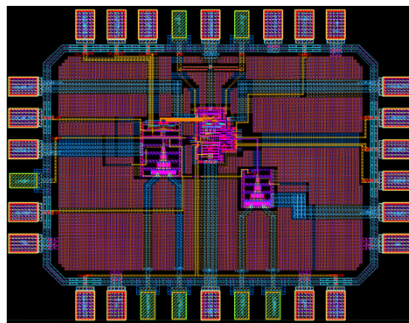
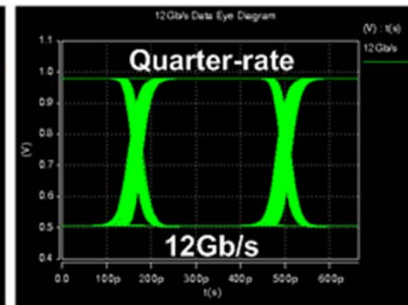
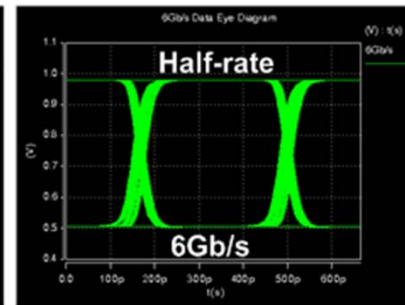
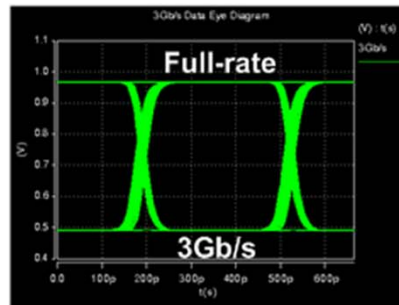


# Multi-Rate Clock and Data Recovery Circuit

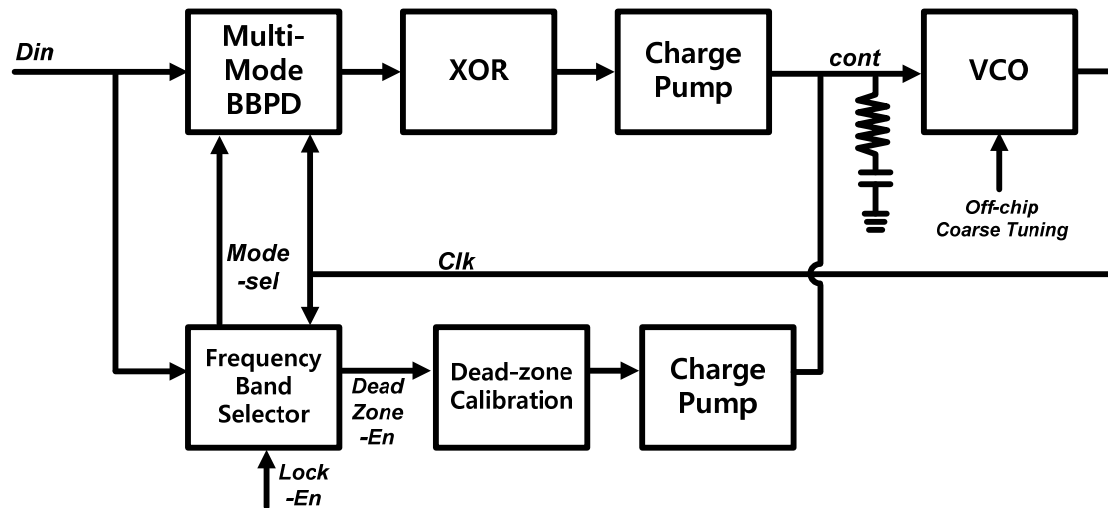
- Multi-Rate Operation using Rotational Bang-Bang Phase Detector.
- Support Full, Half and Quarter rate mode operation.



< Layout >



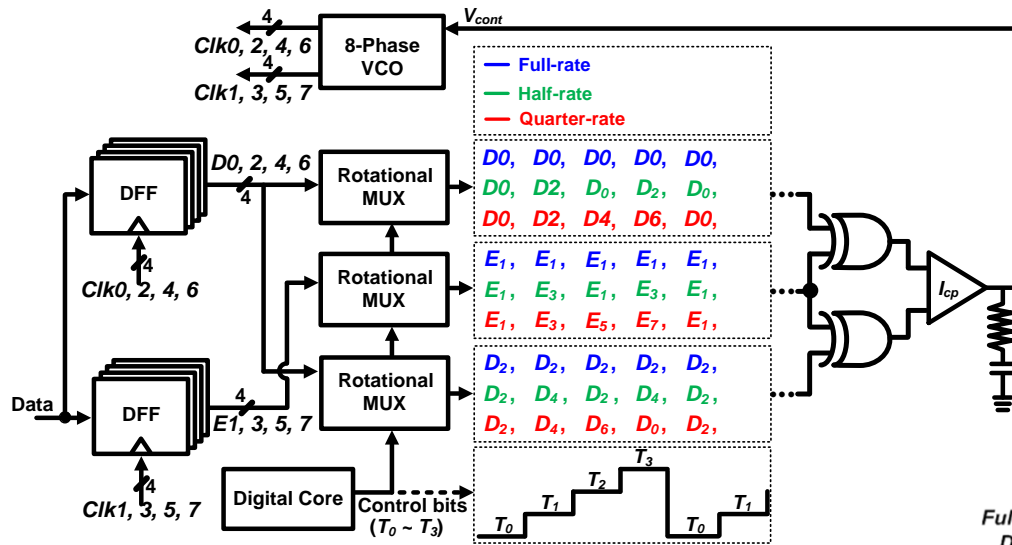
< EYE diagram of 3Gb/s, 6Gb/s and 12Gb/s >



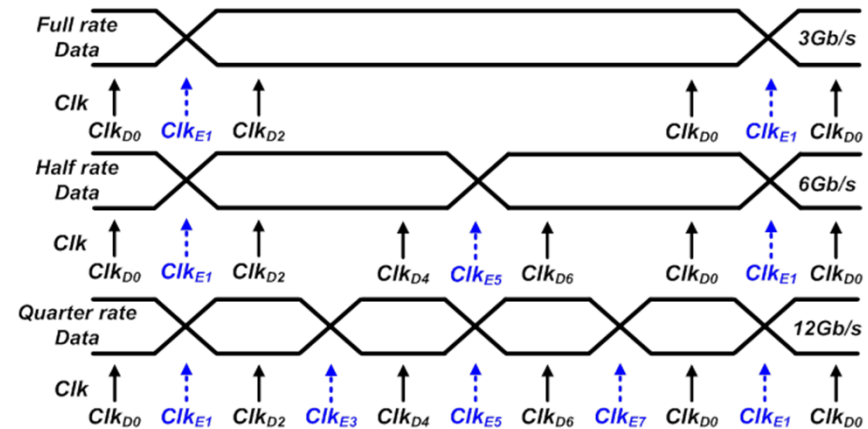
<Block diagram of Multi-Rate Clock and Data Recovery Circuit >

# Multi-Mode Rotational BB-PD

- Multi-Mode Rotational Bang-Bang Phase Detector.



< Block diagram of MRBBPD >



< Timing diagram of Full/Half/Quarter rate >