



TEAclipper / TEAleaf Eval Board™

Evaluation board for TEAclipper and TEAleaf devices

Summary

This evaluation board contains the requisite components to quickly patch together a circuit for evaluation and product development using the TEAclipper programming clips and TEAleaf protection keys.

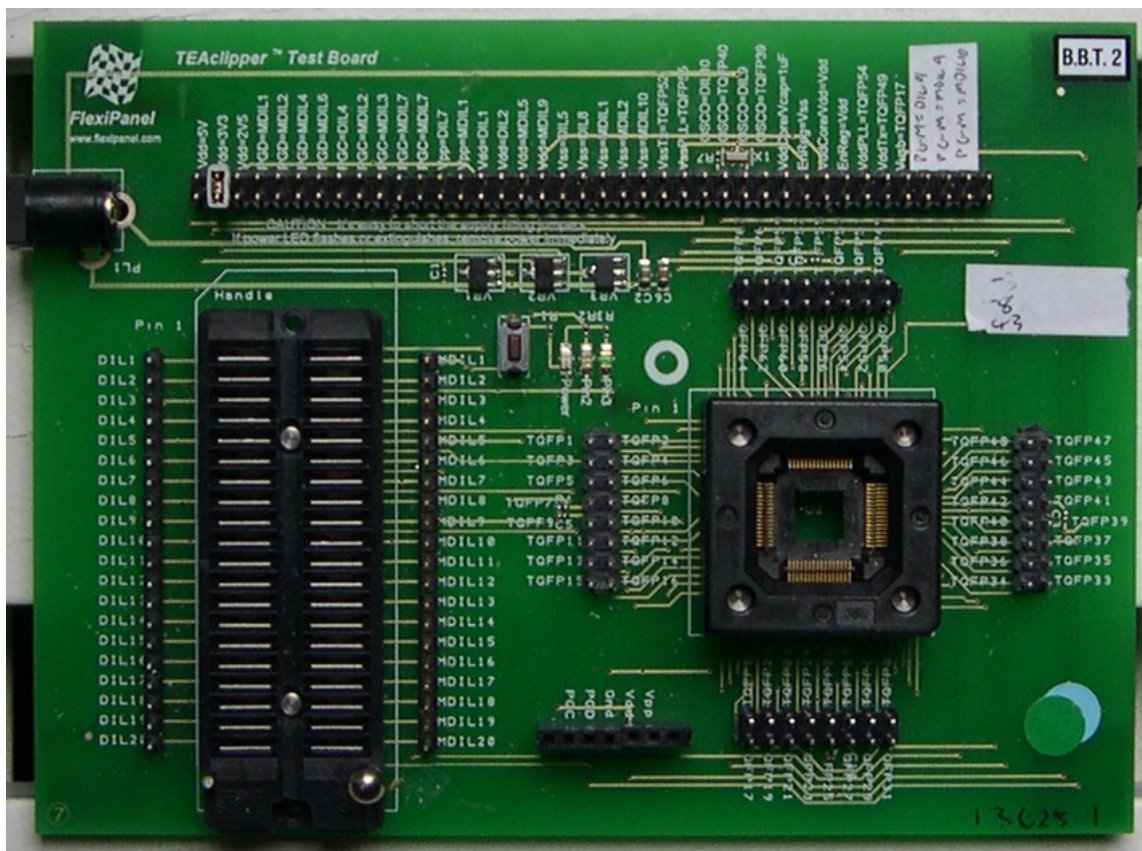
The board is compatible with the evaluation files available from www.HexWax.com.

Applications

- TEAclipper evaluation and product development
- TEAleaf evaluation and product development

Features

- 40-pin DIL socket for microcontrollers
- Additional 64-pin TQFP socket (self-install option)
- TEAclipper programming connector
- TEAclipper lean-against connector
- TEAleaf SOT-23 on board
- ICD2 program & debug socket
- 5V, 3V3 and 2V5 power regulators
- Pushbutton and switch with pullup / pulldown
- Four user LEDs
- Pushbutton and switch with pullup / pulldown



Ordering Information

Part No	Description
EVAL-TEA	TEAclipper / TEAleaf Evaluation Board



FlexiPanel Ltd
 2 Marshall St, 3rd Floor
 London W1F 9BB, UK
www.flexipanel.com
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Manufactured to ISO9001:2000



Patching and Prototyping

In view of the large number of potential permutations of connections for this board, a large area of the board is comprised of patch sockets. Breadboard-type prototyping wires may be used to patching circuit elements together. For more complex circuits, prototyping breadboards may be abutted to the top of the evaluation board.

ZIF sockets

The ZIF socket pins each connect to a pair of patch pins directly above the socket. Pin 1 of the integration should be aligned with the Pin 1 marking on the PCB in order for the patch markings to read correctly.

The 64-pin ZIF socket is not supplied in view the high cost of fitting it when only a proportion of customers need it. Customers will need to purchase the following parts and install them in order to use the socket:

- 1 x Wells CTI 7010-064-x-08 64-pin TQFP DIL socket (Farnell part number 1337654)
- 8 x Harwin M20-7830846 Socket 0.1" PCB 8+8 way (Farnell part number 7992017)

TEAclipper, TEAleaf & ICD2

TEAclippers may be inserted to the TEAclipper SKT socket or leaned against the TEAclipper PTH plate-through holes. The *Vss* pin connects directly to ground. The other pins connect to the *Vdd*, *PGD*, *PGD* and *Vpp* patch sockets respectively.

A TEAleaf PIC10F202-OT component is fitted. The *NRST* pin connects to a 47K pullup and the *NRST* patch socket. The *Dat* pin connects to the *Dat* patch socket. The *Vss* pin connects directly to ground. The other pins connect to the same *Vdd*, *PGD* and *PGD* patch sockets as the TEAclipper. In normal use *NRST* is left pulled up. To program the TEAleaf using a TEAclipper, connect *NRST* to *Vpp*.

The ICD2 may be used to connect to an ICD2 in-circuit debugger from Microchip Technology. The *Vss* pin connects directly to ground. The other pins connect to the same *Vdd*, *PGD*, *PGD* and *Vpp* patch sockets as the TEAclipper.

Power Supply

Unregulated 6V – 9V DC power should be applied to the center positive 2.5mm DC power socket. On-board power switch and indicator are provided.

The power regulators supply 5V, 3.3V and 2.5V. The 5V regulator is rated at 400mA. The 3.3V and 2.5V regulators are supplied from the 5V source and are rated at 250mA each.

Decoupling capacitors are fitted in various placed on the board.

Switches

The SPST pushbutton marked PB is connected to patch sockets *PBcom* and *PBno*. Additionally, 10k, 22k, 47k and 100k resistors is connected between *PBcom* and PB10K, PB22K, PB47K and PB100K respectively. These may be sued to provide pullups or pulldowns.

The SPST switch marked SW is connected to patch sockets *SWcom* and *SWno*. Additionally, a 22k resistor is connected between *SWres* and *SWcom* to provide a pullup or pulldown.

User LEDs

D1 and D3 are red LEDs. D2 and D4 are green LEDs.

The cathodes of D1 and D3 are connected via 470R resistors to *Vss*. They will light if supplied with a positive voltage of 2V5 or greater.

The anodes of D1 and D3 are connected via 470R resistors to 2V5. They will light if pulled to *Vss*