
Adapters

QFP144 TET

Target CPU package: QFP144
Body size: 20 mm x 20 mm
Pitch: 0.5 mm
POD target layout: T_QFP144

Can be used with:

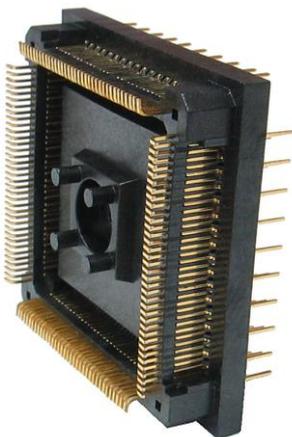
- MPC5604P Active GT POD
- MPC5604B Active GT POD
- MPC564xL Active GT POD
- SPC56AP Active GT POD
- MC9S12XDP512 Active PRO/GT POD
- MC9S12XFR128 Active PRO/GT POD
- MC9S12XEP100 Active PRO/GT POD
- MC9S12XF512 Active PRO/GT POD
- MC9S12XHZ512 Active PRO/GT POD
- MC9S12H256 Active POD
- NEC V850ES/Fx3 Active PRO/GT POD
- NEC V850ES/Sx2 Active PRO POD
- NEC V850ES/Fx2 Active PRO POD
- TMS470Pxx Standard Active PRO POD
- TMS470R1VB8x SE4 Active PRO POD
- TMS470R1VB8 Standard Active PRO POD
- TMS470R1VB8 I/O Extended Active PRO POD

This adapter is used when the target CPU in a QFP144 package (size 20mm x 20 mm) is being emulated.

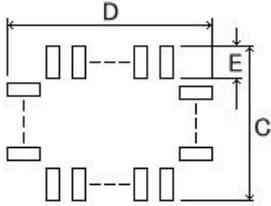
Described adapter parts can be used only with listed PODs. Disregarding this warning may result in hardware failure of the emulation system and the target.

► Required Adapter Parts (by ordering code):

- **IA144TQ-SOLDER**

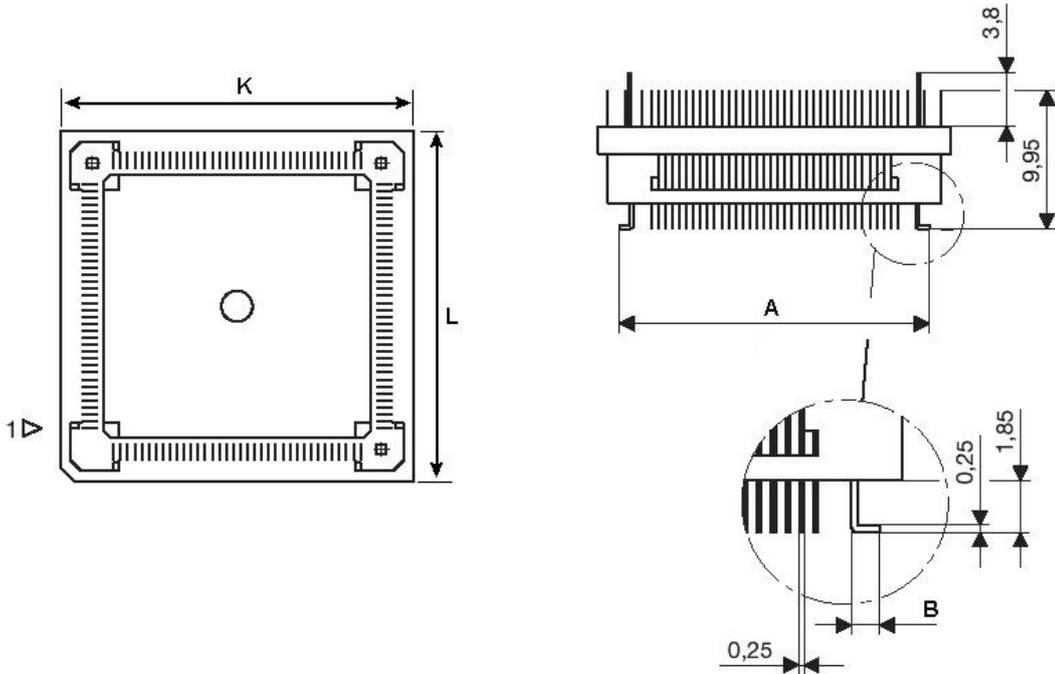


Solder part, which is soldered down to the target.



