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ENGINEERING COMMITTEE
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AMERICAN NATIONAL STANDARD

ANSI/SCTE 137-2 2007

DOCSIS Downstream External PHY Interface for Modular

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1 SCOPE

This Standard is part of the DOCSIS® family of Standards that define a Modular Cable Modem Termination System (M-CMTS™) architecture for head-end components that comply with DOCSIS.

The DOCSIS Standards[DOCSIS-RFI] define the requirements for the two fundamental components that comprise a high-speed data-over-cable system: the cable modem (CM) and the cable modem termination system (CMTS). The M-CMTS architecture was designed as an extension to the DOCSIS Standards to allow for flexibility and independent scaling of certain CMTS functions, and to allow operators to more efficiently use available network resources.

One of the key elements of the M-CMTS architecture is the separation of the downstream physical layer QAM modulation and up-conversion functions from the CMTS, and the placement of that functionality into an "Edge-QAM" (EQAM) device. This separation allows for the development of EQAM products that support both video and DOCSIS, which in turn allows operators to use the same network resources to support multiple types of services such as data, voice, and video.

This document defines an interface known as the Downstream External PHY Interface (DEPI) and associated protocol requirements for the transport of downstream user data between the "M-CMTS Core" and the EQAM. It describes the characteristics of the DEPI interface, provides requirements that must be met by the M-CMTS Core and the EQAM, and also describes various aspects of technical issues that are involved in the implementation and deployment of a DOCSIS system using the M-CMTS architecture.

A list of the documents in the Modular CMTS Interface Standards family is provided below.

{Editor's note: To be updated to SCTE standards when designations are available}

Designation	Title
SCTE 137-2 2007	DOCSIS Downstream External PHY Interface for Modular
SCTE 137-1 2007	DOCSIS Timing Interface for Cable Modem Termination Systems
SCTE 139 2007	Edge Resource Manager Interface for Modular Cable Modem Termination Systems
SCTE 141 2007	Operations Support System Interface for Modular Cable Modem Termination Systems

2 REFERENCES

2.1 Normative References

All references are subject to revision; users of this specification are therefore encouraged to investigate the possibility of applying the most recent edition of the standards and other references listed below.

[DOCSIS-RFI]	ANSI/SCTE 79-1 2003 (formerly DSS 02-01) DOCS 2.0 Part 1: Radio Frequency Interface
[SCTE 133]	Downstream RF Interface for Cable Modem Termination Systems. 2007
[SCTE 137-1]	DOCSIS Timing Interface for Cable Modem Termination Systems, 2007.
[IANA-PORTS]	IANA, "Port Numbers", June 29, 2004.
[IEEE-802.1Q]	IEEE Std 802.1Q™-2003, "Virtual Bridged Local Area Networks", May 7, 2003.