

Pin Name (1)	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA	484-Pin FineLine BGA
MSEL0 (2)	77	108	P1	U4
MSEL1 (2)	76	107	R1	V4
nSTATUS (2)	35	52	T16	W19
nCONFIG (2)	74	105	N4	T7
DCLK (2)	107	155	B2	E5
CONF_DONE (2)	2	2	C15	F18
INIT_DONE (3)	14	19	G16	K19
nCE (2)	106	154	B1	E4
nCEO (2)	3	3	B16	E19
nWS (4)	142	206	B14	E17
nRS (4)	141	204	C14	F17
nCS (4)	144	208	A16	D19
CS (4)	143	207	A15	D18
RDYnBUSY (4)	11	16	G14	K17
CLKUSR (4)	7	10	D15	G18
DATA7 (4)	116	166	B5	E8
DATA6 (4)	114	164	D4	G7
DATA5 (4)	113	162	A4	D7
DATA4 (4)	112	161	B4	E7
DATA3 (4)	111	159	C3	F6
DATA2 (4)	110	158	A2	D5
DATA1 (4)	109	157	B3	E6
DATA0 (2), (5)	108	156	A1	D4
TDI (2)	105	153	C2	F5
TDO (2)	4	4	C16	F19
TCK (2)	1	1	B15	E18
TMS (2)	34	50	P15	U18
TRST (2)	(6)	51	R16	V19
Dedicated Inputs	54, 56, 124, 126	78, 80, 182, 184	B9, E8, M9, R8	E12, H11, R12, V11
Dedicated Clock Pins	55, 125	79, 183	A9, L8	D12, P11
GCLK1 (7)	55	79	L8	P11
Lock (8)	42	62	P12	U15
DEV_CLRn (3)	122	180	D8	G11
DEV_OE (3)	128	186	C9	F12
VCCINT (2.5 V)	6, 25, 52, 75, 93, 123	6, 23, 35, 43, 76, 106, 109, 117, 137, 145, 181	E11, F5, F7, F9, F12, H6, H7, H10, J7, J10, J11, K9, L5, L7, L12, M11, R2	C11, C15, H14, J8, J10, J12, J15, L9, L10, L13, M10, M13, M14, N12, P8, P10, P15, R14, V5, W21, Y8, AA12
VCCIO (2.5 or 3.3 V)	5, 24, 45, 61, 71, 94, 115, 134	5, 22, 34, 42, 66, 84, 98, 110, 118, 138, 146, 165, 178, 194	D12, E6, F8, F10, G6, G8, G11, H11, J6, K6, K8, K11, L10, M6, N12	A6, A13, B5, E1, G1, G15, H9, H20, J11, J13, K9, K11, K14, K20, L14, M9, N3, N9, N11, N14, N20, P13, R1, R9, T3, T15, T22, V22, AB13
VCC_CKCLK (9)	53	77	L9	P12

Pin Name (1)	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA	484-Pin FineLine BGA
GNDINT (11)	15, 16, 40, 50, 58, 66, 84, 85, 103, 104, 127, 129, 139	20, 21, 32, 33, 48, 49, 59, 72, 82, 91, 123, 124, 129, 130, 151, 152, 171, 185, 188, 201	E5, E12, F6, F11, G7, G9, G10, H8, H9, J8, J9, K7, K10, L6, L11, M5, M12	A1, A8, A22, B1, B2, B17, B21, B22, C2, C21, E21, G3, G21, H2, H8, H15, J9, J14, J20, K3, K10, K12, K13, L11, L12, M11, M12, M20, N10, N13, P9, P14, R8, R15, R22, T1, V3, W20, Y1, Y2, Y3, Y21, Y22, AA1, AA6, AA22, AB11, AB16
GNDIO	–	–	–	–
GND_CCLK (9)	57	81	T8	W11
No Connect	–	–	D1, E3, E16, G3, H1, H16, J1, K3, K14, K16, L2, L4, M14, M16, N15	A2, A3, A4, A5, A7, A9, A11, A12, A14, A15, A20, A21, B3, B4, B9, B10, B12, B16, B19, B20, C1, C6, C9, C10, C12, C13, C14, C16, C17, C22, D1, D2, D3, D20, D21, D22, E2, E3, E20, E22, F1, F2, F3, F20, F21, F22, G2, G4, G20, G22, H1, H3, H6, H19, H21, H22, J1, J2, J3, J21, J22, K1, K2, K6, K21, K22, L1, L2, L3, L4, L19, L20, L21, L22, M1, M2, M3, M4, M21, M22, N1, N2, N21, N22, N6, N17, N19, P1, P2, P3, P5, P7, P20, P21, P22, R2, R3, R17, R19, R20, R21, T2, T18, T20, T21, U1, U2, U3, U20, U21, U22, V1, V2, V20, V21, W1, W2, W22, Y4, Y9, Y12, Y13, Y16, Y19, Y20, AA2, AA3, AA4, AA9, AA11, AA13, AA15, AA21, AB1, AB2, AB3, AB4, AB5, AB7, AB8, AB9, AB12, AB15, AB17, AB18, AB19, AB20, AB21, AB22
Total User I/O Pins (10)	102	147	176	220

Notes:

- (1) All pins that are not listed are user I/O pins.
- (2) This pin is a dedicated pin; it is not available as a user I/O pin.
- (3) This pin can be used as a user I/O pin if it is not used for its device-wide or configuration function.
- (4) This pin can be used as a user I/O pin after configuration.
- (5) This pin is tri-stated in user mode.
- (6) The optional JTAG pin TRST is not used in the 144-pin TQFP package.
- (7) This pin drives the ClockLock and ClockBoost circuitry.
- (8) This pin shows the status of the ClockLock and ClockBoost circuitry. When the ClockLock and ClockBoost circuitry is locked to the incoming clock and generates an internal clock, LOCK is driven high. LOCK remains high if a periodic clock stops clocking. The LOCK function is optional; if the LOCK output is not used, this pin is a user I/O pin.
- (9) This pin is the power or ground for the ClockLock and ClockBoost circuitry. To ensure noise resistance, the power and ground supply to the Clock Lock and Clock Boost circuitry should be isolated from the power and ground to the rest of the device. If the ClockLock or ClockBoost circuitry is not used, this power or ground pin should be connected to VCCINT or GNDINT, respectively.
- (10) The user I/O pin count includes dedicated inputs, dedicated clock inputs, and all I/O pins.
- (11) The Quartus II software lists some GNDINT pins as GND. The MAX+PLUS II software lists all of these pins (GNDIO, GNDINT, and GND pins) as GND pins. All of these pins can be connected to a single GND plane.

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