

INTERNET-DRAFT

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**Definitions of Managed Objects for the
InfiniBand Baseboard Management Agent (BMA)**

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Abstract

InfiniBand Architecture (IBA) specifies a high speed, channel based, switched fabric architecture that delivers scalable performance in data centers.

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it defines objects for managing InfiniBand Baseboard Management Agents (BMA).

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1. Introduction

This document defines a MIB for the InfiniBand Baseboard Management Agent (BMA).

The InfiniBand Architecture [[INFINIV1](#)] is defined by the InfiniBand Trade Association. InfiniBand is designed to provide low latency high bandwidth interconnect in a computing environment. This document will define the objects related to managing the Baseboard Management Agent on each device in an InfiniBand Fabric.

In the InfiniBand context, Baseboard Management is the monitoring and control of important physical resources of a network entity. These resources include reading chassis voltage and temperature, recognition of the insertion and removal of an InfiniBand module, access to "Vital Product Data (VPD)", additional environmental variables and LEDs, remote control of power state, and several other related management functions. The BMA is mandatory for every InfiniBand network entity.

A network entity is considered "[Baseboard Management] manageable" if it provides basic information about itself and where it is located. This information is called the "Vital Product Data (VPD)".

Within the InfiniBand network entity, the group of functionality that implements a BMA is called the "Baseboard Management Unit (BMU)". The InfiniBand architecture defines three types of BMUs.

1. A Baseboard Management compliant module that includes a Module Management Entity (MME), and InfiniBand Management Link (IB-ML) agent, and (optionally) a Chassis Management Entity (CME). This is called an "IB-Module" or, simply, a MODULE. The Module is protocol-aware and can send and receive Baseboard Management GMPs. The GMPs are addressed using the LID of any endpoint of the IB device on the Module.
2. A NON-MODULE does not have an MME or IB-ML agent. It does not conform to the Baseboard Management form factors or other compliances.
3. A MANAGED CHASSIS contains a CME. The Managed Chassis can contain a switch that handles the sending and receiving of the Baseboard Management GMPs. These GMPs are addressed to the LID of the switch. The Managed Chassis contains slots, modules, nodes, and ports.

In-band management Baseboard Management messages are messages that traverse the InfiniBand fabric between the Baseboard Manager and the BMA. After connecting to the fabric, the BMA is able to send and

receive GMP packets on QP1 on the General Services Interface (GSI).

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in

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this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

[2. The Internet-Standard Management Framework](#)

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to [section 7 of RFC 3410](#) [[RFC3410](#)].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, [RFC 2578](#) [[RFC2578](#)], STD 58, [RFC 2579](#) [[RFC2579](#)] and STD 58, [RFC 2580](#) [[RFC2580](#)].

[3. Structure of the MIB](#)

This section describes the structure of the IPOIB BMA MIB.

[3.1. Overview](#)

The SNMP management of the BMA involves the monitoring of key management attributes. The BMA is mandatory on all InfiniBand nodes.

[3.2. Discussion of MIB Groups](#)

The BMA MIB is divided into two basic groups: MIB objects and the conformance section.

[3.3. The BMA MIB Objects](#)

There are three general groups of BMA MIB objects. The Baseboard Management Unit Info Group, the Baseboard Key Info Group, and the Vital Product Data (VPD) Group.

[3.3.1. The Baseboard Management Unit Info Group](#)

This group provides top-level information about the BMA Baseboard Management Unit (BMU).

[3.3.2. The Baseboard Key \(B_Key\) Info Group](#)

This group provides information about the Baseboard Management key.

3.3.3. The Vital Product Data (VPD) Group

This group provides information about the Vital Product Data for the Basebaord Managment Unit.

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3.4. The BMA Conformance Group

The BMA Conformance Group lists the possible compliances for various types of InfiniBand nodes (basic and full), and the units of conformance that define the constituent object groups.

3.4.1. BMA Compliance Groups

The BMA Compliance Groups list acceptable MIB implementation requirements.

