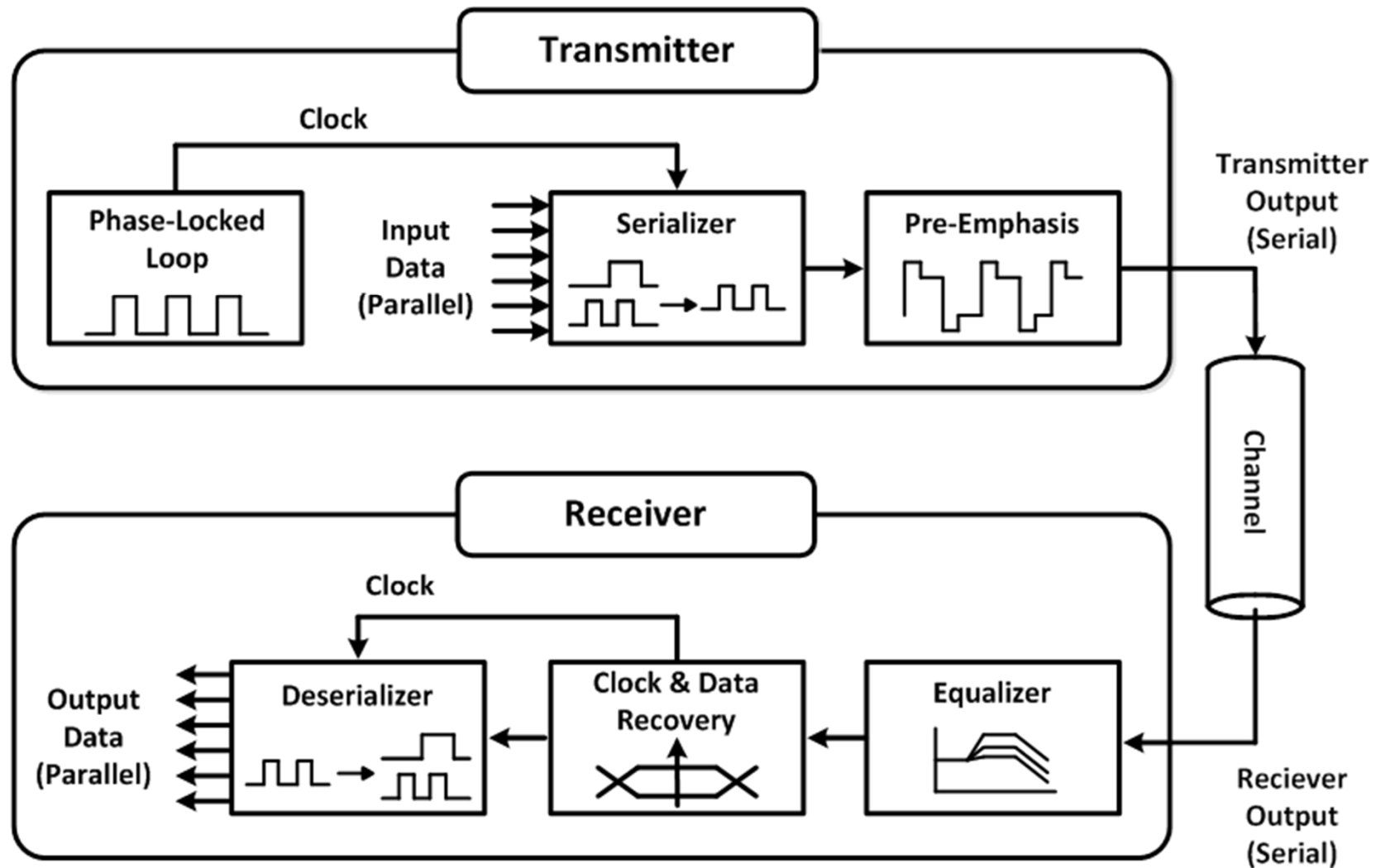


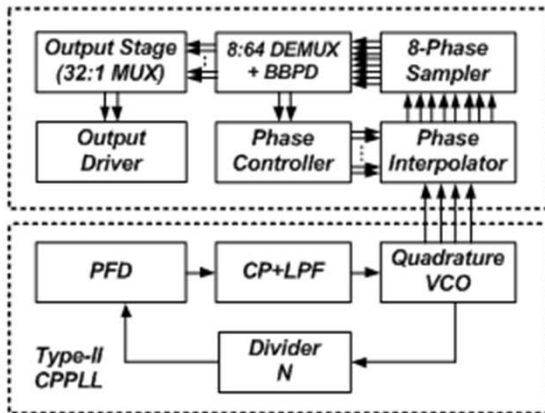
# High Speed Circuits for Serial Link



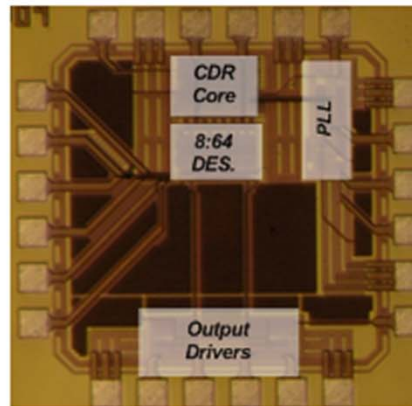
# High Speed Circuits for Serial Link

## Low-Power CDR Design

PI-based CDR



Overall Architecture

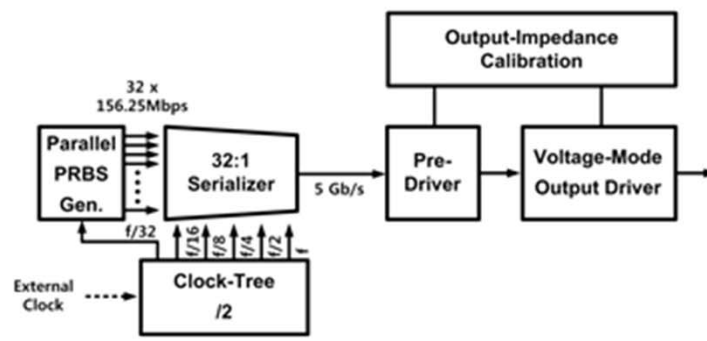


Chip Microphotograph

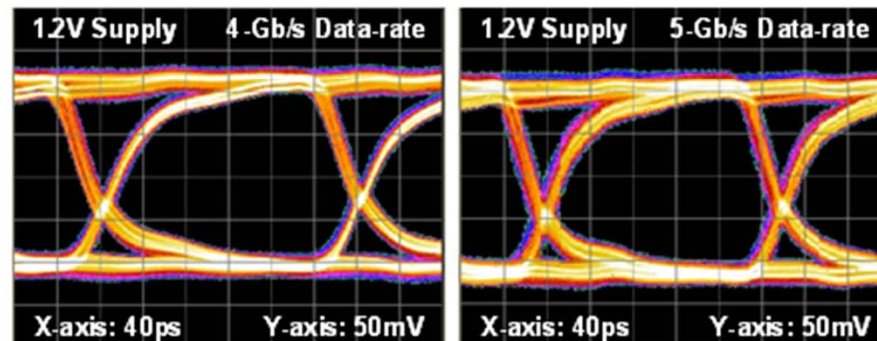
Low-Power CDR	
Technology	180nm CMOS
Data-rate (Pattern)	8 Gb/s (PRBS 31)
Power Consumption	38 mW
Power Efficiency	4.8 mW/Gb/s
Area	0.078 mm <sup>2</sup>

Chip Summary

## Voltage-Mode Output Driver



Overall Architecture



Measured Eye-Diagram