EV12AD550
Evolution from revA to revB

June 2018

Purpose and Disclaimer

This document describes improvements considered on the next revision of the EV12AD550.
Fit, form and function of the devices remain the same. Rev A and Rev B are fully pin to pin compatible. Once fully validated and qualified, the EV12AD550B (Q3-2018) aims at fully replacing the EV12AD550A.

For any question, please contact hotline-bdc@e2v.com.

Feature improvement on EV12AD550B

1. Sampling Delay Adjust (SDA): increased range
- The revision A offers a SDA range of 10ps. It is improved up to 90ps in the revision B.

2. Multi-ADC synchronization: new features
- Revision B embeds a meta-stability detection flag through SPI on the SYNCTRIG input in SYNC mode.
- Revision B proposes a new feature to add one clock cycle delay to the timing restart after a SYNC.
Both these features aim at facilitating synchronization of multiple devices or system needing a deterministic sampling.

3. Performance: improved H2 & H3 linearity
- The linearity performance on the revision B is slightly improved compared to revision A, especially for high input levels.

4. Trigger propagation delay : identical to data path
- The time propagation delay between data path and trigger path is identical in the revision B.

5. Sampling Frequency
- The sampling frequency in revision B is extended up to 1.6GSps (production tests at 1.5 GSps).

6. Slight Iccd Current increase
- Compared to revision A, revision B presents a higher Iccd current increase around 50mA-80mA that represents less than 4% of the total power consumption. The thermal model is unchanged.

Bill of Material difference between rev A and rev B

Die	EV12AD550A	EV12AD550B
Die (internal reference)	Mask reference VN80A	Mask reference :VO02A
Underfill material (internal reference)	106923U	107532U