



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



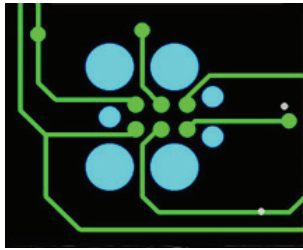
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Tag-Connect



SPY-BI-TAG: MSP430 SPY-BI-WIRE Adaptor for TC2030-MCP

Allows Tag-Connect TC2030-MCP cables to be used with TI's FET430 for MSP430.

The "SPY-BI-TAG" SPY-BI-WIRE adaptor board allows use of our Tag-Connect TC2030-MCP series Plug-of-Nails™ cables with later versions of TI's MSP430 MCU's that support the SPY-BI-WIRE (2-Wire) JTAG interface and allow a tiny Tag-Connect footprint (as small as 0.02 sq. inch) to be used instead of the traditional 14-pin JTAG header.

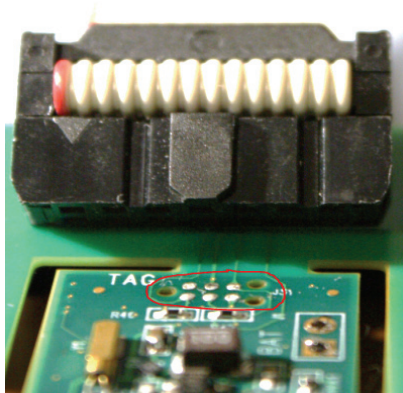


Left: SPY-BI-TAG boards. Right: TI MSP-FETU430 shown with SPY-BI-TAG adapter board and TC2030-MCP cable – also works with TC2030-MCP-NL "No Legs" cable. When your board real-estate is at a premium, Tag-Connect is the way to go!

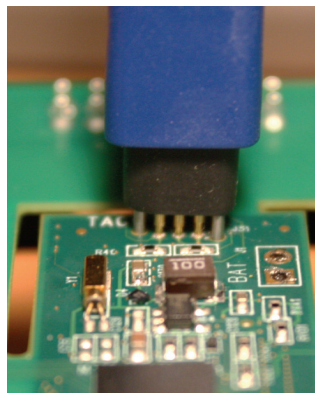
Compare the board space for the old-style 14-pin ribbon against the self-retaining TC2030-MCP (legged version)

(TC2030 Cable, TI FET and Target Board shown for illustrational use only and are not included)

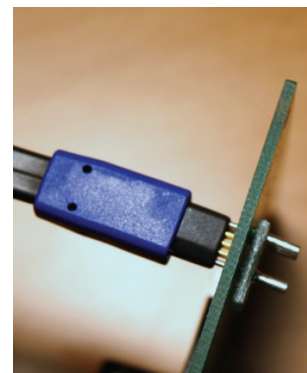
Tag-Connect - Save Cost and Space on Every Board!



Even smaller yet, the TC2030-MCP-NL footprint (circled in red) is shown against the 14-pin ribbon!



TC2030-MCP-NL shown held in place by the TC2030-CLIP board (not visible)



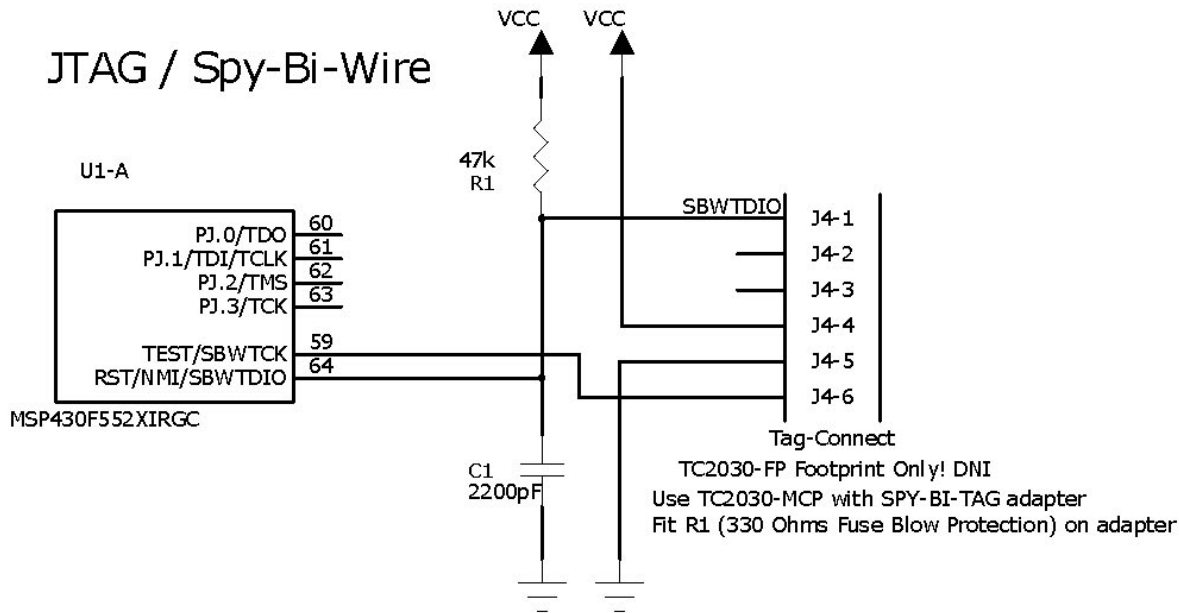
TC2030-CLIP board side-on.

Application Notes (also see www.Tag-Connect.com)

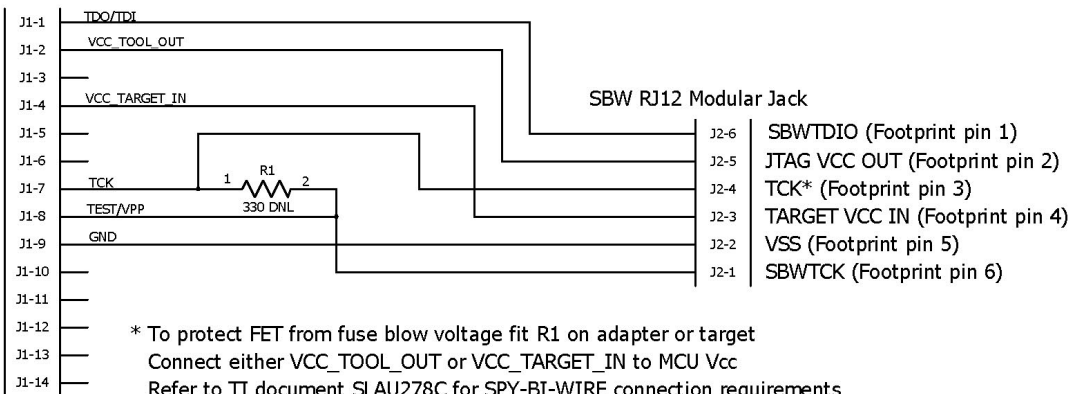
IMPORTANT NOTE FOR USE OF FUSE-BLOW: A 330 Ohm Fuse Blow Protect Resistor must in place either on your PCB (between footprint pin 3 TCK and pin 6 TEST/SBWTCK) or alternately may be soldered in place on the SPY-BI-TAG PCB (solder an 0805 330 Ohm resistor in the R1 location). See Figure 2-2 of TI's MSP430 Hardware Tools User's Guide (SLAU278C) for SPY-BI-WIRE connection details. The R1 330 Ohm resistor is not fitted in the shipping configuration of the SPY-BI-TAG adaptor.

MAXIMUM CABLE LENGTH: TI specifies a cable length of no more than 8 inches (20 cm). TC2030-MCP cables are available in 6" (TC2030-MCP and TC2030-MCP-NL) and 10" (TC2030-MCP-10 and TC2030-MCP-NL-10) lengths. We've tested extensively and experienced no problems using our 10" cables (we put the Tag-Connect footprint right at the MSP430) but you may wish to use only our 6" cables.

Suggested MSP430 Hookup



SPY-BI-TAG Schematic



TC2030-MCP Footprint Pinout

- Pin 1: SBWTDIO
- Pin 2: JTAG Vcc OUT
- Pin 3: TCK*
- Pin 4: Target Vcc IN
- Pin 5: Vss
- Pin 6: SBWTCK

* Fit R1 Fuse Blow Protect to SPY-BI-TAG adaptor or include on target board

Footprints, Decals, Technical Support:

For access to technical support, product information and datasheets please visit our website: www.Tag-Connect.com