



SigmaDSP Digital Audio Processor with Flexible Audio Routing Matrix

Silicon Anomaly

ADAU1442/ADAU1445/ADAU1446

This anomaly list describes the known bugs, anomalies, and workarounds for the [ADAU1442/ADAU1445/ADAU1446](#).

Analog Devices, Inc., is committed, through future silicon revisions, to continuously improving silicon functionality. Analog Devices tries to ensure that these future silicon revisions remain compatible with your present software/systems by implementing the recommended workarounds outlined here.

ADAU1442/ADAU1445/ADAU1446 FUNCTIONALITY ISSUES

Silicon Status	Anomaly Sheet	No. of Reported Anomalies
Release	Rev. 0	1

FUNCTIONALITY ISSUES

Table 1. S/PDIF Transmitter Validity Bit Setting [er001]

Background	The S/PDIF transmitter outputs two channels of audio data directly from the DSP core at the core rate. It does not preserve or output any additional nonaudio information encoded in the S/PDIF input stream, such as the validity bit, user data, and channel status. The encoded nonaudio data bits in the S/PDIF output stream are hardwired internally to logic low values, except for the validity bit, which is set as logic high.
Issue	In the S/PDIF specification, a high validity bit indicates invalid data. For this reason, if the output from the ADAU1442/ADAU1445/ADAU1446 SPDIFO pin is connected directly to an S/PDIF receiver IC, the receiver may ignore or discard the transmitted audio data because the high validity bit indicates an error. Alternatively, some S/PDIF receivers (including the ADAU1442/ADAU1445/ADAU1446 SPDIFI pin) may ignore the validity bit and pass the data through.
Workaround	This issue cannot be avoided because the validity bit value is internally hardcoded. If an S/PDIF output is required in the system, audio data can instead be routed to the ADAU1442/ADAU1445/ADAU1446 serial ports and then to an I ² S-to-S/PDIF transceiver IC.
Related Issues	None.

SECTION 1. ADAU1442/ADAU1445/FUNCTIONALITY ISSUES

Reference Number	Description	Status
er001	S/PDIF transmitter validity bit setting	Open

Rev. 0

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.
Tel: 781.329.4700 www.analog.com
Fax: 781.461.3113 ©2011 Analog Devices, Inc. All rights reserved.

NOTES