

Converting to Mictor probe attachment for use with Logic analyzer and flying leads

ZX105, ZX110, in application with any other ZX100 series products

Zebax offers high quality Mictor breakout adapters covering range of logic analyzer and oscilloscope, scope, probes in market. This document outlines general application process where any Mictor or Samtec connector may be utilized with Mictor 38 probe of Logic Analyzer along with any scope probe with flying leads (wires)

This document identifies:

1. Breakout adapters in debugging, emulation and testing environment.
2. Logic Analyzer probes
3. Conversion of any Samtec & Mictor (76+) connector to Mictor, flying leads probe interface.

Revision History

Version	Date	Description
v01	May 15, 2011	Initial release –

1 Breakout adapters in debugging, emulation and testing environment

Zebax offers generally known breakout adapters covering Mictor Samtec PCIe-mini connectors. The breakout adapters are often called **test boards**, **extended boards** as well. Zebax ZX100 series product lines cover Samtec, Mictor, and PCIe-mini high density SMD connectors. One may utilize breakout adapters for bringup, validation, emulation, characterization and testing purpose by accessing the host (aggressor) or target (victim, DUT- Device under test) signals via the provided headers.

In addition, the breakout adapters are well suited for external excitation of sub-module design located either on host or target. The external devices such as power supply, function generator, signal generators can be interfaced with the design by accessing the standard 0.1" (2.54mm) break-out header's.

2 Logic Analyzer & Scope probes and their functionality

Agilent Tektronix Lecroy are the suppliers of most common oscilloscope (scope), and Logic Analyzer in electronic industry in USA and the world. They cover range of scopes and logic analyzers targeting design requirements. Scopes are offered with different probes meeting signal bandwidth. There exist number of USB based Logic Analyzer & scope devices offering by 3rd parties for low end testing.

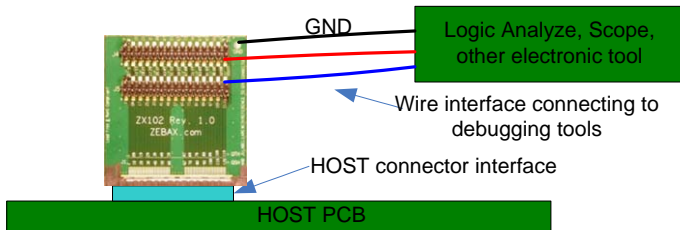
Logic analyzer probes vary in embedded filter, typically RC filter design, as well as supported mechanical attachment, Mictor connector, 40 pin 0.1" pitch connector, flying leads, Samtec to name the few. Zebax offers

ZX104, ZX105, ZX110 Mictor connectors that may directly be connected to scope or logic analyzer's Mictor probe.

3 Conversion of any Samtec & Mictor (76+) connector to Mictor, Flying leads probe interface.

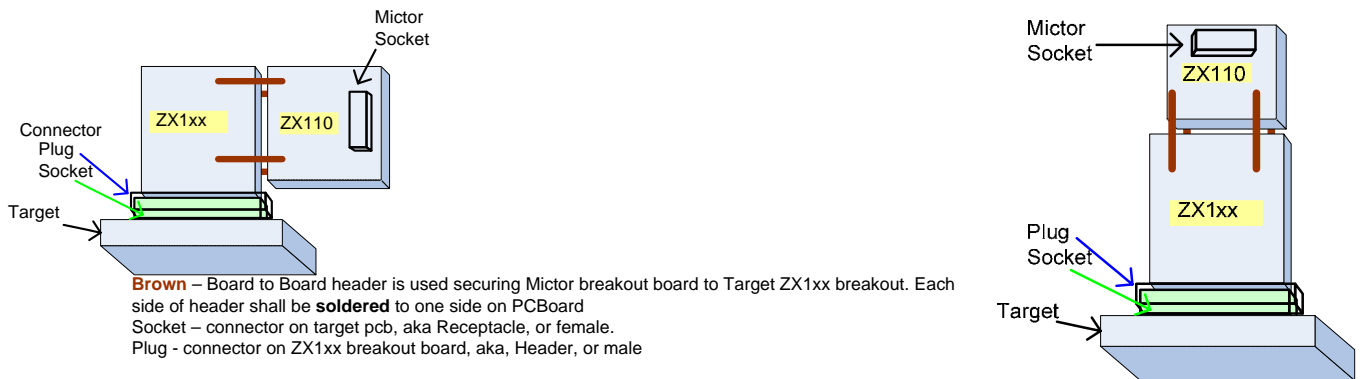
Figure 1 exhibits general application of Zebax breakout adapters with scope or logic analyzer. Using Zebax ZX105, or ZX110, one may transfer any Samtec connector or Mictor connector (76+) interface to general Mictor connector configuration application for use with logic analyzer offering Mictor probe attachment or flying leads probes, see figure 2 horizontal or vertical configuration. The conversion requires 2 breakout adapters where one breakout provides headers, interfacing with the target connector (Mictor, Samtec ..) whereas the 2nd breakout board is ZX105, or ZX110. Two standard 2 pin headers (0.1" pitch) can be used for securing the 2 breakout adapters. Note – For stability and solid ground connection between the breakout boards, user must edge off the solder mask, soldering the 2 pin header to board target and Mictor breakout boards, ground's top/bottom fill. It is recommended to connect the breakout boards Ground (GND) TP to each other, enforcing the solid ground connection between the target the Mictor probe interface board.

Figure 1- General application of Zebax breakout board with scope or test equipment



GND test point is common to all Zebax Breakout adapters, check connector type for GND connection at connector or requiring external GND interface.
Wire interface such as Zebax accessory, part number ZX100ACC-SS6.

Figure 2- Converting ANY breakout to Mictor attachment, horizontal or vertical configuration



ZX105 and ZX110 offer slightly different mechanical form factor, see figure 3, however any one of the ZX105 or ZX110 can be used as signal assignments are user dependent.

Logic Analyzers with flying leads probes do not require the 2nd breakout adapter. The flying leads can directly be connected to the breakout adapter's headers.

Figure 3- ZX105, ZX110 Mictor breakout

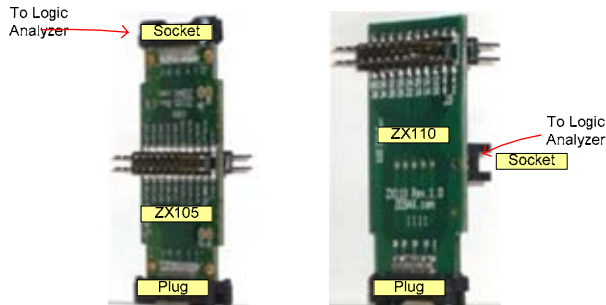
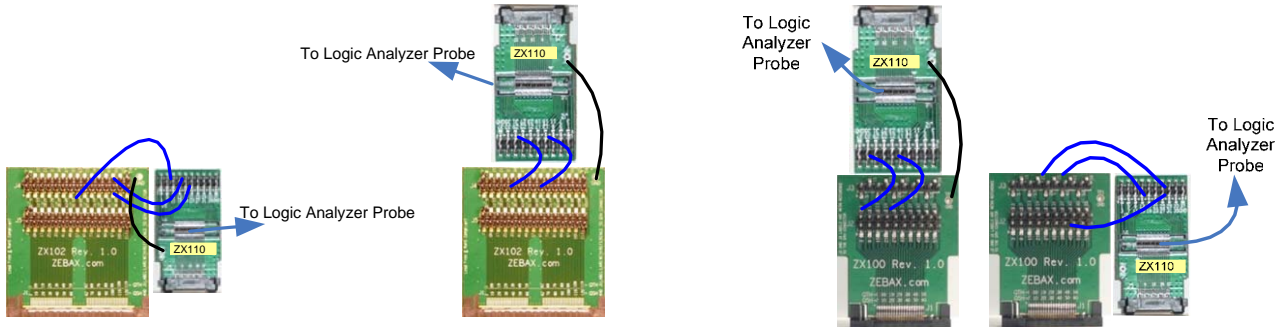


Figure 4- Converting Any Samtec to Mictor



Black – Board to board Ground interface.
Blue - Wire interface between target breakout connector to Mictor breakout adapter.

Zebax offer variety of breakout adapters covering Samtec, Tyco, TE, and other connector suppliers.

DOCUMENT : Mictor

SUBJECT: Converting to Mictor probe LA attachment

See Also – Literature & Web Link:

ZXTN_38MICTOR	An overview of Mictor connector's technology and Mictor breakout adapters
ZEBAX_DOWNLOAD	Zebax technical notes, application notes and test records
Breakout adapters	Zebax breakout adapters
Mictor breakout selection	Zebax breakout selection guide

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