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GT916MUX

DC to 6GHz , 17-to-2 Active Multiplexer

APPLICATIONS

- Switching and multiplexing high-speed signal – for both clock and data
- Testing multiple signals on limited number of test channels
- Oscillators & Clocks
- Square wave conversion retaining signal timing information
- Lab / R&D Characterizations
- Semiconductor ATE

KEY FEATURES

- Active multiplexer for time and frequency measurements
- 16 single-ended or 8 differential inputs – software selectable
- 2 differential outputs driving 50Ω termination to ground
- A common input signal for both outputs – software selectable single-ended or differential
- All inputs are terminated with 50Ω to a user programmable voltage
- Frequency range: DC to 6GHz
- Input voltage range –5V to +5V
- Input termination voltage range –5V to +5V
- Peak voltage measurement on all input signals.
- PXI or PXIe interface on a single-slot 3U form factor card (Legacy or Hybrid)
- SMP connectors for all inputs and outputs

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The **GT916MUX** is a 17-to-2 Active Multiplexer, allowing a time measurement instrument, such as a Frequency Counter or a Time Interval Analyzer, to measure time and frequency of up to 17 signals with software selection.

All inputs can be used as single-ended signals or differential signal pairs under software control, selectable at runtime. See Figure 1. Input Pair for the description of each signal pair.

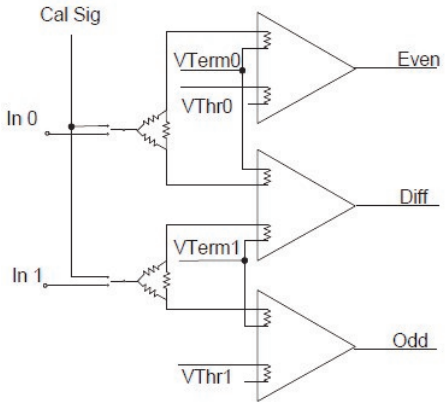


Figure 1. Input Pair

The main 16 inputs are routed to two differential outputs under user selectable control.

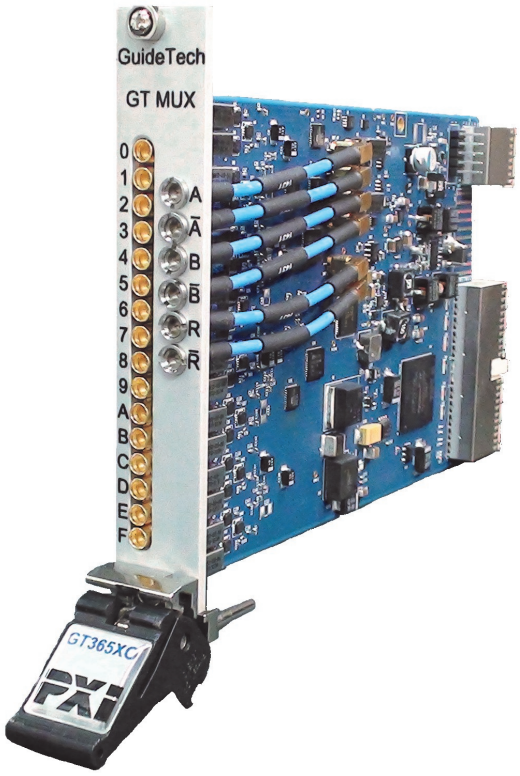
All even-numbered inputs can be routed to output A

All odd-numbered inputs can be routed to output B

All differential input pairs can be routed to either output A, or B, or both – with the following limitation:

The differential signals are divided into two groups – low (input pairs 0,1 through 6,7) and high (input pairs 8,9 through E,F). Only one signal pair from each group can be used at the same time.

One signal (named 'Reference'), which can be either single-ended or differential, is routed to both outputs. This signal can therefore be used as a common reference for skew or propagation delay measurements of all the other signals.



The **GT916MUX** multiplexer's outputs are differential, but can be used as single ended.

See Figure 2. Multiplexer Routing below to understand better the **GT916MUX** routing capabilities.

