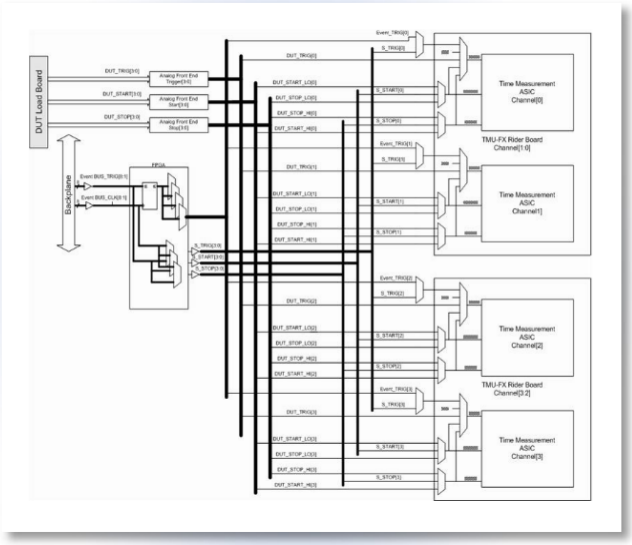
Cohu

DIAMOND$_x$ SERIES ATMP$_x$



Analog Time Measurement Processors

Highlights:

- Flexible timing measurements through per-pin programmable comparator levels and programmable hysteresis
- Reduced loadboard complexity using the SmartMux for high voltage timing measurements

Features:

- 4 channels
- Smart Mux capabilities
- ±2.5 V, -5 V to +25 V, -15 V to +100 V comparator ranges
- Flexible arming for wide range of measurements

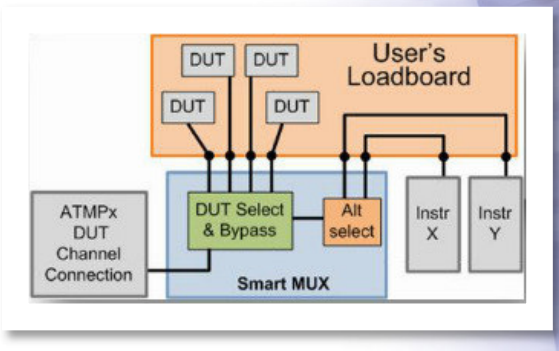
The ATMP$_x$ (Analog Time Measurements Processor) provides 4 independent time measurement channels per board to perform rise or fall time, pulse width, delay, frequency, or period, and duty cycle measurement.

Each ATMP$_x$ channel has two signal measurement inputs (A and B), and a trigger signal input for arming the measurement. Each of these inputs has front-end circuitry to optionally attenuate or filter the incoming signals, and allows setting conditions for low level, high level, and hysteresis. For each input, the fan-out relays enable connection from 6 different DUT pins.

DIAMOND$_x$ SERIES ATMP$_x$

The Analog Time Measurement Processor (ATMP$_x$) is a high voltage multichannel time measurement unit.

- A quad-channel board providing fully independent operation
- SmartMux capabilities that enable:
  - Fanning each channel out to four different DUT IO paths
  - Mapping two alternate loadboard connected signals to the DUT connection path



Key Specifications

Feature	Specifications	Pulse Width Measurement	Specifications
Retrigger Time between Samples	1.5 µs	**Resolution**	29 ps
Samples per Measurement	1 to 4194303	**Measurement Accuracy**	±1 ns typical
Rise/Fall Time	±1 ns typical	**Min. Pulse Width**	10 ns
Duty Cycle Measurements	±(((800 ps + pulse width) /(period – 800 ps/#samples)) – pulse width/period) * 100%	**Max. Pulse Width**	800 ms

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