

LVDS output levels for the UT200SpW4RTR SpaceWire Router

Table 1: Cross Reference of Applicable Products

Product Name:	Manufacturer Part Number	SMD #	Device Type	Internal PIC*
4-PORT SPACEWIRE ROUTER	UT200SpW4RTR	NA Note 1	NA	WD41A

Note 1: WD41A will not be sold against the SMD. All SMD shipments will be with Rev B Silicon.

*PIC = Product Identification Code

1.0 Overview

The UT200SpW4RTR 4-Port SpaceWire router contains an anomaly that prevents the device from complying with the Low Voltage Differential Signaling, LVDS, levels called out in ECSS-E-ST-50-12C Section 6.1. The SpaceWire Standard calls for a LVDS physical layer as defined in ANSI/TIA/EIA-644, Electrical Characteristics of Low Voltage Differential Signaling Interface Circuits. Revision A of the Aeroflex router does not comply with the levels called out for Differential Output Voltage (V_{OD} or V_T) and Offset Voltage (V_{OS}) sections 4.1.1 and 4.1.2 in ANSI/TIA/EIA-644. Additionally the UT200SpW4RTR does not show in family characteristics for High-Level Output Voltage (V_{OH}) when compared to other Aeroflex LVDS and SpaceWire products.

Table 2 below shows the Differential Output Voltage, Offset Voltage, and High-Level Output Voltage comparison between Revision A and the targeted Revision B limits for the UT200SpW4RTR.

SYMBOL	Parameter	Rev A		Rev B		Units
		MIN	MAX	MIN	MAX	
V_{OD}	Differential Output Voltage	362	434	250	400	mV
V_{OS}	Offset Voltage	1.38	1.53	1.125	1.450	V
V_{OH}	High-Level Output Voltage	--	1.75	--	1.625	V

Table 2. Anomaly comparison table between Rev A and Rev B of the UT200SpW4RTR

2.0 Corrective Action

This anomaly can not be prevented.

3.0 Rev A vs. Rev B

Revision A of the UT200SpW4RTR contains this anomaly. Revision B will correct this errata.