA14	---	31		---	31	A12
32	EA15	---	32		---	32	A13
33	EA16	---	33		---	33	A14
34	EA17	---	34		---	34	A15
35	/CE1	---	35		---	35	/XCE1
36	/ARE	---	36		---	36	/RE
37	/AWE	---	37		---	37	/WE
38	ARDY	---	38		---	38	READY
39	GND	---	39			39	NC
40	GND	---	40			40	NC

CON2 (Module)			CON2 (MTB)		J2 (MTB)	
Pin No.	Pin Name		Pin No.		Pin No.	Pin Name
1	GND	---	1		40	GND
2	GND	---	2		39	GND
3	EXT_INT4	---	3	---	38	/INT0
4	RS232RX	---	4	---	37	CLKOUT
5	EXT_INT5	---	5	---	36	/INT1
6	RS232TX	---	6	---	35	CLKIN
7	EXT_INT6	---	7	---	34	/INT2
8	CB_TXD	---	8	---	33	HTXD
9	EXT_INT7	---	9	---	32	/INT3
10	CB_RXD	---	10	---	31	HRXD
11	+5V	---	11	---	30	NC
12	+5V	---	12	---	29	NC
13	CLK0	---	13	---	28	CK
14	DX0	---	14	---	27	RXD
15	FS0	---	15	---	26	FS
16	DR0	---	16	---	25	TXD
17	CLK1	---	17	---	24	CK1
18	DX1	---	18	---	23	DR1
19	FS1	---	19	---	22	FS1
20	DR1	---	20	---	21	DX1
21	Reserved	---	21	---	20	/XCE0
22	/CE3	---	22	---	19	/XCE3
23	/CE2	---	23	---	18	/XCE2
24	Reserved	---	24	---	17	ALE
25	TINP0	---	25	---	16	IN0
26	TOUT0	---	26	---	15	OUT0
27	TINP1	---	27	---	14	IN1
28	TOUT1	---	28	---	13	OUT1
29	+5V	---	29	---	12	NC
30	+5V	---	30	---	11	NC
31	TMS	---	31	---	10	JTMS
32	TD1	---	32	---	9	JTDI
33	TD0	---	33	---	8	JTD0
34	TCK	---	34	---	7	JTCK
35	EMU0	---	35	---	6	EMU0
36	EMU1	---	36	---	5	EMU1
37	/TRST	---	37	---	4	/TRST
38	/RESET	---	38	---	3	/RESET
39	GND	---	39		2	NC
40	GND	---	40		1	NC

Table 5. Pin Descriptions (PM6203)

Pin Name	Description
GND	Ground
ED[0:15]	External Data Bus
EA[2:17]	External Address Bus
/CE1	CE1 Memory Space Enable
/ARE	Asynchronous Memory Read Enable
/AWE	Asynchronous Memory Write Enable
ARDY	Asynchronous Memory Ready Input
EXT_INT[4:7]	External Interrupt 4, 5, 6, 7
RS232RX	USER RS232 Rx Data
RS232TX	USER RS232 Tx Data
CB_TXD	Serial Transmit Port for Code Builder
CB_RXD	Serial Receive Port for Code Builder
+5V	VCC (5V)
CLK0	CLKX0 and CLKR0 Wired Or
DX0	McBSP Port 0 Tx Data
FS0	FSX0 and FSR0 Wired Or
DR0	McBSP Port 0 Rx Data
CK1	CLKX1 and CLKR1 Wired Or
DX1	McBSP Port 1 Tx Data
FS1	FSX1 and FSR1 Wired Or
DR1	McBSP Port 1 Rx Data
/CE3	CE3 Memory Space Enable
/CE2	CE2 Memory Space Enable
TINP0	Timer 0 or General-purpose input
TOUT0	Timer 0 or General-purpose output
TINP1	Timer 1 or General-purpose input
TOUT1	Timer 1 or General-purpose output
TMS	J-TAG, Test Mode Select
TD1	J-TAG, Test Data Input
TD0	J-TAG, Test Data Output
TCK	J-TAG, Test Clock(10.368MHz)
EMU0	J-TAG, Emulation Pin 0
EMU1	J-TAG, Emulation Pin 1
/TRST	J-TAG, Test Reset
/RESET	Board Reset

