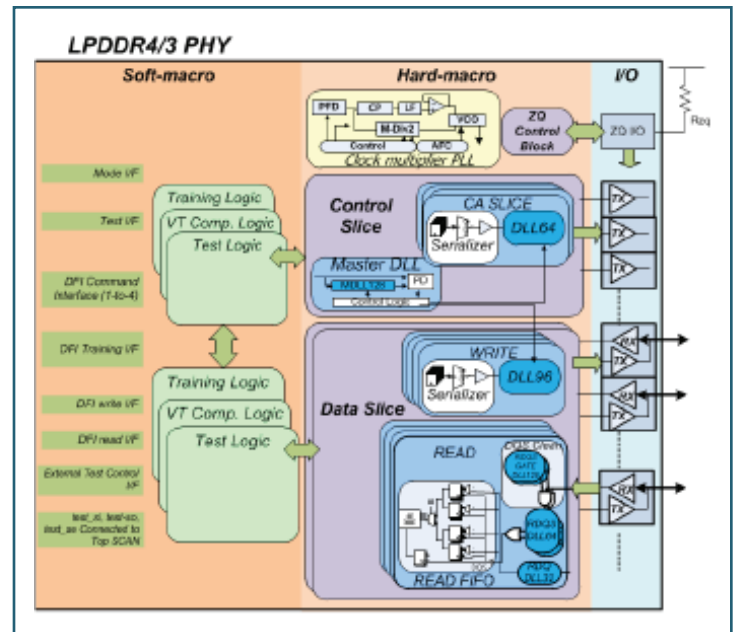# LPDDR4/LPDDR3 PHY

Overview

The Samsung Foundry LPDDR combo PHY supports 3.2Gbps LPDDR4 with 16-bit 1-channel configuration or 2.1Gbps LPDDR3 with 32-bit 1-channel configuration. It is DFI4.0 compliant with a frequency ratio of 1:2.

Key Features

- Samsung Foundry 10nm low power CMOS device technology
- Supports 3.2Gbps LPDDR4
- Supports 2.133Gbps LPDDR3
- Off-chip driver (OCD)
- Supports Retention IO
- On-die term (VDDQ-TERM, Center-Tap TERM)
- Auto training after memory initialization
  - o Command Bus Training
  - o Write Leveling
  - o Auto-DQS Cleaning(LPDDR4)
  - o Gate Training (LPDDR4)
  - o Write/Read Bit Training
  - o Vref CA/DQ Training
  - o Voh Calibration
- Power supply
  - o 1.0V PHY Core Voltage (Typ.)
  - o 1.2V for LPDDR4 IO, 1.35 for LPDDR3 IO

Deliverables

- Model and soft macro netlist
- Timing DK
- DFT model and netlist
- CIR, GDS (GDS2) and LEF
- Datasheet

SAMSUNG Foundry

For more information, please contact us at IP@silvaco.com.

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