

## 32.1 Gbit/s 4Tap Emphasis

### MP1825B

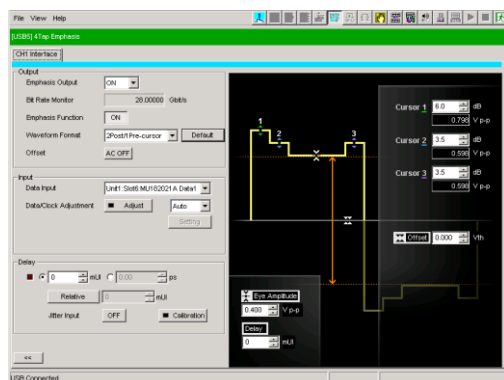
4Tap Emphasis

#### ■ Features

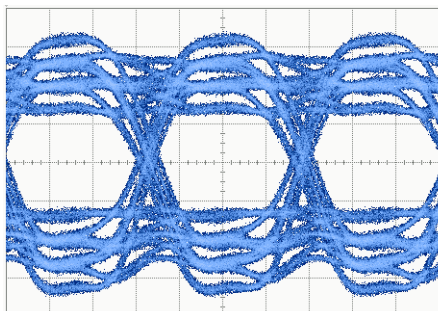
- ✓ Pre-emphasis up to 4 taps
- ✓ Up to 32.1 Gbit/s (Opt-002 and -006)
- ✓ Jitter transparent
- ✓ Compact remote head
- ✓ S-parameter based automatic Emphasis setting
- ✓ Automatic phase adjustment between Data/Clock inputs (using MU18302xA 28/32 Gbit/s PPG)

#### ■ Applications

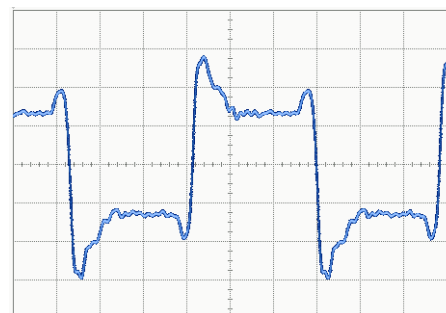
- ✓ High-speed Backplanes, Cables: 100 GbE (100 GBASE-KR4, CR4)
- ✓ SERDES, CDR: CEI-25 G, CEI-28 G-VSR
- ✓ AOC (Active Optical Cables): InfiniBand™ EDR (26 G)
- ✓ Optical Transceiver Modules (CFP/CFP2/CFP4, QSFPs):  
32 G Fibre Channel, 100 GbE (100 GBASE-SR4, LR4, ER4), OTU4 (28 Gx4)
- ✓ TOSA/ROSA, Silicon Photonics Devices



#### ■ Typical Waveforms

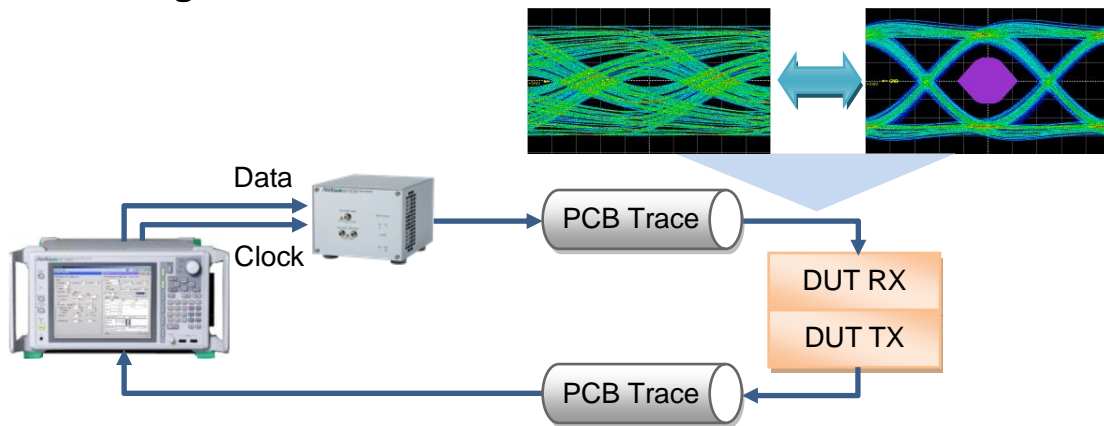


Bit Rate: 28 Gbit/s, Eye Amplitude: 0.5 p-p,  
Test Pattern: PRBS31



Bit Rate: 28 Gbit/s, Eye Amplitude: 0.5 p-p,  
Test Pattern: FFFF0000

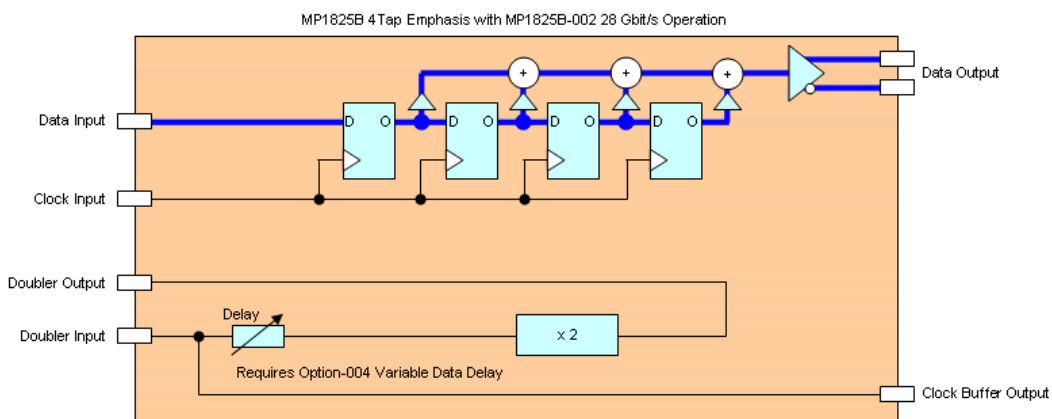
## ■ Typical Configurations



Model	Name	32 G Configuration	Remarks
MP1825B	4 Tap Emphasis	•	Select either MP1825B-001 or -002.
MP1825B-001	14 Gbit/s Operation	•	
MP1825B-002	28 Gbit/s Operation	•	
MP1825B-003	14 Gbit/s Variable Data Delay	•	Requires MP1825B-001
MP1825B-004	28 Gbit/s Variable Data Delay	•	Requires MP1825B-002
MP1825B-005	14.1 Gbit/s Extension	•	Max. operation bit-rate of MP1825B-004 Data Delay restricted to 28.1 Gbit/s with MP1825B-006
MP1825B-006	32 Gbit/s Extension	•	Requires MP1825B-001 Requires MP1825B-002

Model	Name	32G Configuration	Remarks
MU183020A	28/32 Gbit/s PPG	•	Full Rate Clock output using MP1825B-006 driver
MU183020A-001	32 Gbit/s Extension	•	
MU183020A-012	1 ch 2 V Data Output	•	Must select one of these
MU183020A-013	1 ch 3.5 V Data Output	•	Select Opt-030 1 ch Data Delay for 1ch option
MU183020A-022	2 ch 2 V Data Output	•	Select Opt-031 2 ch Data Delay for 2ch option
MU183020A-023	2 ch 3.5 V Data Output	•	
MU183020A-030	1 ch Data Delay	•	Must select one of these for auto-phase adjustment between MP1825B Data/Clock inputs at tracking with MP1825B
MU183020A-031	2 ch Data Delay	•	

## ■ Block Diagram



Even when the MP1825B-006 32 Gbit/s Extension option is installed, the upper limit of the MP1825B-004 28 Gbit/s Variable Data Delay operation range is 28.1 Gbit/s.

The Data/Clock phase between the MU18302xA PPG and MP1825B is auto-adjusted by the MU18302xA-030/031 Data Delay function.