Table 6. Interface Connector for PM6713, PM6711D

CON1 (Module)			CON1 (MTB)			J1 (MTB)	
Pin No.	Pin Name		Pin No.		Pin No.	Pin Name	
1	GND	---	1		1	+5V	
2	GND	---	2		2	+5V	
3	ED0	---	3	---	3	D0	
4	ED1	---	4	---	4	D1	
5	ED2	---	5	---	5	D2	
6	ED3	---	6	---	6	D3	
7	ED4	---	7	---	7	D4	
8	ED5	---	8	---	8	D5	
9	ED6	---	9	---	9	D6	
10	ED7	---	10	---	10	D7	
11	ED8	---	11	---	11	D8	
12	ED9	---	12	---	12	D9	
13	ED10	---	13	---	13	D10	
14	ED11	---	14	---	14	D11	
15	ED12	---	15	---	15	D12	
16	ED13	---	16	---	16	D13	
17	ED14	---	17	---	17	D14	
18	ED15	---	18	---	18	D15	
19	EA2	---	19	---	19	A0	
20	EA3	---	20	---	20	A1	
21	EA4	---	21	---	21	A2	
22	EA5	---	22	---	22	A3	
23	EA6	---	23	---	23	A4	
24	EA7	---	24	---	24	A5	
25	EA8	---	25	---	25	A6	
26	EA9	---	26	---	26	A7	
27	EA10	---	27	---	27	A8	
28	EA11	---	28	---	28	A9	
29	EA12	---	29	---	29	A10	
30	EA13	---	30	---	30	A11	
31	EA14	---	31	---	31	A12	
32	EA15	---	32	---	32	A13	
33	EA16	---	33	---	33	A14	
34	EA17	---	34	---	34	A15	
35	/CE1	---	35	---	35	/XCE1	
36	/ARE	---	36	---	36	/RE	
37	/AWE	---	37	---	37	/WE	
38	ARDY	---	38	---	38	READY	
39	GND	---	39		39	NC	
40	GND	---	40		40	NC	

CON2 (Module)			CON2 (MTB)			J2 (MTB)	
Pin No.	Pin Name		Pin No.		Pin No.	Pin Name	
1	GND	---	1		40	GND	
2	GND	---	2		39	GND	
3	EXT_INT4	---	3	---	38	/INT0	
4	RS232RX	---	4	---	37	CLKOUT	
5	EXT_INT5	---	5	---	36	/INT1	
6	RS232TX	---	6	---	35	CLKIN	
7	EXT_INT6	---	7	---	34	/INT2	
8	CB_TXD	---	8	---	33	HTXD	
9	EXT_INT7	---	9	---	32	/INT3	
10	CB_RXD	---	10	---	31	HRXD	
11	+5V	---	11	---	30	NC	
12	+5V	---	12	---	29	NC	
13	CLK0	---	13	---	28	CK	
14	DX0	---	14	---	27	RXD	
15	FS0	---	15	---	26	FS	
16	DR0	---	16	---	25	TXD	
17	CLK1	---	17	---	24	CK1	
18	DX1	---	18	---	23	DR1	
19	FS1	---	19	---	22	FS1	
20	DR1	---	20	---	21	DX1	
21	Reserved	---	21	---	20	/XCE0	
22	/CE3	---	22	---	19	/XCE3	
23	/CE2	---	23	---	18	/XCE2	
24	Reserved	---	24	---	17	ALE ¹	
25	TINP0	---	25	---	16	IN0	
26	TOUT0	---	26	---	15	OUT0	
27	SDA0	---	27	---	14	IN1	
28	SCL0	---	28	---	13	OUT1	
29	+5V	---	29	---	12	NC	
30	+5V	---	30	---	11	NC	
31	TMS	---	31	---	10	JTMS	
32	TD1	---	32	---	9	JTD1	
33	TD0	---	33	---	8	JTD0	
34	TCK	---	34	---	7	JTCK	
35	EMU0	---	35	---	6	EMU0	
36	EMU1	---	36	---	5	EMU1	
37	/TRST	---	37	---	4	/TRST	
38	/RESET	---	38	---	3	/RESET	
39	GND	---	39		2	NC	
40	GND	---	40		1	NC	

¹ Reserved

Table 7. Pin Descriptions (PM6713, PM6711D)

Pin Name	Description
GND	Ground
ED[0:15]	External Data Bus
EA[2:17]	External Address Bus
/CE1	CE1 Memory Space Enable
/ARE	Asynchronous Memory Read Enable
/AWE	Asynchronous Memory Write Enable
ARDY	Asynchronous Memory Ready Input
EXT_INT[4:7]	External Interrupt 4, 5, 6, 7
RS232RX	USER RS232 Rx Data
RS232TX	USER RS232 Tx Data
CB_TXD	Serial Transmit Port for Code Builder
CB_RXD	Serial Receive Port for Code Builder
+5V	VCC (5V)
CLK0	CLKX0 and CLKR0 Wired Or
DX0	McBSP Port 0 Tx Data
FS0	FSX0 and FSR0 Wired Or
DR0	McBSP Port 0 Rx Data
CK1	CLKX1 and CLKR1 Wired Or
DX1	McBSP Port 1 Tx Data
FS1	FSX1 and FSR1 Wired Or
DR1	McBSP Port 1 Rx Data
/CE3	CE3 Memory Space Enable
/CE2	CE2 Memory Space Enable
TINP0	Timer 0 or General-purpose input
TOUT0	Timer 0 or General-purpose output
SCL0	I2C0 clock
SDA0	I2C0 data
TMS	J-TAG, Test Mode Select
TD1	J-TAG, Test Data Input
TD0	J-TAG, Test Data Output
TCK	J-TAG, Test Clock(10.368MHz)
EMU0	J-TAG, Emulation Pin 0
EMU1	J-TAG, Emulation Pin 1
/TRST	J-TAG, Test Reset
/RESET	Board Reset

Table 8. PM6711D Memory Map

Address	Description
0x00000000 ~ 0x0000FFFF	Internal RAM (L2 64Kbytes)
0x00010000 ~ 0x017FFFFF	Reserved (24M - 64Kbytes)
0x01800000 ~ 0x0183FFFF	EMIF Registers (256Kbytes)
0x01840000 ~ 0x0187FFFF	L2 Control Registers(256Kbytes)
0x01880000 ~ 0x018BFFFF	HPI Control Registers(256Kbytes)
0x018C0000 ~ 0x018FFFFF	McBSP Port 0 Control Registers(256Kbytes)
0x01900000 ~ 0x0193FFFF	McBSP Port 1 Control Registers(256Kbytes)
0x01940000 ~ 0x0197FFFF	TIMER 0 Control Registers(256Kbytes)
0x01980000 ~ 0x019BFFFF	TIMER 1 Control Registers(256Kbytes)
0x019CFFFF ~ 0x019FFFFF	Interrupt Select Registers(256Kbytes)
0x01A00000 ~ 0x01A3FFFF	EDMA RAM and Registers(256Kbytes)
0x01A40000 ~ 0x1FFFFFFF	Reserved (1G - 288Mbytes)
0x20000000 ~ 0x3FFFFFFF	McBSP Port 0/1 Data(256Mbytes)
0x01A40000 ~ 0x1FFFFFFF	Reserved (1G - 288Mbytes)
0x80000000 ~ 0x81FFFFFF	SDRAM (32M byte)
0x82000000 ~ 0x8FFFFFFF	Reserved
0x90000000 ~ 0x901FFFFF	Flash Memory (1M byte)
0x90200000	User RS232 Control Register
0x90200004	User RS232 Data Register
0x90200008 ~ 0x902FFFFF	Reserved
0x90300000 ~ 0x903FFFFF	DSP STAR I/O or User Defined (CE1)
0x90400000 ~ 0x9FFFFFFF	Reserved
0xA0000000 ~ 0xA003FFFF	User Defined (CE2)
0xA004FFFF ~ 0xAFFFFFFF	Reserved
0xB0000000 ~ 0xB003FFFF	User Defined (CE3)
0xB004FFFF ~ 0xBFFFFFFF	Reserved

Table 9. PM6713 Memory Map

Address	Description
0x00000000 ~ 0x0002FFFF	Internal RAM (L2 192Kbytes)
0x00030000 ~ 0x017FFFFF	Reserved (24M - 192Kbytes)
0x01800000 ~ 0x0183FFFF	EMIF Registers (256Kbytes)
0x01840000 ~ 0x0187FFFF	L2 Control Registers(256Kbytes)
0x01880000 ~ 0x018BFFFF	HPI Control Registers(256Kbytes)
0x018C0000 ~ 0x018FFFFF	McBSP Port 0 Control Registers(256Kbytes)
0x01900000 ~ 0x0193FFFF	McBSP Port 1 Control Registers(256Kbytes)
0x01940000 ~ 0x0197FFFF	TIMER 0 Control Registers(256Kbytes)
0x01980000 ~ 0x019BFFFF	TIMER 1 Control Registers(256Kbytes)
0x019CFFFF ~ 0x019FFFFF	Interrupt Select Registers(256Kbytes)
0x01A00000 ~ 0x01A3FFFF	EDMA RAM and Registers(256Kbytes)
0x01A40000 ~ 0x1FFFFFFF	Reserved (1G - 288Mbytes)
0x20000000 ~ 0x3FFFFFFF	McBSP Port 0/1 Data(256Mbytes)
0x01A40000 ~ 0x1FFFFFFF	Reserved (1G - 288Mbytes)
0x80000000 ~ 0x803FFFFF	SDRAM (4M byte)
0x80400000 ~ 0x8FFFFFFF	Reserved
0x90000000 ~ 0x901FFFFF	Flash Memory (1M byte)
0x90200000	User RS232 Control Register
0x90200004	User RS232 Data Register
0x90200008 ~ 0x902FFFFF	Reserved
0x90300000 ~ 0x903FFFFF	DSP STAR I/O or User Defined (CE1)
0x90400000 ~ 0x9FFFFFFF	Reserved
0xA0000000 ~ 0xA003FFFF	User Defined (CE2)
0xA004FFFF ~ 0xAFFFFFFF	Reserved
0xB0000000 ~ 0xB003FFFF	User Defined (CE3)
0xB004FFFF ~ 0xBFFFFFFF	Reserved

Table 10. PM6203 Memory Map

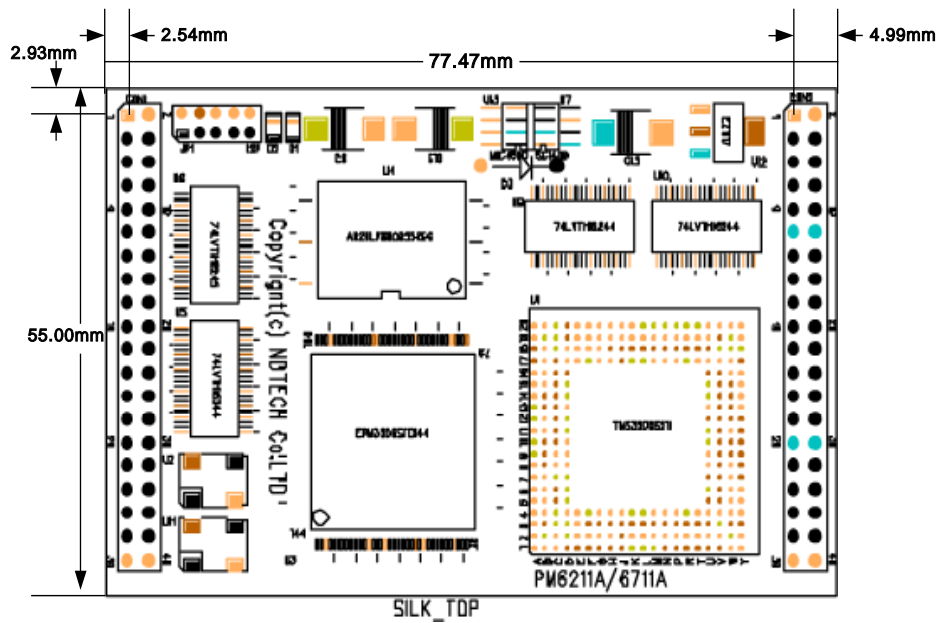
Address	Description
0x00000000 ~ 0x0005FFFF	Internal Program RAM
0x00060000 ~ 0x003FFFFFFF	Reserved
0x00400000 ~ 0x013FFFFFFF	SDRAM(16M Bytes)
0x01400000 ~ 0x015FFFFFFF	Flash Memory(1M Bytes)
0x01600000	User RS232 Control Register
0x01600004	User RS232 Data Register
0x01600008 ~ 0x016FFFFFFF	Reserved
0x01600000 ~ 0x017FFFFFFF	EMIF CE1
0x01800000 ~ 0x0183FFFF	EMIF Registers
0x01840000 ~ 0x0187FFFF	DMA Control Registers
0x01880000 ~ 0x018BFFFF	Expansion Bus Registers
0x018C0000 ~ 0x018FFFFFFF	McBSP 0 Registers
0x01900000 ~ 0x0193FFFF	McBSP 1 Registers
0x01940000 ~ 0x0197FFFF	Timer 0 Registers
0x01980000 ~ 0x019BFFFF	Timer 1 Registers
0x019C0000 ~ 0x019C01FF	Interrupt Selector Registers
0x019C0200 ~ 0x019CFFFF	Power Down Registers
0x01A00000 ~ 0x01A3FFFF	Reserved
0x01A40000 ~ 0x01A7FFFF	McBSP 2 Registers
0x01A80000 ~ 0x01FFFFFFF	Reserved
0x02000000 ~ 0x02FFFFFFF	EMIF CE2
0x03000000 ~ 0x03FFFFFFF	EMIF CE3
0x04000000 ~ 0x3FFFFFFF	Reserved
0x40000000 ~ 0x4FFFFFFF	Expansion Bus XCE0
0x50000000 ~ 0x5FFFFFFF	Expansion Bus XCE1
0x60000000 ~ 0x6FFFFFFF	Expansion Bus XCE2
0x70000000 ~ 0x7FFFFFFF	Expansion Bus XCE3
0x80000000 ~ 0x8007FFFF	Internal Data RAM
0x80080000 ~ 0xFFFFFFFF	Reserved

