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Engineers***

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**ENGINEERING COMMITTEE**  
**Hybrid Management Sub-Layer Subcommittee**

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**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 110 2011**

**Hybrid Fiber Coax Outside Plant Status Monitoring:  
Alternative Power Supply to Transponder Interface Bus  
(PSTIB) For HMS Transponders**

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# TABLE OF CONTENTS

<b>TABLE OF CONTENTS .....</b>	<b>II</b>
<b>LIST OF FIGURES .....</b>	<b>II</b>
<b>LIST OF TABLES .....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>1 INTRODUCTION.....</b>	<b>1</b>
<b>2 INCLUSION BY REFERENCE.....</b>	<b>1</b>
2.1 SECTION 3.1.3 OF ANSI/SCTE 25-3 2002 (FORMERLY HMS 022). .....	1
2.2 SECTION 3.1.4 OF ANSI/SCTE 25-3 2002 (FORMERLY HMS 022). .....	1

## LIST OF TABLES

Table: RJ-45 Connector Pin Assignment

# 1 Introduction

The Power Supply to Transponder Interface Bus (PSTIB) was defined by ANSI/SCTE 25-3 2002 (formally HMS 022). Some applications have been identified that may have under certain conditions a powering requirement which exceeds those defined by HMS 022. This specification will not delete or replace the ANSI/SCTE 25-3 2010 specification but will be a supplement to and will coexist with that document

## 2 Inclusion by Reference

This document incorporates by reference, all requirements of ANSI/SCTE 25-3 2010 except Sections 3.1.3 and 3.1.4 which are replaced by those in this section.

### 2.1 Section 3.1.3 of ANSI/SCTE 25-3 2010

Section 3.1.4 of ANSI/SCTE 25-3 2010 shall be replaced by the following in its entirety:

#### 3.1.3 Connector Signals

Connector pins shall support signaling as described in Table 3.

**Table 3: RJ-45 Connector Pin Assignment**

Connected Pin Number	Signal
1, 8	Ground
2, 7	+24 VDC $\pm$ 15% at 4.8 watts
3, 6	RS-485 (+)
4, 5	RS-485 (-)

### 2.2 Section 3.1.4 of ANSI/SCTE 25-3 2010

Section 3.1.4 of ANSI/SCTE 25-3 2010 shall be replaced by the following in its entirety.

#### 3.1.4 Transponder Power

1. The power supply shall implement appropriate isolation and system grounding such that the communication interface and transponder power remains functional under the operating conditions defined herein.
2. The transponder shall be bonded to chassis ground directly and/or through the system coaxial cable sheath.

3. Optionally, transponder power may be bonded to chassis ground at the power supply interface. The power supply vendor shall determine this.
4. The power supply shall implement appropriate over-current and short-circuit protection of transponder power such that the communication interface and transponder power remain functional under the operating conditions defined herein.
5. Up to eight (8) power supplies may be connected in parallel using the RS-485 interface.
6. Under the operating requirements defined herein, the Power Supply shall be able to supply 4.8 watts of continuous power to the PSTIB.
7. Under the operating requirements defined herein, the Transponder shall draw no more than 4.8 watts of power from the PSTIB.
8. During startup, while the power supply is coming up to the minimum voltage requirement, the transponder shall limit inrush current to no more than 250mA. and power draw to no more than 4.8 watts.
9. During startup the Power Supply shall achieve the minimum voltage requirement within 1 second.