

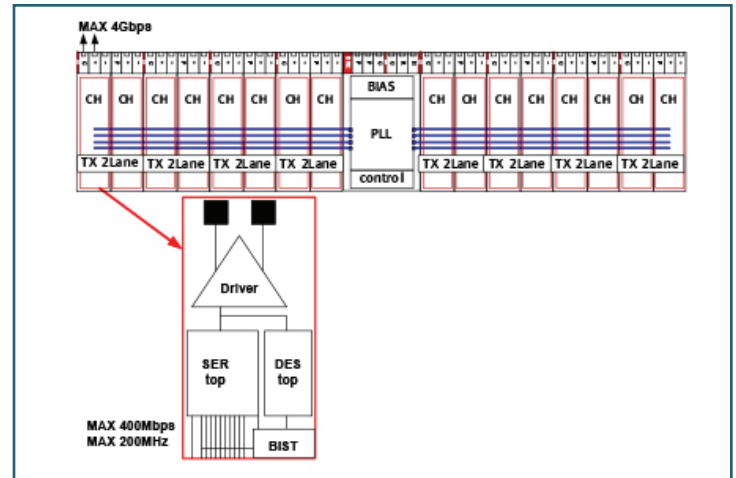
## V-by-One HS TX 16-Lane

### OVERVIEW

The V-by-One HS TX PHY IP targets high speed data transmission of video signals. IO pads and ESD structures are included with extensive built-in self test features such as loopback and scan support. It offers a cost-effective and low-power solution. It builds on silicon-proven design that are in volume production.

### KEY FEATURES

- Samsung Foundry 14nm low power CMOS device technology
- 1.8V, 0.9V dual power supply
- Compliant to V-by-One HS Standard v1.4
- Supports up to 4Gbps data rate (effective data rate 3.2Gbps)
- Channel Configuration for Data Lanes
- Common (CMN) and 2 to 16 Data Lanes
- Supports Spread Spectrum Clocking in the Transmitter
- Supports the following pre-emphasis levels
  - o - 1.5/3/6dB
- 20M to 100MHz reference clock is required
- Include SFRs (Special Function Register) controlled APB 2.0 for PHY
- Built-in self test feature capable of producing and checking PRBS random patterns



### DELIVERABLES

- Front-end: Timing LIB, Verilog model, Sample test bench
- Back-end: Physical view LEF, GDSII layout, DRC, LVS
- Documentation : Datasheet and User's guide

# SAMSUNG Foundry

For more information, please contact us at [IP@silvaco.com](mailto:IP@silvaco.com).

©Copyright Silvaco, Inc. All rights reserved. Silvaco is a registered trademark of Silvaco, Inc. Samsung Foundry is a trademark of Samsung Electronics Co. Ltd. All other names mentioned herein are trademarks or registered trademark of their respective owners.

All information provided is for reference purposes only and may be changed without notice.

# SILVACO

HEADQUARTERS

2811 Mission College Boulevard, 6th Floor  
Santa Clara, CA 95054

Phone: 408-567-1000

Fax: 408-496-6080



CALIFORNIA

[sales@silvaco.com](mailto:sales@silvaco.com)  
408-567-1000

MASSACHUSETTS

[masales@silvaco.com](mailto:masales@silvaco.com)  
978-323-7901

TEXAS

[txsales@silvaco.com](mailto:txsales@silvaco.com)  
512-418-2929

JAPAN

[jpsales@silvaco.com](mailto:jpsales@silvaco.com)

EUROPE

[eusales@silvaco.com](mailto:eusales@silvaco.com)

FRANCE

[eusales@silvaco.com](mailto:eusales@silvaco.com)

KOREA

[krsales@silvaco.com](mailto:krsales@silvaco.com)

TAIWAN

[twsales@silvaco.com](mailto:twsales@silvaco.com)

SINGAPORE

[sgsales@silvaco.com](mailto:sgsales@silvaco.com)

CHINA

[cnsales@silvaco.com](mailto:cnsales@silvaco.com)

[WWW.SILVACO.COM](http://WWW.SILVACO.COM)

Rev 050119\_01

71156