

## 10-Bit RGB AFE

### Overview

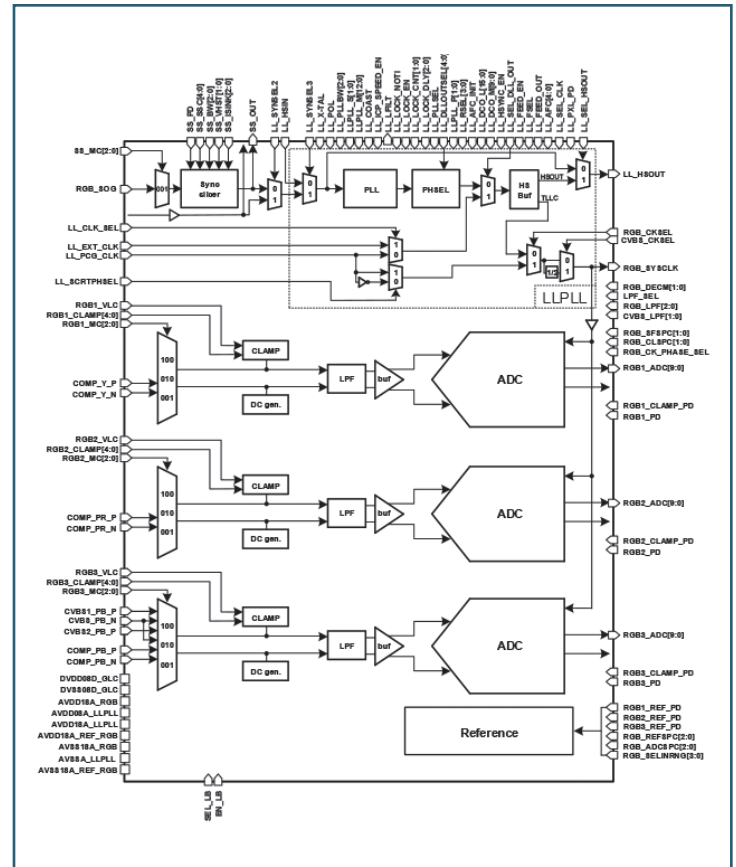
This 3-channel RGB analog front-end (AFE) is for digital television applications. It is a 1.8V/0.8V 10-bit 162MS/s 3-ch A-to-D for component (Y/Pb/Pr) video interfaces including three ADCs, three clamps, three analog buffers, a threshold controlled analog sync slicer, and a 162 MHz Line Locked PLL (LLPLL). It also supports 1-channel combo CVBS AFE, which is a 10-bit 57.272 MS/s A-to-D interface for Composite (CVBS).

### Key Features

- 14nm Low Power Plus (LN14LPP) CMOS device technology
- 1.8V, 0.8V dual power supply
- Resolution : 10-bit
- Conversion Rate : up to 162 MS/s (UXGA component), 57.272 MS/s (CVBS)
- Input Range : 1.0Vpp
- SNDR : > 48dB
- PLL reference input clock frequency : 24.576 MHz

### Deliverables

- DataSheet
- UserGuide
- Verilog model
- Timing DK
- CDL netlist
- Layout (GDS2 or OAS)



### Applications

- Mobile/Consumer/Network/IoT

# 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 080819\_02  
71126