(Unit: mm)						
A	B	C	D	E	K	L
22	1.125	23.0	23.0	2.15	25.05	25.05

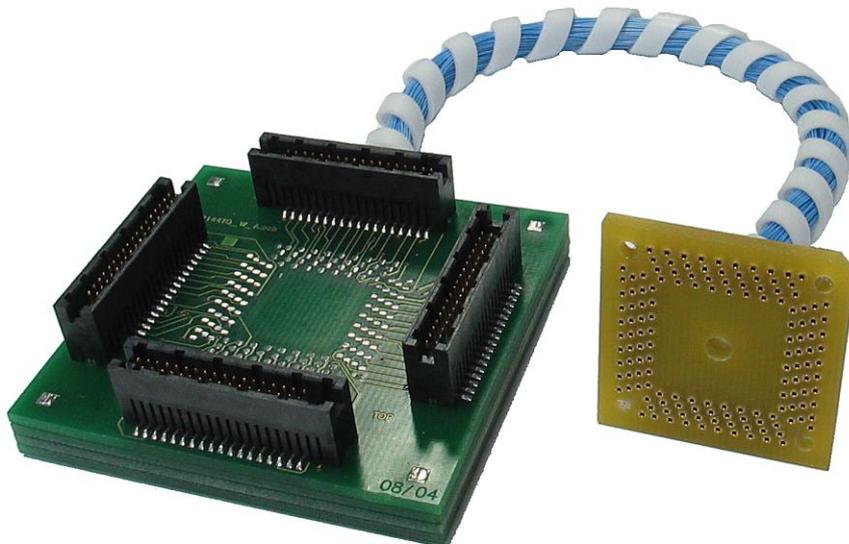
Recommended (by TET) PCB footprint size



IA144TQ-SOLDER dimensions

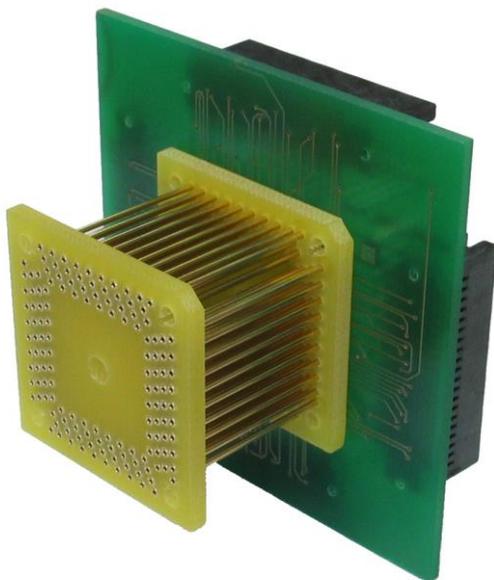
- **IA144P144TQ-W**

Don't use IA144P144TQ-W with MC9S12XDP512, MC9S12XFR or MC9S12XE Active PRO POD when emulating expanded mode. Use IA144TQEX-FIXED instead. The CPU has very tight timings and long adapter lines could result in incorrect or unreliable emulation. No problems are expected with IA144P144TQ-W when emulating single chip mode.



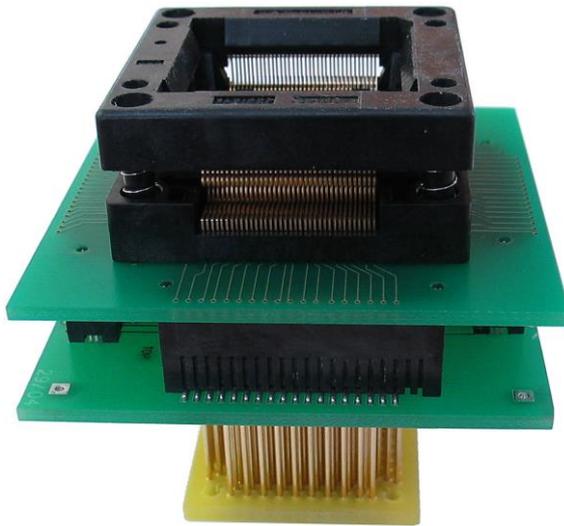
The IA144P144TQ-W represents flexible connection between the POD and the target.

IA144TQEX-FIXED



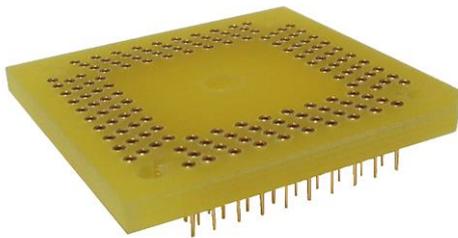
The IA144TQEX-FIXED represents fixed connection between the POD and the target.

