

# **SCTE** | **STANDARDS**

---

**Network Operations Subcommittee**

---

**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 84-2 2017 (R2022)**

**HMS Inside Plant  
Management Information Base (MIB)  
SCTE-HMS-HE-POWER-SUPPLY-MIB**

## NOTICE

The Society of Cable Telecommunications Engineers (SCTE) Standards and Operational Practices (hereafter called “documents”) are intended to serve the public interest by providing specifications, test methods and procedures that promote uniformity of product, interoperability, interchangeability, best practices, and the long term reliability of broadband communications facilities. These documents shall not in any way preclude any member or non-member of SCTE from manufacturing or selling products not conforming to such documents, nor shall the existence of such standards preclude their voluntary use by those other than SCTE members.

SCTE assumes no obligations or liability whatsoever to any party who may adopt the documents. Such adopting party assumes all risks associated with adoption of these documents and accepts full responsibility for any damage and/or claims arising from the adoption of such documents.

NOTE: The user’s attention is called to the possibility that compliance with this document may require the use of an invention covered by patent rights. By publication of this document, no position is taken with respect to the validity of any such claim(s) or of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, then details may be obtained from the standards developer. SCTE shall not be responsible for identifying patents for which a license may be required or for conducting inquiries into the legal validity or scope of those patents that are brought to its attention.

Patent holders who believe that they hold patents which are essential to the implementation of this document have been requested to provide information about those patents and any related licensing terms and conditions. Any such declarations made before or after publication of this document are available on the SCTE web site at <https://scte.org>.

All Rights Reserved  
© 2022 Society of Cable Telecommunications Engineers, Inc.  
140 Philips Road  
Exton, PA 19341

### DOCUMENT TYPES AND TAGS

Document Type: Specification

Document Tags:

- |   |                                    |  |
|---|------------------------------------|--|
| <input type="checkbox"/> Test or Measurement          | <input type="checkbox"/> Checklist | <input type="checkbox"/> Facility                  |
| <input type="checkbox"/> Architecture or Framework    | <input type="checkbox"/> Metric    | <input checked="" type="checkbox"/> Access Network |
| <input type="checkbox"/> Procedure, Process or Method | <input type="checkbox"/> Cloud     | <input type="checkbox"/> Customer Premises         |

### DOCUMENT RELEASE HISTORY

Release	Date
SCTE 84-2 2004	05/21/2004
SCTE 84-2 2009	07/10/2009
SCTE 84-2 2017	08/28/2017

Note: Standards that are released multiple times in the same year use: a, b, c, etc. to indicate normative balloted updates and/or r1, r2, r3, etc. to indicate editorial changes to a released document after the year.

Note: This document is a reaffirmation of SCTE 84-2 2017. No substantive changes have been made to this document. Information components may have been updated such as the title page, NOTICE text, headers, and footers.

## CONTENTS

<b>SCOPE</b> .....	<b>5</b>
<b>COPYRIGHT</b> .....	<b>5</b>
<b>NORMATIVE REFERENCE</b> .....	<b>5</b>
<b>INFORMATIVE REFERENCE</b> .....	<b>5</b>
<b>TERMS AND DEFINITIONS</b> .....	<b>5</b>
<b>REQUIREMENTS</b> .....	<b>5</b>

## SCOPE

This document is identical to SCTE 84-2 2009 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 MIB definitions for HMS Indoor Power Supplies present in the headend (or indoor) and supported by a SNMP agent.

## COPYRIGHT

The MIB definition found in this document may be incorporated directly in products without further permission from the copyright owner, SCTE.

## NORMATIVE REFERENCE

IETF RFC 1907 SNMPv2-MIB  
IETF RFC 2578 SNMPv2-SMI  
IETF RFC 2579 SNMPv2-TC  
IETF RFC 2580 SNMPv2-CONF  
IETF RFC 2737 ENTITY-MIB  
SCTE 36 SCTE-ROOT  
SCTE 37 SCTE-HMS-ROOTS  
SCTE 38-11 SCTE-HMS-HEADENDIDENT-MIB  
SCTE 38-1 SCTE-HMS-HE-PROPERTY-MIB  
SCTE 84-1 SCTE-HMS-HE-COMMON-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.

