



### APPLICATION NOTE

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## APPLICATION NOTE SPEEDMASTER S-PARAMETER MODELS

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### APPLICATION NOTE SPEEDMASTER S-PARAMETER MODELS

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## REVISION HISTORY

| REV | DATE    | REVISED PAGES | AUTHOR       | REVISIONS       |
|-----|---------|---------------|--------------|-----------------|
| 1   | 3/28/24 |               | L. Blackwell | Initial Release |
|     |         |               |              |                 |
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## 1.0 Purpose

This document describes the SpeedMaster electrical behavioral models.

## 2.0 Referenced Documents

| Document Number/Name | Description                               |
|----------------------|---|
| 858-100              | SpeedMaster 10G Ethernet Size #22D Socket |
| 858-101              | SpeedMaster 10G Ethernet Size #22D Pin    |
| SM_CABLED.s4p        | Cabled SpeedMaster Touchstone File        |

**Table 1. Reference Documents**

## 3.0 Responsibility

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

## 4.0 SpeedMaster S-Parameters

### 4.1 Configurations

The S-parameter models were obtained through testing mated SpeedMaster cable assemblies (contacts 858-100 and 858-101). The electrical effects of the test cabling were de-embedded from the models. The resulting model consist of S-parameters in aTouchstone formatted file. The following table delineates the tested configuration and the resulting Touchstone file.

| Configuration           | Touchstone File |
|-------------------------|-----------------|
| Cable to Cable Assembly | SM_CABLED.s4p   |
|                         |                 |

**Table 2. Test Configuration to Touchstone File Mapping**

|                     |  |  |
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## 4.2 SpeedMaster S-parameter Model Package

The following files are supplied as attachments to this document.

1. Touchstone file SM\_CABLED.s4p

## 4.3 Port Assignments

The Touchstone files utilize the following port assignments:

