

Mictor Breakout adapter selection guide for use with Oscilloscope & Logic Analyzer probes

ZX100 series products

Zebax offers best in class Mictor breakout adapter modules covering range of logic analyzer and oscilloscope, scope, probes in market. This document facilitates selection of Mictor breakout adapter and provides general guidelines on Mictor breakout adapter in areas of pre-bringup bringup, test debug and development using [Zebax Mictor breakout adapter](#).

This document identifies:

1. Breakout adapters in debugging, emulation and testing environment.
2. Logic Analyzer & scope probes
3. Zebax Mictor breakout adapter

Revision History

Version	Date	Description
v01	Jan 14, 2017	updated

1 Breakout adapters in debugging, emulation and testing environment

Zebax offers best in class Mictor breakout adapter covering various applications. All Zebax Mictor breakout adapters are designed using multi-layers PCB with 50 Ω Ohms trace impedance. Mictor breakout adapter are often referred as test modules test board extender board extension module as well.

Primary application of Mictor breakout adapter is exposing the signal for test and measurement as well as board to board stitching applications. Pre-bringup , bringup , validation , test , debug and development phase of any design (designs utilizing Mictor connector interface) benefits from utilization of Mictor breakout adapters. Additionally; characterization , emulation and automation (automation process in manufacturing) phases certainly benefit for using Mictor breakout adapter due to its ease of use and reuse functionality.

The Mictor breakout adapter is well suited for external excitation of sub-module design. The external devices (test equipment or other system design) such as power supply, function generator, signal generators can be interfaced with design using Mictor breakout adapter accessibility features.

2 Logic Analyzer & Scope probes

Keysight (formerly Agilent) Tektronix Lecroy are the suppliers of most common oscilloscope (scope), and Logic Analyzer , (a.k.a. as LA) , 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, filtering and special functions dedicated to supported specified range of scopes. Each scope probe supports one channel only, whereas the logic analyzer probes support many channels in one cable assembly, typically 17 (16 data + 1 Clock) channels. Similar to scope probes, logic analyzer probes embed filter circuit for each channel.

Below are compiled list of probes using Mictor connector interface where the scope / LA probe can directly be connected to [Zebax Mictor breakout adapter](#) test module extender. Zebax offers variation of Mictor breakout adapter with accessible headers applicable for single ended as well as differential signaling design requirements; please see the Mictor breakout adapter list below:

Using Single Ended (SE) signaling configuration:

[ZX104WS](#) [ZX104WH](#) [ZX104LN](#) [ZX104LNR](#) [ZX104L](#) [ZX104LX](#) [ZX105](#) [ZX110](#) [ZX110H](#)

Using Differential pair signaling configuration: [ZX104D12](#) [ZX104D13](#)

Table below is summarized list of probes using flying leads interface where the scope / LA probe can directly be interfaced to any of the [Zebax Mictor breakout adapter](#). Typically flying leads probes are designed to mate with 0.1" (2.54mm) pitch headers.

Mfr	Attachment method	Probe	Logic Analyzer - Probe	# channels	type
Keysight	flying leads	E5382A	17-channel flying lead probe	17	single-ended
Keysight	flying leads	E5383A	17-channel flying lead probe	17	single-ended
tek	flying leads	P6410	17 ch. Mictor Probe for TLA520x mainframe, TLA6xx mainframe or TLA7Lx/Mx/Nx/Px/Qx logic analyzer	17	single-ended
tek	flying leads	P6417	TLA700 Series Logic Analyzer	16+Clock	single-ended
tek	flying leads	P6418	TLA700 Series Logic Analyzer	16+Clock	single-ended
Lecroy	flying leads 10	PK400-1	Large gripper probe set for 0.1" (2.54mm) pin pitch	10	single-ended
Lecroy	flying leads 10	PK400-2	Large gripper probe set for 0.01" (1.0mm) pin pitch	10	single-ended
Lecroy	flying leads 10	PK400-3	Large gripper probe set for 0.008" (0.2mm) pin pitch	10	single-ended
Keysight (formerly Agilent)					

DOCUMENT : [Mictor Breakout Adapters](#) SUBJECT: [Mictor Breakout adapter selection guide for use with Scope & logic Analyzer](#)

Zebax offers variation of Mictor breakout adapter tailored for interface with both Logic Analyzer as listed below:

[ZX104WH](#) [ZX110S](#) [ZX105](#) [ZX110](#) [ZX110H](#) [ZX110X4](#)

Table below is summarized list of logic analyzer probes using Mictor probe. Zebax provides best in class Mictor breakout adapter interfacing with Mictor Logic Analyzer probe. Additionally, Zebax offers [Samtec breakout adapter for scope test & measurement using scope and Logic Analyzer.](#)

Mfr	Attachment method	Probe	Logic Analyzer - Probe	# channels	type
Keysight	Mictor	E5339A	34-channel low voltage Mictor probe	34	single-ended
Keysight	Mictor	E5339A	34 channel Mictor-Probe-Low Voltage, with 40-pin cable connecto	34	single-ended
Keysight	Mictor	E5346A	38 Pin Probe - designed for 16557D 16710A 16711A 16712A 16715A 16716A 16718A 16719A 15751A 16752A logic analyzer		single-ended
Keysight	Mictor	E5346A	High-speed Mictor Adapter	34	single-ended
Keysight	Mictor	E5351A	34-channel unterminated Mictor probe	34	single-ended
Keysight	Mictor	E5380A	16753A, 16754A, 16755A, 16756A, 16760A	34	single-ended
Lecroy	Mictor	MS250	250MHz, 1GS/s 18 Ch. Mixed signal Oscilloscope		
Lecroy	Mictor	MS-32-Mictor-L	Mictor Connection Cable	34	single-ended
Lecroy	Mictor	MS-32-Mictor-S	Mictor Connection Cable	34	single-ended
Lecroy	Mictor	MS500	500MHz, 2GS/s 18 Ch. Mixed signal Oscilloscope	18	single-ended
Lecroy	Mictor	MS500-36	250MHz, 1GS/s 36 Ch. Mixed signal Oscilloscope	36	single-ended
Lecroy	Mictor	MSO-Mictor	34 Channel Mictor Connector for MS Series	34	single-ended
tek	Mictor	P6410	17 ch. Mictor Probe for TLA520x mainframe, TLA6xx mainframe or TLA7Lx/Mx/Nx/Px/Qx logic analyzer module	16+Clock	single-ended
tek	Mictor	P6434	TLA5000 / TLA6000	34	single-ended
Keysight (formerly Agilent)					

3 Zebax Mictor breakout adapter

Zebax offers best in class Mictor breakout adapter listed under ZX100 product line, www.Zebax.com. Zebax Mictor breakout adapter provide test and measurement solution both in test & design phase as well as manufacturing automation environment. Zebax focuses on product reliability, ease of use and improved signal integrity and performance across all Zebax products.

Zebax offers best in class [Samtec](#) [Mictor](#) [FMC VITA 57.1](#) [AHSMC](#) [PCISIG M.2](#) [PCIe/104 PCI/104-Express](#) and more breakout test modules extension boards. ZX100 products are widely used in test, debug, validation and characterization of engineering efforts in R&D as well as automation test environment and manufacturing test areas.

Zebax is dedicated in providing best in class solutions supporting engineering and technical communities in test and measurements disciplines.

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