



APPLICATION NOTE

Cage Code: 06324	Document Description APPLICATION NOTE EL OCHITO RED S-PARAMETER MODELS	Document #: AN0023 Revision: D Page 1 of 6
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**APPLICATION NOTE
EL OCHITO RED S-PARAMETER MODELS**

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Cage Code: 06324	Document Description APPLICATION NOTE EL OCHITO RED S-PARAMETER MODELS	Document #: AN0023 Revision: D Page 2 of 6
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REVISION HISTORY

REV	DATE	REVISED PAGES	AUTHOR	REVISIONS
A	11/29/2023		L. Blackwell	Initial Release
B	4/17/2024		L. Blackwell	Consolidated Sections 4.1 and 4.2 with updated parameter table
C	5/20/2024		L. Blackwell	Updated touchtone links of table 2
D	2/13/2025		L. Blackwell	Updated pair length verbiage and replaced link and attachment for El Ochito Red RA to RA (long pair).s4p per DCN104353

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Cage Code: 06324	Document Description APPLICATION NOTE EL OCHITO RED S-PARAMETER MODELS	Document #: AN0023 Revision: D Page 3 of 6
-------------------------	--	--

Table of Contents

1.0	Purpose	4
2.0	Referenced Documents	4
3.0	Responsibility	4
4.0	El Ochito Red S-Parameters.....	5
4.1	Configurations	5
4.2	Port Assignments.....	6

Cage Code: 06324	Document Description APPLICATION NOTE EL OCHITO RED S-PARAMETER MODELS	Document #: AN0023 Revision: D Page 4 of 6
---------------------	--	--

1.0 Purpose

This document describes the El Ochito Red, board connector to board connector and cable to cable, electrical behavioral models.

2.0 Referenced Documents

Document Number/Name	Description
GT-23-047	El Ochito Red High Speed Test Report
792-001	Datalink Plug Connector Drawing, Socket Contacts, Series 792
792-002	Datalink Receptacle Connector Drawing, Pin Contacts, Series 792
792-005	Vertical PCB Mount Plug Connector Drawing, El Ochito Socket Contacts, Series 792
792-006	Vertical PCB Mount Receptacle Connector Drawing, El Ochito Pin Contacts, Series 792
792-009	Right Angle PCB Mount Plug Connector Drawing, El Ochito Socket Contacts, Series 792
792-010	Right Angle PCB Mount Receptacle Connector Drawing, El Ochito Pin Contacts, Series 792

Table 1. Reference Documents

3.0 Responsibility

This document is the responsibility of the Glenair High-Speed Datalink Group.

Cage Code: 06324	Document Description APPLICATION NOTE EL OCHITO RED S-PARAMETER MODELS	Document #: AN0023 Revision: D Page 5 of 6
---------------------	--	--

4.0 El Ochito Red S-Parameters

4.1 Configurations

The S-parameter models were obtained through testing PCB mounted straight connectors (part numbers 792-006PA-1P1MNNAC and 792-005SA-1P1MNNAC) and PCB mounted right angle connectors (part numbers 792-010PA-1P1MENAC and 792-009SA-1P1MNNAC). The test cable assemblies were also tested that consisted of a Series 792 plug connector, part number 792-001SA-1W1MN, with 858-049 contacts, and a Series 792 receptacle connector, part number 792-002PA-1W1MNN, with 858-050 contacts. The electrical effects of the test PCB and test cabling were de-embedded from the models. Refer to Glenair Test Report GT-23-047 for detailed testing information. The resulting models consist of S-parameters in Touchstone formatted files. The following table delineates the tested configurations and the resulting Touchstone files.

Configuration	Touchstone File
Straight PCB to Straight PCB	El Ochito Red ST to ST.s4p
Right-angle PCB to Right-angle PCB (short pair)	El Ochito Red RA to RA (short pair).s4p
Right-angle PCB to Right-angle PCB (long pair)	El Ochito Red RA to RA (long pair).s4p
Cable Assembly to Cable Assembly	El Ochito CA to CA.s4p
Right-angle PCB to Straight PCB (short pair)	El Ochito Red RA to ST (short pair).s4p
Right-angle PCB to Straight PCB (long pair)	El Ochito Red RA to ST (long pair).s4p
Straight PCB to Cable Assembly	El Ochito Red ST to CA.s4p
Right-angle PCB to Cable Assembly (short pair)	El Ochito RA to CA (short pair).s4p
Right-angle PCB to Cable Assembly (long pair)	El Ochito RA to CA (long pair).s4p

Table 2. Test Configuration to Touchstone File Mapping

There are two files in the table above associated with each right-angle configuration. Due to the physical layout of the right-angle connector, pair positions 1/2 and 7/8 are longer than pair positions 3/4 and 5/6.

In addition to direct downloadable links from the table above, the files of Table 2 are supplied as attachments to this document.

Cage Code: 06324	Document Description APPLICATION NOTE EL OCHITO RED S-PARAMETER MODELS	Document #: AN0023 Revision: D Page 6 of 6
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4.2 Port Assignments

The Touchstone files utilize the following port assignments:

