

MUX56G

56 Gbps 2:1 Multiplexer



(Illustration similar)

Compact Broadband 2:1 Multiplexer with Maximum Output Data Rate of 56 Gbps

Differential Outputs with 600 mV Single-Ended Output Swing

Single-Ended Data and Clock Inputs

Brief Description

The Sympuls MUX56G is a 2:1 multiplexer that operates at data rates between 1 and 56 Gbps. Two 28 Gbps data input signals are converted to a serial output data stream of 56 Gbps. A clock signal of half the frequency of the output data rate is needed for operation. The data inputs are single-ended and DC-coupled, the single-ended clock input is AC-coupled. Amplitude and duty cycle of the output signal and the input bias voltage are adjustable. The device is available with manual controls or with a USB interface to remotely control all device settings.

Technical Data

56 Gbps 2:1 Multiplexer	
Data Rate	1 Gbps ... 56 Gbps, gap free
Clock Input	500 MHz ... 28 GHz, Clock Input Frequency = (Data Rate)/2, $U_i = 0,4 \dots 1 V_{pp}$, $Z_i = 50 \Omega$, $ r < 0,2$, AC-coupled, 50 Ω 2.92 mm (K)
Data Inputs	2 Single-Ended Data Inputs (A, B) 500 Mbps ... 28 Gbps, $U_i = 0.4 \dots 1 V_{pp}$, $Z_i = 50 \Omega$, $ r < 0,2$ DC-Coupled, 50 Ω 2.92 mm (K) Input Data Bias Voltage Control
Data Outputs	Data and /Data, DC-Coupled, 50 Ω 2.4 mm, Amplitude Adjustable $0.4 V_{pp} \dots 0.6 V_{pp}$ Single-Ended, Rise-/Fall-Times (20 %/80 %) < 12 ps Jitter (rms) < 750 fs ¹ Duty Cycle Adjustable
Interface	Control via USB-Interface or Manual Control
Power Supply	External -5 V Power Supply
Dimensions	Aluminium Case, W x H x D = 59 mm x 28 mm x 87 mm

¹For input clock signal with Jitter(rms) < 500 fs

Output Signals

All oscillograms taken using Agilent 86100B sampling oscilloscope with sampling module 86118A (70 GHz cut-off frequency).

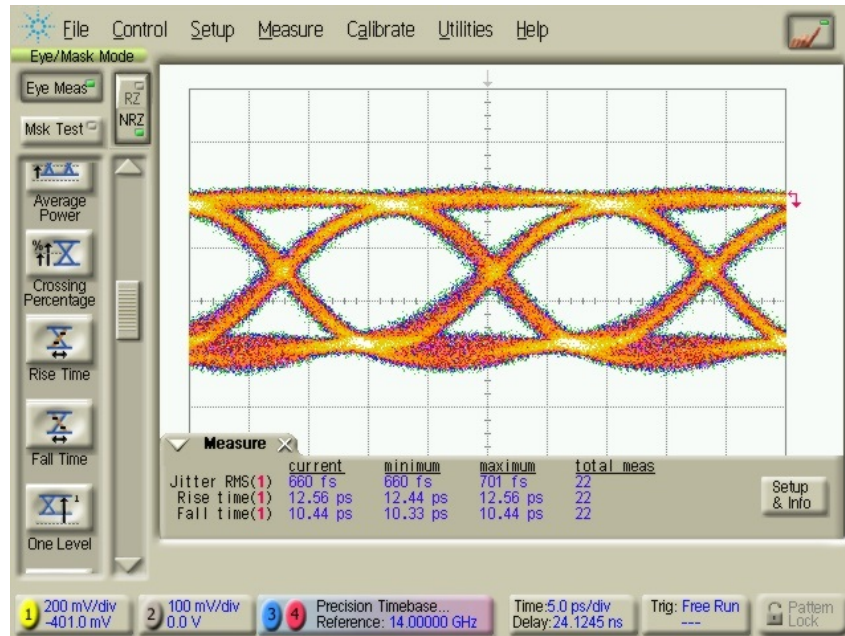


Figure 1: 56 Gbps Output Eye

Ordering Information

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Included in delivery:

- 56GBit/s 2:1 Multiplexer
- -5 V Power Supply
- User Manual
- Optionally: USB Cable Set, CD-ROM with Device Drivers and Operating Software

**The instrument is produced by SYMPULS in Germany.
We offer a reliable service and 24 month warranty.**