## REQUIREMENTS

This section defines the mandatory syntax of the SCTE-HMS-HE-POWER-SUPPLY-MIB. It follows the IETF Simple Network Management Protocol (SNMP) for defining managed objects.

ANSI/SCTE 84-2 2017 (R2022)

The syntax is given below.

SCTE-HMS-HE-POWER-SUPPLY-MIB DEFINITIONS ::= BEGIN

IMPORTS

OBJECT-TYPE, MODULE-IDENTITY, Unsigned32  
FROM SNMPv2-SMI  
OBJECT-GROUP, MODULE-COMPLIANCE  
FROM SNMPv2-CONF  
DisplayString  
FROM SNMPv2-TC  
hePowerSupply, HeTenthVolt, HeHundredthWatts,  
HeMilliAmp  
FROM SCTE-HMS-HEADENDIDENT-MIB  
entPhysicalIndex  
FROM ENTITY-MIB;

hePowerSupplyMIB MODULE-IDENTITY

LAST-UPDATED "200403250410Z"  
ORGANIZATION  
"SCTE HMS Working Group"

CONTACT-INFO  
"SCTE HMS Subcommittee, Chairman  
mail to: standards@scte.org"

DESCRIPTION  
"The MIB module is for representing a power supply present in the  
headend (or indoor) and supported by a SNMP agent."

::= { hePowerSupply 1 }

hePsMIBObjects OBJECT IDENTIFIER ::= { hePowerSupplyMIB 1 }

-- Conformance Information

hePsMIBConformance OBJECT IDENTIFIER ::= { hePowerSupplyMIB 2 }  
hePsMIBCompliances OBJECT IDENTIFIER ::= { hePsMIBConformance 1 }  
hePsMIBGroups OBJECT IDENTIFIER ::= { hePsMIBConformance 2 }

-- The Power Supply Unit Table

hePsUnitTable OBJECT-TYPE  
SYNTAX SEQUENCE OF HePsUnitEntry  
MAX-ACCESS not-accessible  
STATUS current  
DESCRIPTION

"A table containing information about headend (or indoor plant)  
power supplies. These power supplies could be, for example,  
plug-in modules for a chassis."

::= { hePsMIBObjects 1 }

## hePsUnitEntry OBJECT-TYPE

SYNTAX HePsUnitEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION

"Information about each Power Supply in the subsystem. Each Power Supply unit will have an entry in the Entity MIB supported for this agent."  
 INDEX { entPhysicalIndex }  
 ::= { hePsUnitTable 1 }

## HePsUnitEntry ::= SEQUENCE {

hePsUnitCurrentIN  
 HeMilliAmp,  
 hePsUnitPowerIN  
 HeHundredthWatts,  
 hePsUnitDescription  
 DisplayString,  
 hePsUnitVoltageIN  
 HeTenthVolt  
 }

## hePsUnitCurrentIN OBJECT-TYPE

SYNTAX HeMilliAmp  
 UNITS "milliamperes"  
 MAX-ACCESS read-only  
 STATUS current  
 DESCRIPTION

"Scaled representation of the input current (AC or DC) for this power supply. This is an RMS value for AC currents.

This object must provide for the alarm management capabilities with a corresponding entry in the propertyTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

An alarm shall be recorded as an entry in the currentAlarmTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

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

An heCommonAlarmEvent notification shall be sent."

::= { hePsUnitEntry 1 }

## hePsUnitPowerIN OBJECT-TYPE

SYNTAX HeHundredthWatts



UNITS "hundredths of a watt"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Scaled representation of the input power (AC or DC) for this power supply. This is an RMS value for AC powers.

This object must provide for the alarm management capabilities with a corresponding entry in the propertyTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

An alarm shall be recorded as an entry in the currentAlarmTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

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

An heCommonAlarmEvent notification shall be sent."

::= { hePsUnitEntry 2 }

hePsUnitDescription OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This string will describe the model type of the Power Supply.

Examples are AC+110, AC+220, DC-48, DC+48. This model type

should

match the entry in the Entity mib for this object."

::= { hePsUnitEntry 3 }

hePsUnitVoltageIN OBJECT-TYPE

SYNTAX HeTenthVolt

UNITS "tenths of a volt"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Scaled representation of the input voltage (AC or DC) for this power supply. This is an RMS value for AC voltages.

