

# PA7032-QFP(-16 or -06T) Data Sheet

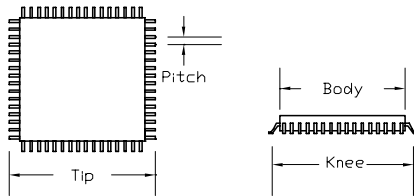
44 pin QFP or TQFP socket/40 pin DIP 0.6" plug

## Supported Device/Footprints

This adapter allows programming of the Altera 7032 in a QFP package using one of several 40 pin DIP programmers.

Mfgr	Device	Package	Footprint
Altera	EPM7032xQxx44	PQFP or TQFP	40 Pin DIP (see programmer instructions)

The QFP socket accepts packages with the dimensions listed below:



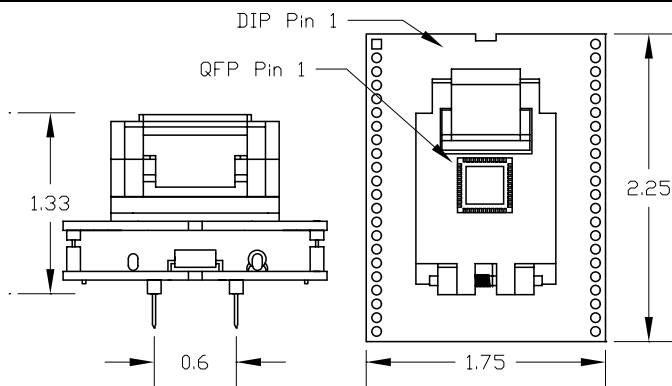
Socket	Body	Knee	Tip	Pitch
<b>44QF-16 PQFP</b>	10.0 mm typ	11.6 mm typ	13.2 mm typ	0.8 mm
<b>44QF-06T TQFP</b>	10.0 mm typ	11 mm typ 11.6 mm max	12 mm typ 13.2 mm max	0.8 mm

## Supported Programmers

The following programmers are known to work, or not work with this adapter.

Manufacturer	Models	Compatible
Advantech	PC-UPPROG	Yes
B&C Microsystems	Proteus UP40 & UP56	Yes
BP Microsystems	All models	No
EE Tools	Allmax	Yes
Logical Devices	ChipMaster 3000	Yes
Systems General	Turpro-(-FX)	Yes

## Adapter Dimensions



**44QF-06T Socket Shown**

## Adapter Parts & Part Numbers

The following chart shows the various socket and board part numbers that make up these adapters.

Adapter	Socket	Top Board	Bottom Board
<b>PA7032-QD-16</b>	44QF-16	44QFP-16	AL7032
<b>PA7032-QD-06T</b>	44QF-06T	44QFP-6T	AL7032

## Adapter Construction

The adapter is made up of 3 sub-assemblies. They assemble via connectors making the adapter modular. This way the sub-assemblies can be replaced when they wear out.

When disassembling the adapter take care not to bend the pins. When reassembling the adapter note the pin 1 indicators to align the parts correctly.

### Test Socket

QFP test socket:

Enplas Part #: FPQ-44-0.8-06T

LSC Part #: 44QF-06T

Enplas Part #: FPQ-44-0.8-16

LSC Part #: 44QF-16

### 44QFP-6T or 44QFP -16

Accepts the test socket and connects to the bottom board.

### AL7032

Performs the wiring shown in the Adapter Wiring section.

## Adapter Wiring

The following chart shows the connections from the QFP device to the adapter's DIP plug.

DEVICE	PLUG	PLUG	DEVICE
1	7	-	44*
2	8	5	43
3*	-	28/J2	42
4	20	40	41
5*	-	2	40
6*	-	1	39
7	13	25	38
8*	-	30/J1	37
9	40	20	36
10	16	27	35
11*	-	29	34
12	18	39	33
13	19	38	32
14*	-	37	31
15	21	36	30
16	20	40	29
17	40	34	28
18	24	33	27
19*	-	32	26
20	26	-	25*
21*	-	20	24
22*	-	-	23*

\* Indicates pulled to ground via a 10K resistor.

VCC to GND .1uf bypass

SK + SCK signals (PGMR pins 30 +28) are buffered with 74HC14's. These buffers may be bypassed using J1 + J2.



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