



**Dedicated Pin Information for the MAX[®] II
EPM240 / EPM240G Devices
Version 1.2**

Dedicated Pin	100-Pin TQFP
IO/GCLK0	12
IO/GCLK1	14
IO/GCLK2	62
IO/GCLK3	64
IO/DEV_OE	43
IO/DEV_CLRn	44
TDI	23
TMS	22
TCK	24
TDO	25
GNDINT	11, 65
GNDIO	10, 32, 46, 60, 79, 93
VCCINT (1)	13, 63
VCCIO1 (2)	9, 31, 45
VCCIO2 (2)	59, 80, 94
No Connect (N.C.)	-
Total User I/O Pins	80

Notes:

1. For EPM240 devices, all VCCINT pins must be connected to either 3.3V or 2.5V (but not a combination of both). For EPM240G devices, all VCCINT pins must be connected to 1.8V.
2. Each set of VCCIO pins (VCCIO1 or VCCIO2) can be connected to 3.3V, 2.5V, 1.8V, or 1.5V.



I/O Pin Information for the MAX[®] II
EPM240 / EPM240G Devices
Version 1.2

Bank Number	Pad Number Orientation	Pin/Pad Function	Optional Function(s)	100-Pin TQFP
B1	0	IO		2
B1	1	IO		3
B1	2	IO		4
B1	3	IO		5
B1	4	IO		6
B1	5	IO		7
B1	6	IO		8
B1	7	VCCIO1		
B1	8	GNDIO		
	9	GNDINT		
B1	10	IO	GCLK0	12
	11	VCCINT		
B1	12	IO	GCLK1	14
B1	13	IO		15
B1	14	IO		16
B1	15	IO		17
B1	16	IO		18
B1	17	IO		19
B1	18	IO		20
B1	19	IO		21
B1	20	TMS		22
B1	21	TDI		23
B1	22	TCK		24
B1	23	N.C. (1)		
B1	24	TDO		25
B1	25	IO		26
B1	26	IO		27
B1	27	IO		28
B1	28	IO		29
B1	29	IO		30
B1	30	VCCIO1		
B1	31	GNDIO		
B1	32	IO		33
B1	33	IO		34
B1	34	IO		35
B1	35	IO		36
B1	36	IO		37
B1	37	IO		38
B1	38	IO		39
B1	39	IO		40
B1	40	IO		41
B1	41	IO		42
B1	42	IO	DEV_OE	43
B1	43	IO	DEV_CLRn	44
B1	44	VCCIO1		
B1	45	GNDIO		
B1	46	IO		47
B1	47	IO		48
B1	48	IO		49

B1	49	IO		50
B1	50	IO		51
B2	51	IO		52
B2	52	IO		53
B2	53	IO		54
B2	54	IO		55
B2	55	IO		56
B2	56	IO		57
B2	57	IO		58
B2	58	VCCIO2		
B2	59	GNDIO		
B2	60	IO		61
B2	61	IO	GCLK2	62
	62	VCCINT		
B2	63	IO	GCLK3	64
	64	GNDINT		
B2	65	IO		66
B2	66	IO		67
B2	67	IO		68
B2	68	IO		69
B2	69	IO		70
B2	70	IO		71
B2	71	IO		72
B2	72	IO		73
B2	73	IO		74
B2	74	IO		75
B2	75	IO		76
B2	76	IO		77
B2	77	IO		78
B2	78	GNDIO		
B2	79	VCCIO2		
B2	80	IO		81
B2	81	IO		82
B2	82	IO		83
B2	83	IO		84
B2	84	IO		85
B2	85	IO		86
B2	86	IO		87
B2	87	IO		88
B2	88	IO		89
B2	89	IO		90
B2	90	IO		91
B2	91	IO		92
B2	92	GNDIO		
B2	93	VCCIO2		
B2	94	IO		95
B2	95	IO		96
B2	96	IO		97
B2	97	IO		98
B2	98	IO		99
B2	99	IO		100
B2	100	IO		1

Note: 1. No Connect



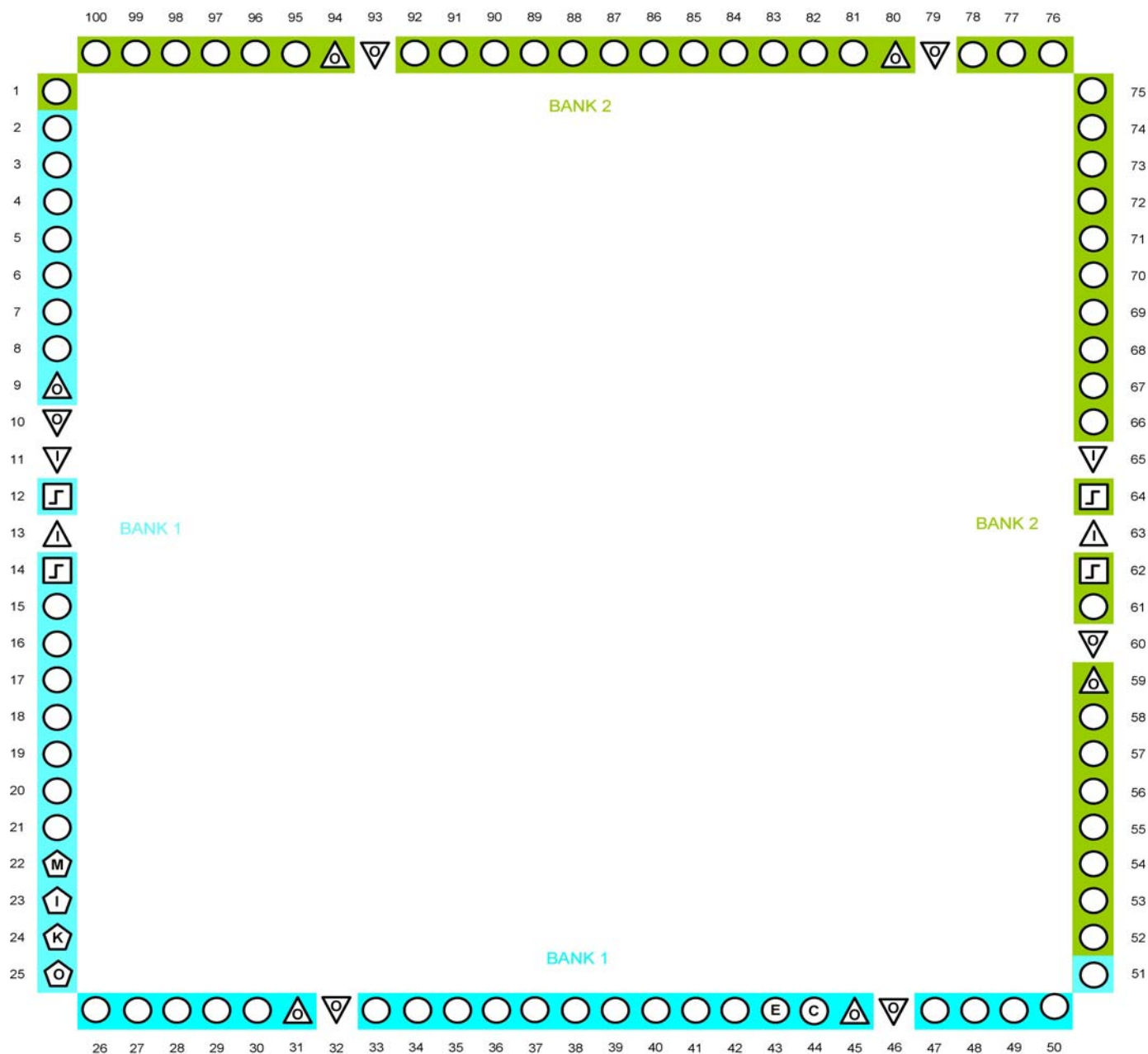
Pin Description Information for the MAX[®] II and MAX[®] IIG Devices
Version 1.2

Pin Name	Pin Type	Pin Description
Supply and Reference pins		
VCCIO[1..4]	Power	I/O supply voltage pins for banks 1 through 4 respectively. EPM2210 and EPM1270 use VCCIO[1..4] while EPM240 and EPM570 use VCCIO[1..2]. Each VCCIO bank supports a different voltage level with the VCCIO pins providing power for the input and output buffers within that particular I/O bank. Each VCCIO bank can be powered with either 3.3 V, 2.5 V, 1.8 V or 1.5 V.
GNDIO	Ground	Ground pins for all the I/O banks.
VCCINT	Power	Voltage supply pins for the device.
GNDINT	Ground	Ground pins for the internal supply.
Programming and JTAG pins		
DEV_CLRn	I/O	Dual-purpose pin that can override all clears on all device registers. All registers are cleared when the pin is driven low and all registers behave as defined in the design when this pin is driven high. If not used for its dual-purpose function this pin is a regular I/O.
DEV_OE	I/O	Dual-purpose pin that can override all tri-states on the device. All output pins are tristated when the pin is driven low and all output pins behave as defined in the design when this pin is driven high. If not used for its dual-purpose function this pin is a regular I/O.
TCK	Input	Dedicated JTAG input pin.
TDI	Input	Dedicated JTAG input pin.
TMS	Input	Dedicated JTAG input pin.
TDO	Output	Dedicated JTAG output pin.
Clock Pins		
GCLK [0..3]	I/O	Dual-purpose clock pins that connect to the global clock network. If not used for its dual-purpose function this pin is a regular I/O.



Package Diagram and Bank Information for the MAX[®] II
EPM240 / EPM240G Devices
Version 1.2

Figure 1. MAX II EPM240 / EPM240G T100 Device Top View Package Diagram and Bank Information



USER I/O PINS	DEDICATED PINS	POWER / GROUND PINS
○ USER IOs	⌚ GCLK	△ VCCINT
⊖ DUAL PURPOSE PINS	⬠ TDI	△ VCCIO
ⓔ DEV_OE	⬠ TCK	▽ GNDINT
Ⓢ DEV_CLRn	⬠ TMS	▽ GNDIO
× NO CONNECT	⬠ TDO	



Pin Information for the MAX[®] II EPM240 / EPM240G Devices
Revision History
Version 1.2

The table below shows the revision history

Date/Version	Changes Made
January 2005, v1.2	Added MAX IIG Device Naming to Titles, Notes, and Figures
July 2004, v1.1	Added Package Diagram and Bank Information Figures for Each Package
May 2004, v1.0	Initial Release