Table 11. PM6416 Memory Map

Address	Description
0x00000000 ~ 0x000FFFFFFF	Internal RAM
0x00100000 ~ 0x017FFFFFFF	Reserved
0x01800000 ~ 0x0183FFFF	EMIFA Registers
0x01840000 ~ 0x0187FFFF	L2 Control Registers
0x01880000 ~ 0x018BFFFF	HPI Control Registers
0x018C0000 ~ 0x018FFFFFFF	McBSP Port 0 Control Registers
0x01900000 ~ 0x0193FFFF	McBSP Port 1 Control Registers
0x01940000 ~ 0x0197FFFF	TIMER 0 Control Registers
0x01980000 ~ 0x019BFFFF	TIMER 1 Control Registers
0x019CFFFF ~ 0x019FFFFFFF	Interrupt Select Registers
0x01A00000 ~ 0x01A3FFFF	EDMA RAM and Registers
0x01A40000 ~ 0x01A7FFFF	McBSP Port 1 Control Registers
0x01A80000 ~ 0x01ABFFFF	EMIFB Registers
0x01AC0000 ~ 0x01AFFFFFFF	TIMER 2 Control Register
0x01B00000 ~ 0x01B3FFFF	GPIO Register
0x01B40000 ~ 0x01B7FFFF	UTOPIA Register
0x01B80000 ~ 0x01BFFFFFFF	Reserved
0x01C00000 ~ 0x01C3FFFF	PCI Register
0x01C40000 ~ 0x01FFFFFFF	Reserved
0x02000000 ~ 0x02000033	QDMA Register
0x02000034 ~ 0x2FFFFFFF	Reserved
0x30000000 ~ 0x33FFFFFFF	McBSP 0 Data
0x34000000 ~ 0x37FFFFFFF	McBSP 1 Data
0x38000000 ~ 0x3BFFFFFFF	McBSP 2 Data
0x3C000000 ~ 0x3FFFFFFF	UTOPIA Queues
0x40000000 ~ 0x5FFFFFFF	Reserved
0x60000000 ~ 0x63FFFFFFF	EMIFB CE0
0x64000000 ~ 0x64FFFFFFF	Flash Memory
0x68000000	USER RS232 Control Register
0x68000004	USER RS232 Data Register
0x68000008 ~ 0x68FFFFFFF	Reserved
0x6C000000 ~ 0x6FFFFFFF	EMIFB CE3
0x70000000 ~ 0x7FFFFFFF	Reserved
0x80000000 ~ 0x81FFFFFFF	SDRAM
0x82000000 ~ 0x8FFFFFFF	Reserved
0x90000000 ~ 0x9FFFFFFF	DSP STAR I/O or User Defined (CE1)
0xA0000000 ~ 0xAFFFFFFF	User Defined (CE2)
0xB0000000 ~ 0xBFFFFFFF	User Defined (CE3)
0xC0000000 ~ 0xFFFFFFFF	Reserved

Table 12. RS232 Register

Name	R/W	Data	Description
RS232C	W	D[3..0]	D[3] : Tx Interrupt D[2] : Rx Interrupt D[1..0] : Baud Rate 00 : 921600Bps 01 : 460800Bps 10 : 230400Bps 11 : 115200Bps(default)
	R	D[5..0]	D[5] : Tx Ready D[4] : Rx Ready D[3] : Tx Interrupt D[2] : Rx Interrupt D[1..0] : Baud Rate 00 : 921600Bps 01 : 460800Bps 10 : 230400Bps 11 : 115200Bps(default)
RS232D	W	D[7..0]	D[7..0] : Tx Data
	R	D[7..0]	D[7..0] : Rx Data



(a) Top View



(b) Side View

Figure 3. Physical Dimensions of DSP STAR PM