AMERICAN NATIONAL STANDARD

ANSI/SCTE 154-1 2018

Digital Video Common MIB
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SCOPE
This document is identical to SCTE 154-1 2008 except for informative components which may have been updated such as the title page, NOTICE text, headers and footers. No normative changes have been made to this document.

This document provides the branch object identifiers for each of the MIBs within the SCTE HMS DIGITAL VIDEO COMMON MIB tree. The HMS DIGITAL COMMON MIB provides standard common MIB definitions for all HMS inside plant digital devices.

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NORMATIVE REFERENCE
IETF RFC 2571 SNMP-FRAMEWORK-MIB
IETF RFC 2578 SNMPv2-SMI
IETF RFC 2579 SNMPv2-TC
IETF RFC 2580 SNMPv2-CONF
IETF RFC 4133 ENTITY-MIB
SCTE 36 2002R2007 (formerly HMS028) SCTE-ROOT
SCTE 37 2008 SCTE-HMS-ROOTS Management Information Base (MIB)
SCTE 38-11 2008 SCTE-HMS-HEADENDIDENT-MIB
SCTE 154-5 2008 HMS-HEADENDIDENT-TC-MIB

INFORMATIVE REFERENCE
None

TERMS AND DEFINITIONS
This document defines the following terms:

Management Information Base (MIB) – the specification of information in a manner that allows standard access through a network management protocol, specifically SNMP.

REQUIREMENTS
This section defines the mandatory syntax of the HE-DIGITAL-COMMON-MIB. It follows the IETF Simple Network Management Protocol (SNMP) for defining managed objects. This mib falls under the SCTE-HMS-ROOTS mib defined by the SCTE Standards HMS Subcommittee.

To avoid issues related to device security and possible user contention, this MIB is only read-only. Device manufacturers are expected to provide device provisioning and control as a separate “out of band” service via protocols of their choice.

This MIB defines the Digital Branches for heDigitalQAM and heDigitalMPEG for compile purposes. Each mib file contains the entire definition to parse to avoid having to parse in all SCTE mib files.
The HE-DIGITAL branch under SCTE-HMS-ROOTS supports definitions from the following MIBs in lexicographical order:

ENTITY-MIB
HMS-ROOTS
SCTE-HMS-ROOTS
SCTE-HMS-HEADENDIDENT-MIB
SCTE-HE-DIGITAL-COMMON-MIB
SCTE-HMS-QAM-MIB
SCTE-HMS-MPEG-MIB
SCTE-HMS-MPEG-ENCODER-MIB

The syntax is given below.

SCTE-HE-DIGITAL-COMMON-MIB DEFINITIONS ::= BEGIN

IMPORTS
  enterprises, MODULE-IDENTITY, OBJECT-TYPE, OBJECT-IDENTITY
  FROM SNMPv2-SMI
  DisplayString, DateAndTime
  FROM SNMPv2-TC
  MODULE-COMPLIANCE, OBJECT-GROUP
  FROM SNMPv2-CONF
  entPhysicalIndex
  FROM ENTITY-MIB
  heDigital
  FROM SCTE-HMS-HEADENDIDENT-MIB -- see SCTE 38-11 (formerly HMS114)
  HeClockSource, HeResetValue, HeTenthCentigrade
  FROM SCTE-HMS-HEADENDIDENT-TC-MIB;

heDigitalCommonMIB MODULE-IDENTITY
  LAST-UPDATED "200807210000Z"
  ORGANIZATION "SCTE HMS Working Group"
  CONTACT-INFO "SCTE HMS Subcommittee, Chairman
  mail to: standards@scte.org"

  DESCRIPTION
  "The MIB module is for representing general information
  about HeadEnd Digital equipment present(or indoor)
  and is supported by an SNMP agent. heDigital is supported in
  HMS114R11.mib (SCTE 38-11)"

  REVISION "200807210000Z"
  DESCRIPTION
  "Updated file with Comments from meeting 7/9/08
  1. Update IMPORTS clause to reference:
     SCTE-HMS-HEADENDIDENT-TC-MIB for HeTenthCentigrade
     Remove Integer32."

  REVISION "200806100000Z"
  DESCRIPTION
"Added tree branches for MPEG and QAM so MIB would parse with any compiler."

REVISION "200712180000Z"
DESCRIPTION
"Modifications due to voting comments
1. Reordered MIB tree to fit under the heDigital branch.
2. Took out unused imports.
3. added temperature.
4. added compliance statement and made everything optional."

REVISION "200709250000Z"
DESCRIPTION
"Took out everything except the most basic place holders for future additions."