- **IA144TQ-CPU**



The IA144TQ-CPU is used to connect the CPU directly to the target.

- **IA144TQ-EXT**



The IA144TQEXT is a 3 mm extension. It can be used to prolong the IA144TQEX-FIXED or as a “socket saver” to protect the more expensive IA144TQ-SOLDER part which may be damaged due to the carelessness when connecting/disconnecting the POD from the IA144TQ-SOLDER part.

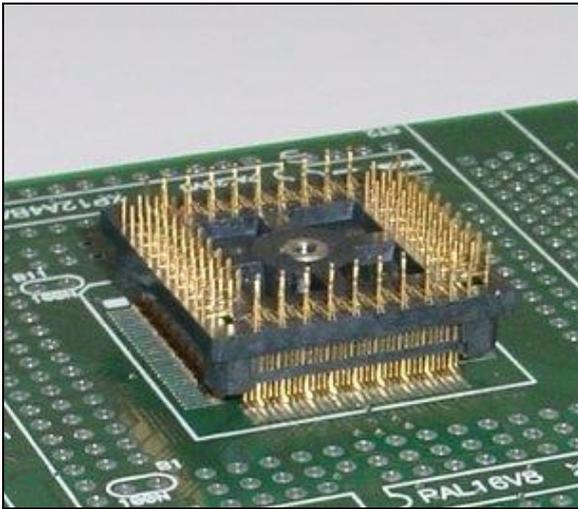
Flexible Adapter

The IA144P144TQ-W and the IA144TQ-SOLDER are essential parts required to adapt the POD to the target QFP144 package. First, the IA144TQ-SOLDER is soldered to the target and then the POD is connected via the IA144P144TQ-W

► Assembly

Pay attention to pin 1 while assembling the adapter and connecting the POD to the target. Improper use of the adapter or even incorrect adapter used with your particular POD can damage the emulation system and the target.

Step 1: Solder the IA144TQ-SOLDER to the target PCB.



Step 2: Connect the IA144P144TQ-W to the POD.



Step 3: Connect the POD via IA144P144TQ-W to the target.



Precaution must be taken after the POD is connected to the target. Adapter parts may break due to the user carelessness.

Fixed Adapter

The IA144TQEX-FIXED and the IA144TQ-SOLDER are essential parts required to adapt the POD to the target QFP144 package. First, the IA144TQ-SOLDER is soldered to the target and then the POD is connected via the IA144TQEX-FIXED.

► Assembly

While assembling the adapter and connecting the POD to the target, pay attention to pin 1 to prevent any damages of the hardware, which may result from incorrect assembly.

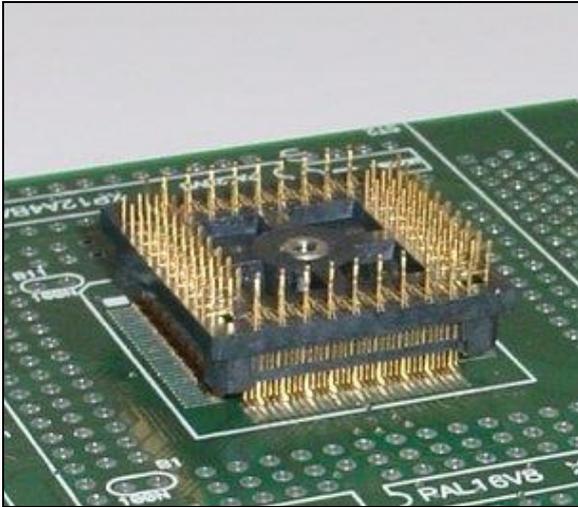
1. First, connect IA144TQEX-FIXED to the POD.
2. Next, solder down the IA144TQ-SOLDER to the target PCB
3. Finally, connect the POD to the soldered IA144TQ-SOLDER.

Precaution must be taken after the POD is connected to the target. Adapter parts may break due to the user carelessness.

Connecting the CPU directly to the target

The CPU can be connected directly to the target using the IA144TQ-SOLDER in combination with the IA144TQ-CPU. This solution is very suitable for an ultimate test.

Step 1: Solder the IA144TQ-SOLDER to the target PCB.



Step 2: Insert the CPU into the IA144TQ-CPU, which then connects to the IA144TQ-SOLDER. IA144TQ-EXT can be additionally used as a “socket saver” for the IA144TQ-SOLDER.

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