This object must provide for the alarm management capabilities with a corresponding entry in the propertyTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

An alarm shall be recorded as an entry in the currentAlarmTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

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

An heCommonAlarmEvent notification shall be sent."

::= { hePsUnitEntry 4 }

-- The Power Supply Output Table

hePsOutputTable OBJECT-TYPE

SYNTAX SEQUENCE OF HePsOutputEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A list of monitorable parameter entries for power supply outputs."

::= { hePsMIBObjects 2 }

hePsOutputEntry OBJECT-TYPE

SYNTAX HePsOutputEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry containing management information applicable to a particular power supplies outputs."

INDEX { entPhysicalIndex,  
hePsOutputIndex }

::= { hePsOutputTable 1 }

HePsOutputEntry ::= SEQUENCE {

hePsOutputIndex

Unsigned32,

hePsOutputVoltage

HeTenthVolt,

hePsOutputCurrent

HeMilliAmp,

hePsOutputPower

HeHundredthWatts

}

hePsOutputIndex OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An arbitrary value which uniquely identifies each entry."

::= { hePsOutputEntry 1 }

hePsOutputVoltage OBJECT-TYPE

SYNTAX HeTenthVolt

UNITS "tenths of a volt"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Scaled representation of the output voltage for this power supply output.

voltage If a single PHYSICAL power supply provides multiple voltages, each shall have its own entry in this table.

This object must provide for the alarm management capabilities with a corresponding entry in the propertyTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

An alarm shall be recorded as an entry in the currentAlarmTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

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

An heCommonAlarmEvent notification shall be sent."

::= { hePsOutputEntry 2 }

hePsOutputCurrent OBJECT-TYPE

SYNTAX HeMilliAmp

UNITS "milliamperes"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Scaled representation of the output current for this power supply output.

This object must provide for the alarm management capabilities with a corresponding entry in the propertyTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

An alarm shall be recorded as an entry in the currentAlarmTable of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

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

An heCommonAlarmEvent notification shall be sent."

::= { hePsOutputEntry 3 }

hePsOutputPower OBJECT-TYPE

SYNTAX HeHundredthWatts

```

UNITS      "hundredths of a watt"
MAX-ACCESS read-only
STATUS    current
DESCRIPTION
    "Scaled representation of the output power for this power supply output.

    This object must provide for the alarm management capabilities
    with a corresponding entry in the propertyTable of
    SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

    An alarm shall be recorded as an entry in the currentAlarmTable
    of SCTE-HMS-PROPERTY-MIB (ANSI/SCTE 38-1).

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

    An heCommonAlarmEvent notification shall be sent."
 ::= { hePsOutputEntry 4 }

-- Compliance statements

hePsCompliance MODULE-COMPLIANCE
  STATUS    current
  DESCRIPTION
    "The minimum compliance statement for indoor power supplies."
  MODULE
    MANDATORY-GROUPS { hePsOutputMandatoryGroup }
    GROUP hePsUnitGroup
    DESCRIPTION
      "The hePsUnitGroup is unconditionally optional."
    GROUP hePsOutputGroup
    DESCRIPTION
      "The hePsOutputGroup is unconditionally optional."
 ::= { hePsMIBCompliances 1 }

-- this module

hePsOutputMandatoryGroup OBJECT-GROUP
  OBJECTS { hePsOutputVoltage }
  STATUS    current
  DESCRIPTION
    "A mandatory collection of objects that provide information
    applicable to a particular power supply's output
    parameters."
 ::= { hePsMIBGroups 1 }

hePsUnitGroup OBJECT-GROUP

```

```
OBJECTS { hePsUnitVoltageIN,
          hePsUnitCurrentIN,
          hePsUnitPowerIN,
          hePsUnitDescription }
STATUS   current
DESCRIPTION
    "A collection of objects that provide information applicable to a
    particular power supply's input parameters."
::= { hePsMIBGroups 2 }

hePsOutputGroup OBJECT-GROUP
OBJECTS { hePsOutputCurrent,
          hePsOutputPower }
STATUS   current
DESCRIPTION
    "A collection of objects that provide information applicable to a
    particular power supply's output parameters."
::= { hePsMIBGroups 3 }

END
```