::= { enterprises scteRoot(5591) scteHmsTree (1) insidePlantIdent (11)
heDigital(5) 2 }

heDigitalCommonMIBObjects OBJECT IDENTIFIER ::= {heDigitalCommonMIB 1 }
heDigitalQAM OBJECT IDENTIFIER ::= {heDigital 3 }
heDigitalMPEG OBJECT IDENTIFIER ::= {heDigital 4 }

-- MIB contains 3 groups
heDigitalCommonConfig OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 1 }
heDigitalCommonStatus OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 2 }
heDigitalCommonAlarms OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 3 }
heDigitalCommonLog OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 4 }

-- The Common Tables
heDigitalCommonClockTable OBJECT-TYPE
SYNTAX SEQUENCE OF HeDigitalCommonClockEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A table containing information about headend (or indoor) equipment."
::= { heDigitalCommonConfig 1 }

heDigitalCommonClockEntry OBJECT-TYPE
SYNTAX HeDigitalCommonClockEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Information about particular headend equipment."
INDEX { entPhysicalIndex }
::= { heDigitalCommonClockTable 1 }

HeDigitalCommonClockEntry ::= SEQUENCE {
  heDigitalCommonTime DateAndTime,
  heDigitalCommonClockSource HeClockSource
}
heDigitalCommonTime OBJECT-TYPE
SYNTAX DateAndTime
MAX-ACCESS read-write
STATUS current
DESCRIPTION "Real time clock value for this module."
::= { heDigitalCommonClockEntry 1 }

heDigitalCommonClockSource OBJECT-TYPE
SYNTAX HeClockSource
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Real time clock source for this module."
::= { heDigitalCommonClockEntry 2 }

heDigitalCommonResetTable OBJECT-TYPE
SYNTAX SEQUENCE OF HeDigitalCommonResetEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "A table containing information about headend (or indoor) equipment."
::= { heDigitalCommonConfig 2 }

heDigitalCommonResetEntry OBJECT-TYPE
SYNTAX HeDigitalCommonResetEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "Software / Hardware Reset of a specific Entity."
INDEX { entPhysicalIndex }
::= { heDigitalCommonResetTable 1 }

HeDigitalCommonResetEntry ::= SEQUENCE {
heDigitalCommonSoftwareReset HeResetValue,
heDigitalCommonHardwareReset HeResetValue,
heDigitalCommonWarmReset HeResetValue
}

heDigitalCommonSoftwareReset OBJECT-TYPE
SYNTAX HeResetValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION "All running Software will reset. This function will initiate a cold start trap depending on the device. Software reset functions will be vendor specific."
::= { heDigitalCommonResetEntry 1 }

heDigitalCommonHardwareReset OBJECT-TYPE
SYNTAX      HeResetValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
"The Hardware for this device will reset. This function will
initiate
a cold start trap from the device."
::= { heDigitalCommonResetEntry 2 }

heDigitalCommonWarmReset OBJECT-TYPE
SYNTAX      HeResetValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
"All running Software will reset. This function will initiate
a warm start trap on the device. Software reset
functions will be vendor specific. No configuration parameters
can change during a Software Warm Start."
::= { heDigitalCommonResetEntry 3 }

heDigitalCommonTempTable OBJECT-TYPE
SYNTAX      SEQUENCE OF HeDigitalCommonTempEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
"A table containing information about headend (or indoor)
equipment temperature values."
::= { heDigitalCommonStatus 1 }

heDigitalCommonTempEntry OBJECT-TYPE
SYNTAX      HeDigitalCommonTempEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
"Information about particular headend equipment."
INDEX       { entPhysicalIndex }
::= { heDigitalCommonTempTable 1 }

HeDigitalCommonTempEntry ::= SEQUENCE {
  heDigitalCommonTemperature                 HeTenthCentigrade
}

heDigitalCommonTemperature OBJECT-TYPE
SYNTAX      HeTenthCentigrade
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
"Temperature measured inside the headend equipment.

This object must provide for the alarm management capabilities
with a corresponding entry in the propertyTable of
SCTE-HMS-PROPERTY-MIB (HMS026)."
An alarm shall be recorded as an entry in the currentAlarmTable of SCTE-HMS-PROPERTY-MIB (HMS026).

A log record shall be added as an entry in the heCommonLogTable.

An heCommonAlarmEvent notification shall be sent.
::= { heDigitalCommonTempEntry 1 }

-- Conformance information
heDigitalCommonConformance OBJECT IDENTIFIER ::= {heDigitalCommonMIB 2 }
heDigitalCommonCompliances OBJECT IDENTIFIER ::= { heDigitalCommonConformance 1 }

heDigitalCompliance   MODULE-COMPLIANCE
  STATUS     current
  DESCRIPTION
   "These objects describe the support level for QAM."
  MODULE
   GROUP heDigitalConfigGroup
   DESCRIPTION
    "The heDigitalConfigGroup is unconditionally optional"
   GROUP heDigitalStatusGroup
   DESCRIPTION
    "The heDigitalStatusGroup is unconditionally optional"
::= { heDigitalCommonCompliances 1 }

-- MIB Groupings
heDigitalCommonGroups OBJECT IDENTIFIER ::= {heDigitalCommonConformance 2}

heDigitalConfigGroup  OBJECT-GROUP
  OBJECTS { heDigitalCommonTime, heDigitalCommonClockSource,
          heDigitalCommonSoftwareReset,
          heDigitalCommonHardwareReset, heDigitalCommonWarmReset }
  STATUS     current
  DESCRIPTION
   "Configuration that is common to network devices."
::= { heDigitalCommonGroups 1 }

heDigitalStatusGroup  OBJECT-GROUP
  OBJECTS { heDigitalCommonTemperature }
  STATUS     current
  DESCRIPTION
   "Status that is common to network devices."
::= { heDigitalCommonGroups 2 }

END