4. IPOIB BMA MIB Definitions

BMA-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, OBJECT-TYPE,	
NOTIFICATION-TYPE, Integer32	FROM SNMPv2-SMI
TruthValue, DisplayString, DateAndTime	FROM SNMPv2-TC
MODULE-COMPLIANCE, OBJECT-GROUP,	
NOTIFICATION-GROUP	FROM SNMPv2-CONF
IbDataPort, infinibandMIB	FROM IB-TC-MIB;

ibBmaMIB MODULE-IDENTITY

LAST-UPDATED "200509011200Z" -- September 1, 2005 12:00:00 GMT

ORGANIZATION "IETF IP Over IB (IPOIB) Working Group"

CONTACT-INFO

"Sean Harnedy (sharnedy@mangrovesystems.com)
Mangrove Systems, Inc."

DESCRIPTION

"Copyright (C) The Internet Society (2005). The initial version of this MIB module was published in RFC XXXX; for full legal notices see the RFC itself. Supplementary information may be available on <http://www.ietf.org/copyrights/ianamib.html>.

This module contains managed object definitions for the Baseboard Management Agent instrumentation for an InfiniBand Baseboard Management Agent (BMA)."

REVISION

"200509011200Z" -- 1 September 2005 12:00:00 GMT

DESCRIPTION

"Initial version published as part of RFC XXXX."

::= { infinibandMIB 5 }

```
-- *****
-- Object Identifiers for the IPOIB BMA MIB
-- *****
```

ibBmaObjects	OBJECT IDENTIFIER ::= { ibBmaMIB 1 }
ibBmaConformance	OBJECT IDENTIFIER ::= { ibBmaMIB 2 }

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```
-- *****
-- BMA Baseboard Management Unit Info Group
--
-- DESCRIPTION: This group contains variables that describe
-- information about the BMA BMU implementation.
-- *****

ibBmaBmuInfo          OBJECT IDENTIFIER ::= { ibBmaObjects 1 }

ibBmaBaseboardManagedUnitType OBJECT-TYPE
    SYNTAX INTEGER
        {
            ibModule(1),
            nonModule(2),
            managedChassis(3)
        }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The Baseboard Managed Unit (BMU) that contains the BMA is one
        of three basic types.  If the BMU contains an interface to the
        InfiniBand Management Link (IB-ML) it is called an IB-Module
        and returns ibModule(1).  If the BMU does not contain the IB-ML,
        it is called a non-Module and returns nonModule(2).  If the BMU
        is part of a managed chassis and contains the Chassis Management
        Entity (CME) it will return managedChassis(3)."
```

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1. [Section 16.2](#) Baseboard Management; and Vol. 2. Chapter 12 Hardware Management."

```
 ::= { ibBmaBmuInfo 1 }
```

ibBmaIsIBMLSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag that indicates whether direct access to IB-ML is supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1. [Section 16.2.3.1](#); Table 205 Baseboard Management ClassPortInfo:Capability Mask."

```
 ::= { ibBmaBmuInfo 2 }
```

ibBmaIBMLImplementation OBJECT-TYPE

SYNTAX INTEGER

```
 {
    ibMLPhysical(1),
    ibMLVirtual(2),
```

```
        unknown(3)
    }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
```

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"Indicates whether the IB-ML is a physical or virtual implementation. This object is only meaningful if ibBmaIsIBMLSupported has a value of true(1). If the IB-ML implementation type is not known, the unknown(3) value is returned."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1.

[Section 16.2.3.1](#); [Section 13.2.3.2.2](#) Virtual IB-ML Vol. 2."

::= { ibBmaBmuInfo 3 }

