

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

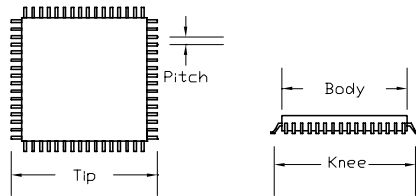
44 pin QFP or TQFP socket/40 pin DIP 0.6" plug

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:



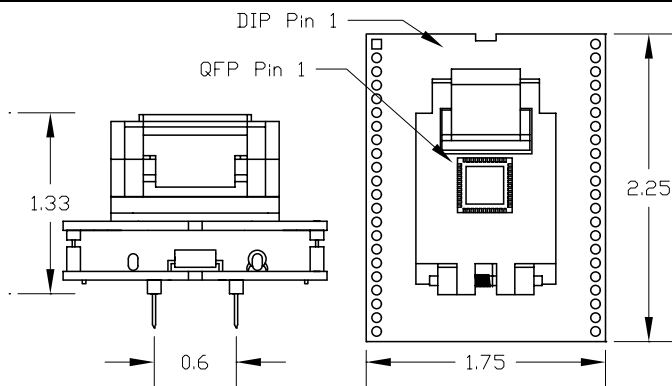
| Socket | Body | Knee | Tip | Pitch |
|----------------------|-------------|--------------------------|--------------------------|--------|
| 44QF-16 PQFP | 10.0 mm typ | 11.6 mm typ | 13.2 mm typ | 0.8 mm |
| 44QF-06T TQFP | 10.0 mm typ | 11 mm typ 11.6 mm max | 12 mm typ 13.2 mm max | 0.8 mm |

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 |
|----------------------|----------|-----------|--------------|
| PA7032-QD-16 | 44QF-16 | 44QFP-16 | AL7032 |
| PA7032-QD-06T | 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.

LOGICAL

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