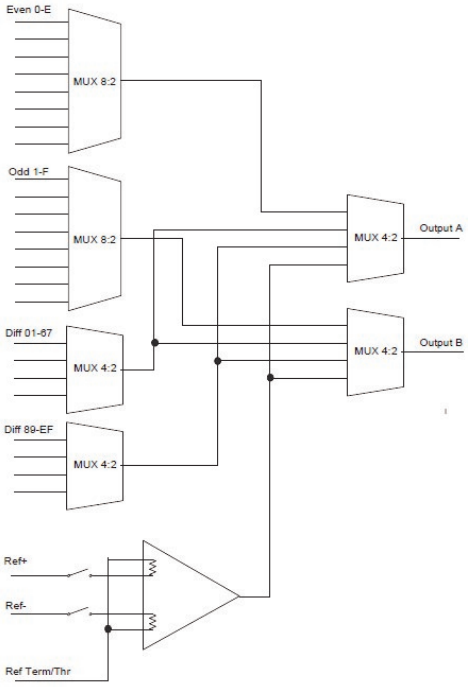


Figure 2. Multiplexer Routing

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SPECIFICATIONS

INPUTS

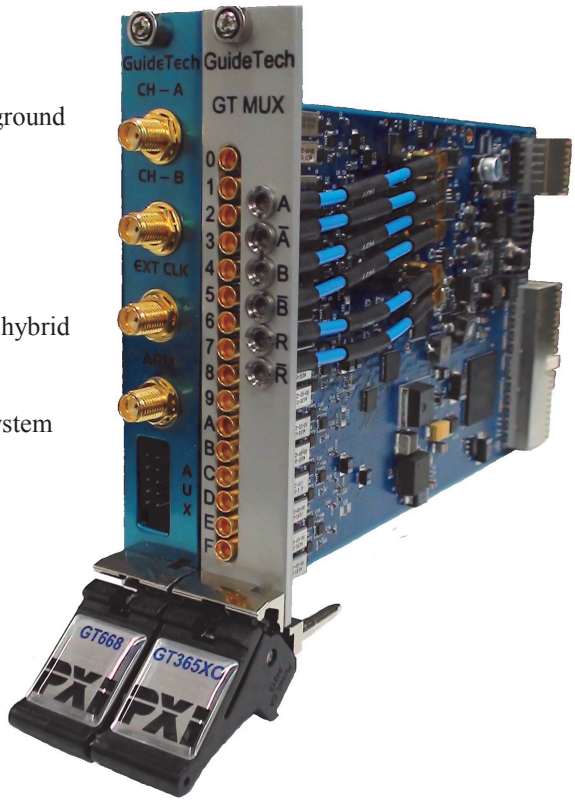
- 16 single-ended or 8 differential inputs, software selectable
- Reference signal – single-ended or differential.
- Input Coupling: DC
- Input Impedance: 50Ω to a user-programmable voltage.
- Input Threshold: programmable in the range of -5V to +5V
- Input Termination: programmable in the range of -5V to +5V
- Hysteresis: programmable in the range of 1mV to 70mV
- The configuration of each input can be programmed individually.
- Connector type: SMP

OUTPUTS

- Two differential outputs
- Output Coupling: DC
- Source terminated with series 50Ω
- User should terminate signals with 50Ω to ground
- Amplitude: 600mv
- Connector type: SMP

SYSTEM REQUIREMENTS

- PXI, PXIe chassis with a 3U slot, legacy or hybrid
- PCIe computer
- Window (XP or later) or Linux operating system



SOFTWARE SUPPORT

Easy to use software is provided with the **GT916MUX** allowing easy configuration and control either from user software or interactively.

The **GT916MUX** comes with software that allows control over the operation of the multiplexer. The software includes kernel-mode driver that allows communication with the board, library of user interface functions, a graphic user interface for interactive control (Windows only), and sample programs.

Software is provided for:

- Windows (XP or later) 32 & 64 Bit
- Linux 32 & 64 Bit
- LabVIEW

GT916MUX MODELS

PXI

- **GT916MUXPXI**

PXIe

- **GT916MUXPXIe**

PCIe

- **GT916MUXPCIe**

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