



APPLICATION NOTE

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**APPLICATION NOTE
EL OCHITO RED S-PARAMETER MODELS**

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REVISION HISTORY

REV	DATE	REVISED PAGES	AUTHOR	REVISIONS
A	11/29/2023		L. Blackwell	Initial Release

Disclaimer

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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.

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

Table 2. Test Configuration to Touchstone File Mapping

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4.2 GHSM S-parameter Model Package

The following files are supplied as attachments to this document.

1. El Ochito Red ST to ST.s4p
2. El Ochito Red RA PCB to RA PCB (short pair).s4p
3. El Ochito Red RA PCB to RA PCB (long pair).s4p
4. El Ochito Red CA to CA.s4p
5. El Ochito Red RA PCB to ST PCB (short pair).s4p
6. El Ochito Red RA PCB to ST PCB (long pair).s4p
7. El Ochito Red ST PCB to RA PCB (short pair).s4p
8. El Ochito Red ST PCB to RA PCB (long pair).s4p
9. El Ochito Red ST PCB to CA.s4p
10. El Ochito RA PCB to CA.s4p

4.3 Port Assignments

The Touchstone files utilize the following port assignments:

