

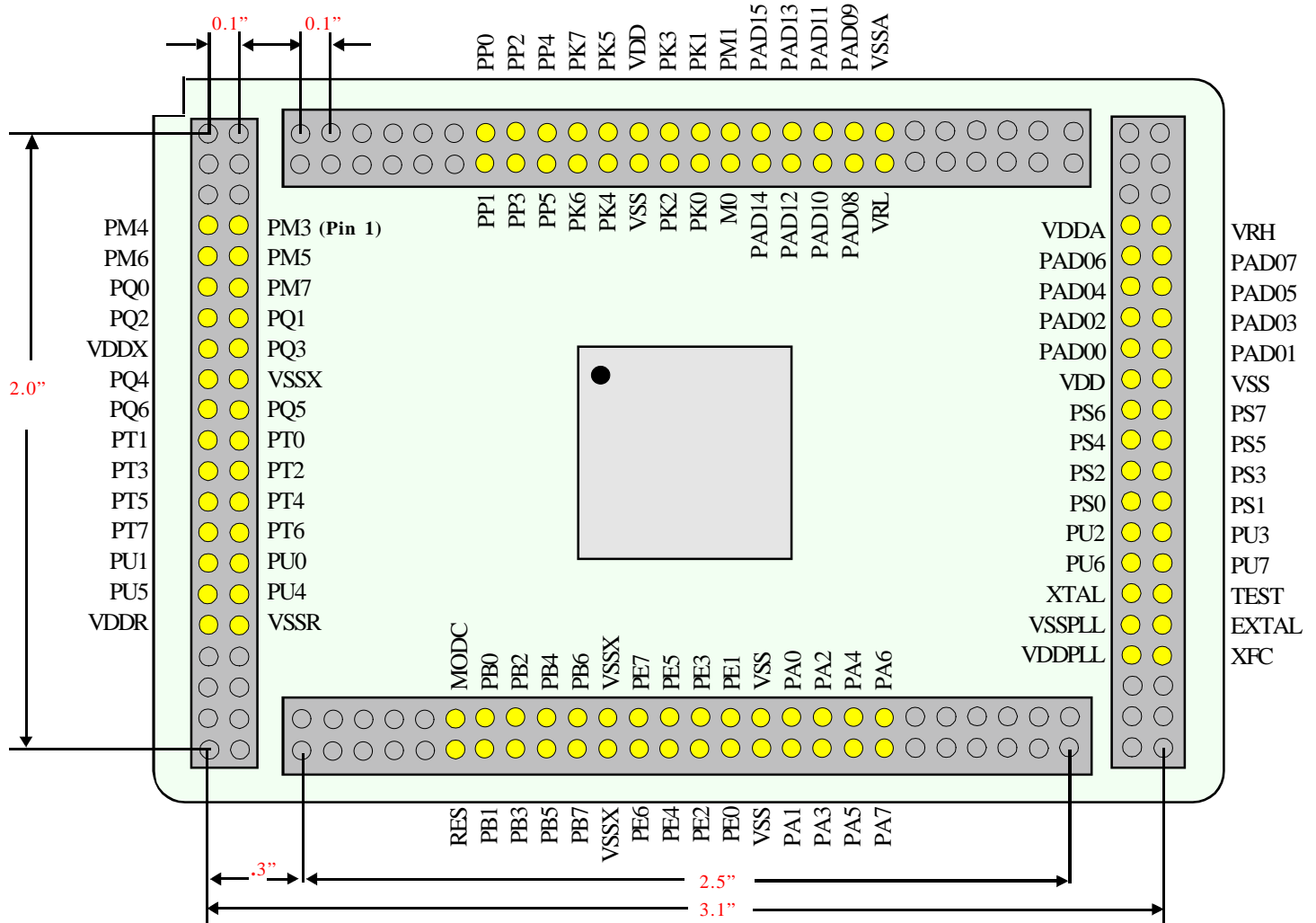
EMUL-S12E Family Layout

This is the top view looking down onto the target board or on top of the MC9S12E128 personality card.

Top View - EMUL-S12E128

Version 1.0

June 1, 2003



- 1) The grayed out pins are not connected. They are physically located on the bottom of the emulator board but are not used on the personality card. They are for future expansion.
- 2) The target microcontroller needs to be removed from the target since the HC12 family cannot tri-state.
- 3) The target adapters do not plug into the top of the emulator, they plug in on the bottom side.

Helpful measurements when laying out the board:

On the top side, the emulator expands 0.2".

On the bottom side, the emulator expands 4.3".

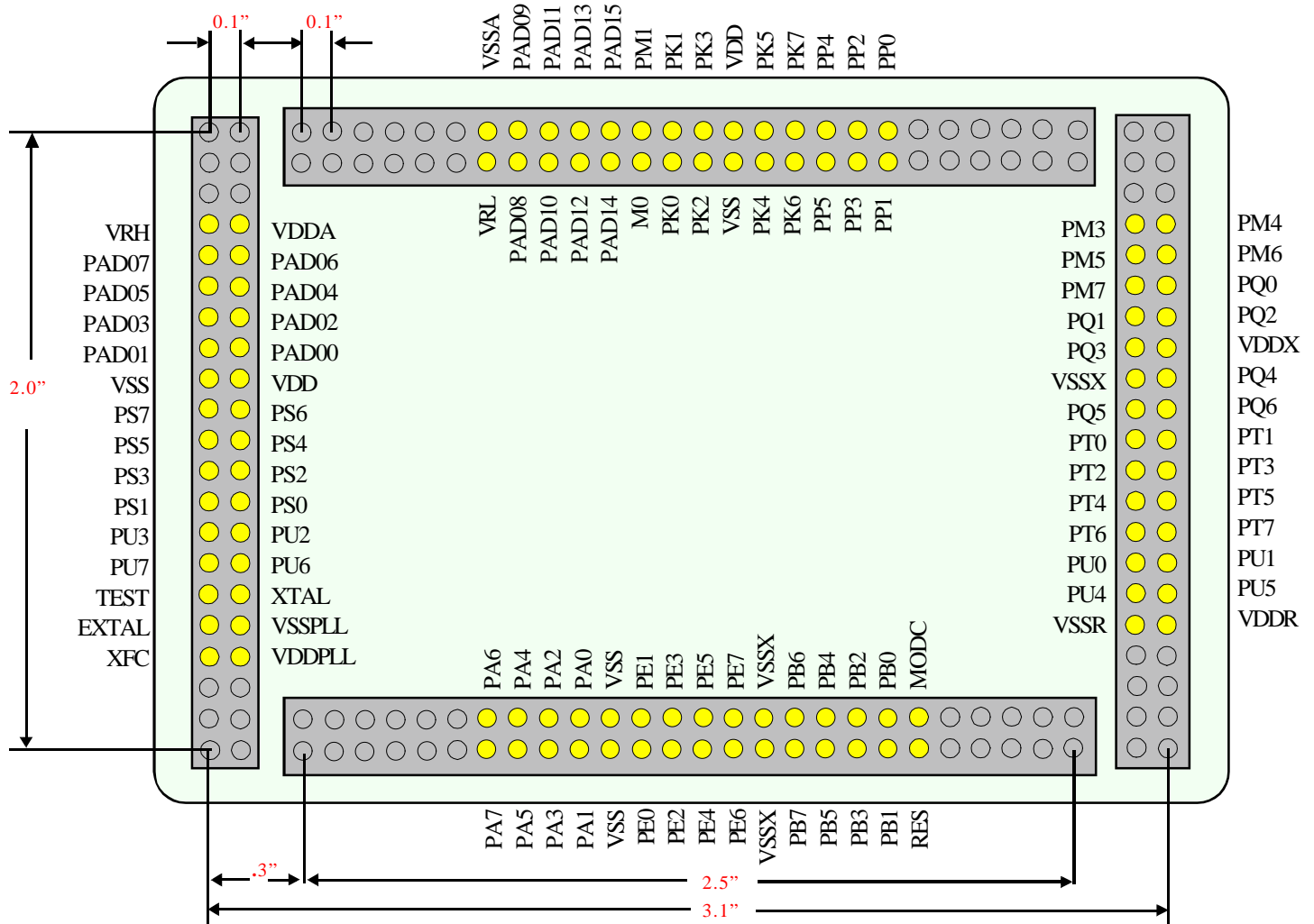
On the left side the emulator expands 0.3".

On the right side the emulator expands 0.6".

Bottom View - EMUL-S12E128

Version 1.0

June 1, 2003



- 1) The grayed out pins are not connected. They are physically located on the bottom of the emulator board but are not used on the personality card. They are for future expansion.
- 2) The target microcontroller needs to be removed from the target since the HC12 family cannot tri-state.
- 3) The target adapters do not plug into the top of the emulator, they plug in on the bottom side.

EMUL-S12E128 Family Pinouts

These are all the pin assignments for the S12E128 family with the alternate names, if applicable.

Version 1.0

June 1, 2003

Pin 1	PM3	Pin 53	LSTRB / TAGLO / PE3	Pin 106	PK7 / ECS / ROMONE
Pin 2	RXD2 / PM4	Pin 54	R / W / PE2	Pin 107	PP5 / PW05
Pin 3	TXD2 / PM5	Pin 55	IRQ / PE1	Pin 108	PP4 / PW04
Pin 4	SDA / PM6	Pin 56	XIRQ / PE0	Pin 109	PP3 / PW03
Pin 5	SCL / PM7	Pin 57	PS0 / RXD0	Pin 110	PP2 / PW02
Pin 6	FAULT0 / PQ0	Pin 58	PS1 / TXD0	Pin 111	PP1 / PW01
Pin 7	FAULT1 / PQ1	Pin 59	PS2 / RXD1	Pin 112	PP0 / PW00
Pin 8	FAULT2 / PQ2	Pin 60	PS3 / TXD1		
Pin 9	FAULT3 / PQ3	Pin 61	PS4 / MISO		
Pin 10	ADDR0 / DATA0 / PB0	Pin 62	PS5 / MOSI		
Pin 11	ADDR1 / DATA1 / PB1	Pin 63	PS6 / SCK		
Pin 12	ADDR2 / DATA2 / PB2	Pin 64	PS7 / SS		
Pin 13	ADDR3 / DATA3 / PB3	Pin 65	PA0 / ADDR8 / DATA8		
Pin 14	VDDX	Pin 66	PA1 / ADDR9 / DATA9		
Pin 15	VSSX	Pin 67	PA2 / ADDR10 / DATA10		
Pin 16	ADDR4 / DATA4 / PB4	Pin 68	PA3 / ADDR11 / DATA11		
Pin 17	ADDR5 / DATA5 / PB5	Pin 69	VDD2		
Pin 18	ADDR6 / DATA6 / PB6	Pin 70	VSS2		
Pin 19	ADDR7 / DATA7 / PB7	Pin 71	PA4 / ADDR12 / DATA12		
Pin 20	IS0 / PQ4	Pin 72	PA5 / ADDR13 / DATA13		
Pin 21	IS1 / PQ5	Pin 73	PA6 / ADDR14 / DATA14		
Pin 22	IS2 / PQ6	Pin 74	PA7 / ADDR15 / DATA15		
Pin 23	MODC / TAGHI / BKGD	Pin 75	PAD00 / AN00 / KWAD00		
Pin 24	IOC04 / PT0	Pin 76	PAD01 / AN01 / KWAD01		
Pin 25	IOC05 / PT1	Pin 77	PAD02 / AN02 / KWAD02		
Pin 26	IOC06 / PT2	Pin 78	PAD03 / AN03 / KWAD03		
Pin 27	IOC07 / PT3	Pin 79	PAD04 / AN04 / KWAD04		
Pin 28	IOC14 / PT4	Pin 80	PAD05 / AN05 / KWAD05		
Pin 29	IOC15 / PT5	Pin 81	PAD06 / AN06 / KWAD06		
Pin 30	IOC16 / PT6	Pin 82	PAD07 / AN07 / KWAD07		
Pin 31	IOC17 / PT7	Pin 83	VDDA		
Pin 32	PW10 / IOC24 / PU0	Pin 84	VRH		
Pin 33	PW11 / IOC25 / PU1	Pin 85	VRL		
Pin 34	PW14 / PU4	Pin 86	VSSA		
Pin 35	PW15 / PU5	Pin 87	PAD08 / AN08 / KWAD08		
Pin 36	XCLKS / NOACC / PE7	Pin 88	PAD09 / AN09 / KWAD09		
Pin 37	MODB / IPIPE1 / PE6	Pin 89	PAD10 / AN10 / KWAD10		
Pin 38	MODA / IPIPE0 / PE5	Pin 90	PAD11 / AN11 / KWAD11		
Pin 39	ECLK / PE4	Pin 91	PAD12 / AN12 / KWAD12		
Pin 40	VSSR	Pin 92	PAD13 / AN13 / KWAD13		
Pin 41	VDDR	Pin 93	PAD14 / AN14 / KWAD14		
Pin 42	RESET	Pin 94	PAD15 / AN15 / KWAD15		
Pin 43	VDDPLL	Pin 95	PM0 / DA0		
Pin 44	XFC	Pin 96	PM1 / DA1		
Pin 45	VSSPLL	Pin 97	PK0 / XADDR14		
Pin 46	EXTAL	Pin 98	PK1 / XADDR15		
Pin 47	XTAL	Pin 99	PK2 / XADDR16		
Pin 48	TEST	Pin 100	PK3 / XADDR17		
Pin 49	PU6	Pin 101	VSS1		
Pin 50	PU7	Pin 102	VDD1		
Pin 51	PW12 / IOC26 / PU2	Pin 103	PK4 / XADDR18		
Pin 52	PW13 / IOC27 / PU3	Pin 104	PK5 / XADDR19		
		Pin 105	PK6 / XCS		

Note: These pinouts are for the 112-pin version of the device. The pins shown in bold are not available on the 80-pin package.