

# 64 Gbaud PAM4 Signal Generation

64 Gbaud PAM4 DAC G0374A

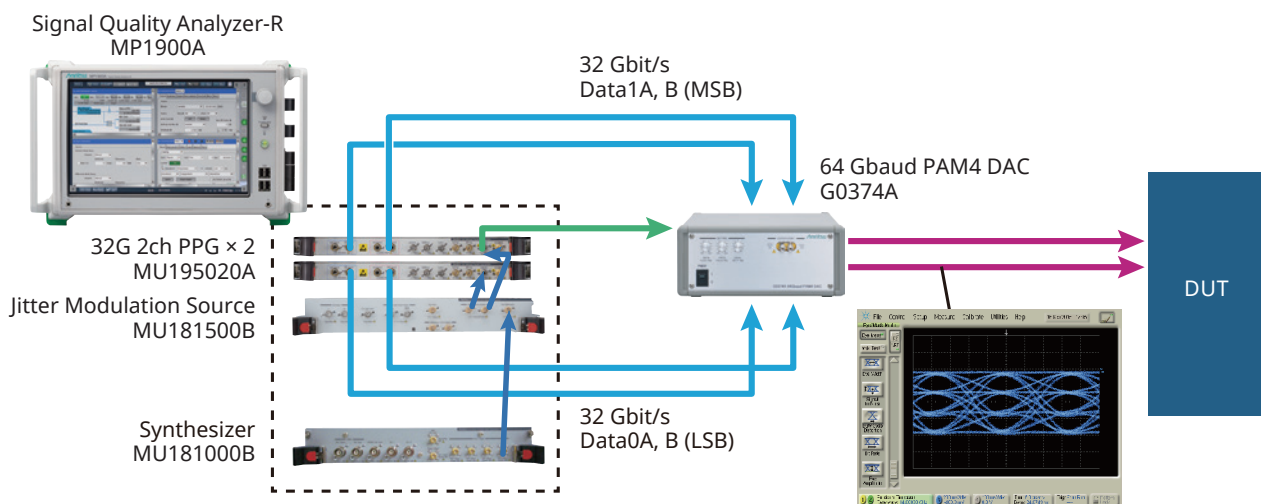
Signal Quality Analyzer-R MP1900A

Next-generation Ethernet standards such as 400 GbE are implementing the PAM (Pulse Amplitude Modulation) method to increase communications speeds between network equipment. The symbol rate per lane in the 400 GbE standard uses 26.6 Gbaud and 53.1 Gbaud PAM4 and development is progressing into higher-speed PAM4 technologies. Combining the Signal Quality Analyzer-R MP1900A with the expandable 64 Gbaud DAC and 32G PPG multi-channel function supports the measurement of high-baud-rate PAM4 signals.

[Supported Applications] 400 GbE, CEI-56G, High-Speed Interconnects

## Features

- Wideband Operating Range: 4.8 Gbaud to 64 Gbaud with 400 GbE support
- 64 Gbaud PAM4 signal jitter addition tests
- 64 Gbaud PAM4 DAC G0374A and 32G PPG combined signal generation
  - Low Output Jitter 300 fs rms high-quality Data output waveforms
  - Supports NRZ, PAM4, Emphasis (NRZ) signals



## Typical Specifications

Model/Name	Item	Condition	Units	Specification		
				min.	typ.	max.
64 Gbaud PAM4 DAC G0374A	Baud Rate		Gbaud	DC*1		64
	Data OUT Output amplitude*2	DC Coupling, Single-End	Vp-p	0.5	0.7	0.9
	Amplitude Control*3		dB		6	
	Jitter*2, *4	NRZ	fs rms		300	500
	Rising/Falling Edge Times*2, *4	NRZ, 20%/80%	ps		8	10
	Data OUT DUTY Adjustment*3				Adjacent Eye DUTY Ratio Adjustment	
Power Supply				100 V(ac) to 240 V(ac)		

\*1: 4.8 Gbaud minimum. when used with MU195020A

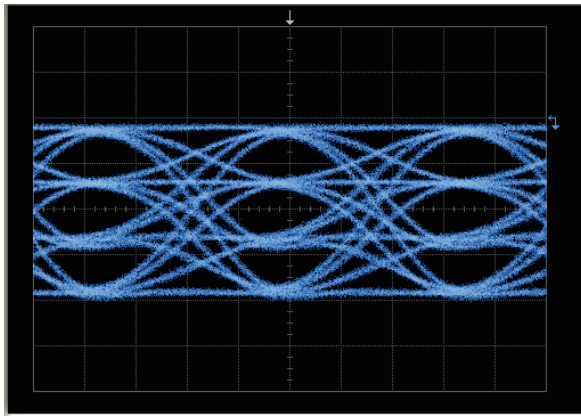
\*2: Value observed with sampling oscilloscope with <200 fs rms Intrinsic Jitter and 70-GHz band

\*3: Adjusted at G0374A front-panel volume

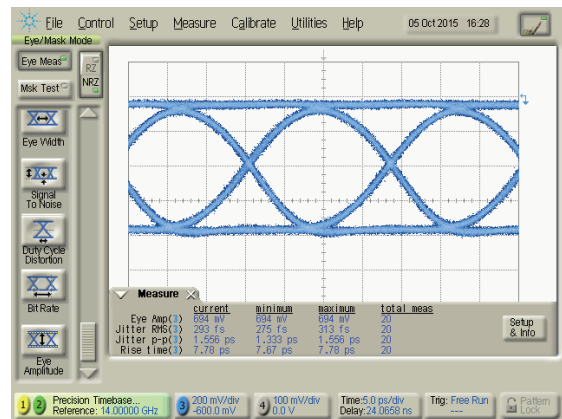
\*4: Value observed at 0101 set output patter

## Typical Output Waveforms

56 Gbaud (PAM4)



56 Gbaud (NRZ)



## External Appearance

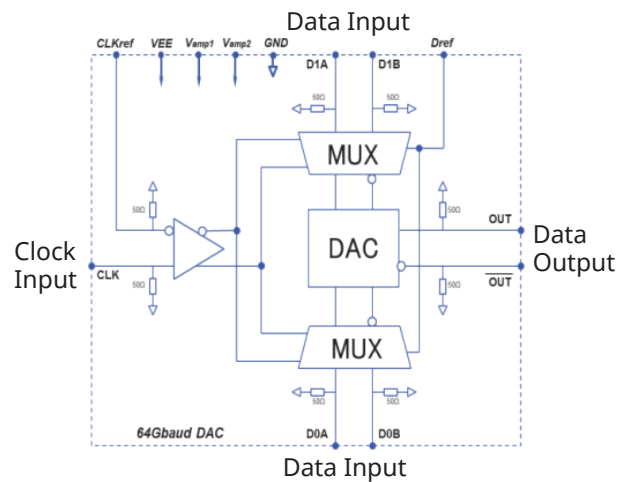
Front Panel



Back Panel



## G0374A Block Diagram



## Ordering Information

Please specify the model/order number, name and quantity when ordering.

The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Contact your sales representative for more details.

Model/Order No.	Name
G0374A	64 Gbaud PAM4 DAC
MP1900A	Signal Quality Analyzer-R
MU195020A	21G/32G bit/s SI PPG

Model/Order No.	Name
MU181500B	Jitter Modulation Source
MU181000B	12.5 GHz 4port Synthesizer

The contents of this leaflet may change without prior notice.