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Programming Adapters

The adapters that should be used with the Altera Programming Unit (APU) or the PL-ASAP2/PL-MPU programmer to program Altera® devices are listed in Table 1.

Table 1. Altera Programming Adapters

Device	Package	Adapter
EPC1064 *(2)* **EPC1064V** *(2)* **EPC1441** *(3)*	PDIP *(7)* (8-pin) J-lead (20-pin) TQFP *(8)* (32-pin)	PLMJ1213 PLMT1064
EPC1 *(3)* **EPC1213** *(2)*	PPDIP (8-pin) J-lead (20-pin)	PLMJ1213
EPC2 *(4)*	J-lead (20-pin) TQFP (32-pin)	PLMJ1213 PLMT1064
EPC4 *(4)* **EPC8** *(4)* **EPC16** *(4)*	Ultra FineLine BGA™ *(9)* (88-pin) PQFP (100-pin)	PLMUEPC-88 PLMQEPC-100
EPCS1 *(5)* **EPCS4** *(5)*	SOIC *(10)* (8-pin)	PLMSEPC-8
EPM9320	J-lead (84-pin) RQFP *(11)* (208-pin) PGA *(12)* (280-pin)	PLMJ9320-84 PLMR9000-208 PLMG9000-280
EPM9320A	J-lead (84-pin) RQFP (208-pin)	PLMJ9320-84 PLMR9000-208NC *(6)*
EPM9400	J-lead (84-pin) RQFP (208-pin) RQFP (240-pin)	PLMJ9400-84 PLMR9000-208 PLMR9000-240
EPM9480	RQFP (208-pin) RQFP (240-pin)	PLMR9000-208 PLMR9000-240
EPM9560	RQFP (208-pin) RQFP (240-pin) PGA (280-pin) RQFP (304-pin)	PLMR9000-208 PLMR9000-240 PLMG9000-280 PLMR9000-304
EPM9560A	RQFP (208-pin) RQFP (240-pin)	PLMR9000-208NC *(6)* PLMR9000-240NC *(6)*
EPM7032	J-lead (44-pin) PQFP (44-pin) TQFP (44-pin)	PLMJ7000-44 PLMQ7000-44 PLMT7000-44
EPM7032S **EPM7032AE** **EPM7032B**	J-lead (44-pin) TQFP (44-pin)	PLMJ7000-44 PLMT7000-44
EPM7064	J-lead (44-pin) TQFP (44-pin) J-lead (68-pin) J-lead (84-pin) PQFP *(13)* (100-pin)	PLMJ7000-44 PLMT7000-44 PLMJ7000-68 PLMJ7000-84 PLMQ7000-100
EPM7064S	J-lead (44-pin) TQFP (44-pin) J-lead (84-pin) TQFP (100-pin)	PLMJ7000-44 PLMT7000-44 PLMJ7000-84 PLMT7000-100NC *(6)*
EPM7064AE **EPM7064B**	J-lead (44-pin) TQFP (44-pin) TQFP (100-pin) FineLine BGA (100-pin)	PLMJ7000-44 PLMT7000-44 PLMT7000-100NC *(6)* PLMF7000-100
EPM7096	J-lead (68-pin) J-lead (84-pin) PQFP (100-pin)	PLMJ7000-68 PLMJ7000-84 PLMQ7000-100
EPM7128E	J-lead (84-pin) PQFP (100-pin) PQFP (160-pin)	PLMJ7000-84 PLMQ7000-100 PLMQ7128/7160-160
EPM7128A **EPM7128AE** **EPM7128B** **EPM7128S**	J-lead (84-pin) PQFP (100-pin) TQFP (100-pin) TQFP (144-pin) PQFP (160-pin) FineLine BGA (100-pin) FineLine BGA (256-pin)	PLMJ7000-84 PLMQ7000-100NC *(6)* PLMT7000-100NC *(6)* PLMT7000-144NC *(6)* PLMQ77128/7160-160NC *(6)* PLMF7000-100 PLMF7000-256
EPM7160E	J-lead (84-pin) PQFP (100-pin) PQFP (160-pin)	PLMJ7000-84 PLMQ7000-100 PLMQ7128/7160-160
EPM7160S	J-lead (84-pin) PQFP (100-pin) PQFP (160-pin)	PLMJ7000-84 PLMQ7000-100NC *(6)* PLMQ7128/7160-160NC *(6)*
EPM7192E	PGA (160-pin) PQFP (160-pin)	PLMG7192-160 PLMQ7192/7256-160
EPM7192S	PQFP (160-pin)	PLMQ7192/256-160NC *(6)*
EPM7256E	PQFP (160-pin) PGA (192-pin) PQFP (208-pin) RQFP (208-pin)	PLMQ7192/7256-160 PLMG7256-192 PLMR7256-208 PLMR7256-208
EPM7256A **EPM7256S** **EPM7256AE** **EPM7256B**	TQFP (100-pin) TQFP (144-pin) PQFP (208-pin) RQFP (208-pin) FineLine BGA (100-pin) FineLine BGA (256-pin)	PLMT7000-100NC *(6)* PLMT7000-144NC *(6)* PLMR7256-208NC *(6)* PLMT7256-208NC *(6)* PLMF7000-100 PLMF7000-256
EPM7512AE **EPM7512B**	TQFP (144-pin) PQFP (208-pin) BGA (256-pin) FineLine BGA (256-pin)	PLMT7000-144NC *(6)* PLMR7256-208NC *(6)* PLMB7000-256 PLMF7000-256
EPM3032A	J-lead (44-pin) TQFP (44-pin)	PLMJ3000-44 PLMT3000-44
EPM3064A	J-lead (44-pin) TQFP (44-pin) TQFP (100-pin)	PLMJ3000-44 PLMT3000-44 PLMT3000-100NC *(6)*
EPM3128A	TQFP (100-pin) TQFP (144-pin)	PLMT3000-100NC *(6)* PLMT3000-144NC *(6)*
EPM3256A	TQFP (144-pin) PQFP (208-pin)	PLMT3000-144NC *(6)* PLMQ3256-208NC *(6)*

Notes to Table 1:

1. Refer to the *Altera Programming Hardware Data Sheet* for device adapter information on Classic™ devices.
2. FLEX® 8000 configuration device.
3. FLEX 10K®, FLEX 8000, or FLEX 6000 configuration devices.
4. Stratix™, Mercury™, APEX™ II, APEX 20K, FLEX 10K, ACEX® 1K configuration devices or the Excalibur™ embedded processor.
5. Cyclone configuration device
6. These devices are not shipped in carriers.
7. PDIP = plastic dual in-line package
8. TQFP = thin quad flat pack
9. BGA = ball-grid array
10. SOIC = small-outline integrated circuit
11. RQFP = power quad flat pack
12. PGA = pin-grid array
13. PQFP = plastic quad flat pack

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