```

_ _*****
-- BMA Baseboard Key (B_Key) Info Group
--
-- DESCRIPTION: This group contains variables that describe
-- information about the Baseboard management keys.
_ _*****

```

ibBmaBKeyInfo OBJECT IDENTIFIER ::= { ibBmaObjects 2 }

ibBmaIsBKeyNVRAM OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag that indicates whether the Baseboard Management key (B_Key) is being stored in NVRAM."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1.

[Section 16.2.3.1](#); Table 205 Baseboard Management ClassPortInfo:Capability Mask."

::= { ibBmaBKeyInfo 1 }

ibBmaBKeyValue OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(64))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The eight-byte Baseboard Management key that is used in all BM MADs sent and received by all valid Baseboard Managers. If the value is all zeroes, B_Key checking is not done by the BMA. Each BMA in a node has one B_Key."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1.

[Section 16.2.3.3](#); Table 208 BKeyInfo; BKeyInfo:B_Key."

::= { ibBmaBKeyInfo 2 }

ibBmaBKeyProtectBit OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag that controls B_Key protection levels at the BMA.

If the ibBmaBKeyValue is zero, no protection is provided

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for any `ibBmaBKeyProtectBit` value. If this value is `false(2)`, protection is provided, but any BM can read this BMA's `B_Key` value (i.e., `ibBmaBKeyValue`). If this value is `true(1)`, protection is provided depending on the value of the `B_Key` lease period (`ibBmaBKeyLeasePeriod`). If the lease period is non-zero, the BMA does not allow anyone to read the `B_Key` until the lease period has expired. If the lease period is zero, the BMA does not allow the `B_Key` in the node to be read by other BMs."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1.
[Section 16.2.4.6](#); Table 211 Protection Levels."

::= { `ibBmaBKeyInfo` 3 }

`ibBmaBKeyLeasePeriod` OBJECT-TYPE

SYNTAX `Integer32(0..65535)`

UNITS "seconds"

MAX-ACCESS `read-only`

STATUS `current`

DESCRIPTION

"Specifies the timer value of the `B_Key` lease period (in seconds). The lease period indicates how long the `B_Key` Protection bit is to remain non-zero after a `BMSet(BKeyInfo)` MAD that fails the `B_Key` authentication check is dropped. When the value is 0, the lease period shall never expire (i.e., infinite)."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1.
[Section 16.2.3.3](#); Table 208 `BKeyInfo`; `BKeyInfo:B_KeyLeasePeriod`."

::= { `ibBmaBKeyInfo` 4 }

`ibBmaBKeyViolations` OBJECT-TYPE

SYNTAX `Integer32(0..65535)`

MAX-ACCESS `read-only`

STATUS `current`

DESCRIPTION

"Counts the number of MAD packets that have been received at this node since power-on or reset that have been dropped due to a failed `B_Key` check. Note, if this counter is not implemented by the node, the value 65535 shall be returned."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 1.
[Section 16.2.3.3](#); Table 208 `BKeyInfo`; `BKeyInfo:B_KeyViolations`."

::= { `ibBmaBKeyInfo` 5 }

-- *****
-- Vital Product Data (VPD)
--

- There are 9 Info Groups (Record Types) associated
- with the VPD:
- o Module Information
- o Chassis Information
- o FRU Information

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```

--      o Module Power Information
--      o Port Connection Information
--      o CME Information
--      o OEM Information
--      o Buddy Information
--      o Asset Tag Information
--
-- *****

ibBmaVpd OBJECT IDENTIFIER ::= { ibBmaObjects 3 }

-- *****
-- BMA Module Info Group
--
-- DESCRIPTION: This group contains variables that describe
--      the Module class and the number of InfiniBand and IB-ML
--      links exiting the Module. Non-Modules can also utilize this
--      information to describe their link and IB-ML connection
--      support.
-- *****

ibBmaModuleInfo OBJECT IDENTIFIER ::= { ibBmaVpd 1 }

ibBmaModuleInfoTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IbBmaModuleInfoEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "This table contains objects that describe the Module class
        and the number of InfiniBand and IB-ML links exiting the
        Module. Non-Modules can also utilize this information to
        describe their link and IB-ML connection support."
    ::= { ibBmaModuleInfo 1 }

ibBmaModuleInfoEntry OBJECT-TYPE
    SYNTAX IbBmaModuleInfoEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The column definitions for the Module Info table."
    INDEX { ibBmaModuleInfoIndex }
    ::= { ibBmaModuleInfoTable 1 }

IbBmaModuleInfoEntry ::= SEQUENCE {
    ibBmaModuleInfoIndex Integer32,
    ibBmaModInfoModGuid OCTET STRING,
    ibBmaModInfoModType INTEGER,
    ibBmaModInfoModClass INTEGER,

```

```
ibBmaModInfoNodeCount Integer32,  
ibBmaModInfoLinkCount Integer32,  
ibBmaModInfoBckplaneLinkCnt Integer32,  
ibBmaModInfoIbmlCount Integer32,  
ibBmaModInfoBckPlaneIbmlCnt Integer32,
```

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```
    ibBmaModInfoModuleSize OCTET STRING,  
    ibBmaModInfoFormFactor INTEGER  
}
```

```
ibBmaModuleInfoIndex OBJECT-TYPE  
    SYNTAX Integer32(1..255)  
    MAX-ACCESS not-accessible  
    STATUS current  
    DESCRIPTION  
        "Index into the Module Info table."  
    ::= { ibBmaModuleInfoEntry 1 }
```

```
ibBmaModInfoModGuid OBJECT-TYPE  
    SYNTAX OCTET STRING (SIZE(8))  
    MAX-ACCESS read-only  
    STATUS current  
    DESCRIPTION  
        "The GUID (EUI-64 ID) assigned to this module."  
    REFERENCE  
        "InfiniBand Architecture Release 1.0.a. Vol. 2.  
        Section 13.7.6 ModuleInfo Record. Table 105 ModuleInfo  
        Record."  
    ::= { ibBmaModuleInfoEntry 2 }
```

```
ibBmaModInfoModType OBJECT-TYPE  
    SYNTAX INTEGER  
        {  
            notInfiniBandModule(1),  
            infinibandModule(2),  
            other(3)  
        }  
    MAX-ACCESS read-only  
    STATUS current  
    DESCRIPTION  
        "InfiniBand module type."  
    REFERENCE  
        "InfiniBand Architecture Release 1.0.a. Vol. 2.  
        Section 13.7.6 ModuleInfo Record. Table 105 ModuleInfo Record."  
    ::= { ibBmaModuleInfoEntry 3 }
```

```
ibBmaModInfoModClass OBJECT-TYPE  
    SYNTAX INTEGER  
        {  
            tca(1),  
            hca(2),  
            switch(3),  
            router(4),  
            oneXrepeater(5),
```

```
        fourXrepeater(6),  
        twelveXrepeater(7),  
        other(8)  
    }  
    MAX-ACCESS read-only
```

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STATUS current

DESCRIPTION

"InfiniBand module class."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.6](#) ModuleInfo Record. Table 105 ModuleInfo Record."

::= { ibBmaModuleInfoEntry 4 }

ibBmaModInfoNodeCount OBJECT-TYPE

SYNTAX Integer32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of InfiniBand nodes on this module with unique NodeGUIDs."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.6](#) ModuleInfo Record. Table 105 ModuleInfo Record."

::= { ibBmaModuleInfoEntry 5 }

ibBmaModInfoLinkCount OBJECT-TYPE

SYNTAX Integer32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of InfiniBand links on this module with unique PortGuids
(i.e., NodeGUID plus Port Number)."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.6](#) ModuleInfo Record. Table 105 ModuleInfo Record."

::= { ibBmaModuleInfoEntry 6 }

ibBmaModInfoBckplaneLinkCnt OBJECT-TYPE

SYNTAX Integer32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of InfiniBand links exiting this module through its
backplane connectors. If the module is not an InfiniBand
module, this count is the number of InfiniBand links that
exit the module."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.6](#) ModuleInfo Record. Table 105 ModuleInfo Record."

::= { ibBmaModuleInfoEntry 7 }

ibBmaModInfoIbmlCount OBJECT-TYPE

SYNTAX Integer32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of IB-ML interfaces on this module."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

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[Section 13.7.6](#) ModuleInfo Record. Table 105 ModuleInfo Record."

::= { ibBmaModuleInfoEntry 8 }

ibBmaModInfoBckPlaneIbmlCnt OBJECT-TYPE

SYNTAX Integer32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of IB-MLs exiting this module through its backplane connectors. If the module is not an InfiniBand module, this count is the number of IB-MLs that exit the module."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.6](#) ModuleInfo Record. Table 105 ModuleInfo Record."

::= { ibBmaModuleInfoEntry 9 }

ibBmaModInfoModuleSize OBJECT-TYPE

SYNTAX OCTET STRING (SIZE (8))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Eight-byte bit map for the volumetric information for standard form factors (in millimeters)."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.6](#) ModuleInfo Record."

::= { ibBmaModuleInfoEntry 10 }

ibBmaModInfoFormFactor OBJECT-TYPE

SYNTAX INTEGER

{
 unspecified(1),
 nonRemovable(2),
 standard(3),
 standardWide(4),
 tall(5),
 tallWide(6),
 pci(7),
 lowProfilePci(8),
 compactPci(9),
 vme(10),
 internalMezzanineBoard(11),
 cardEdgeBoard(12),
 deviceBay(13),
 otherRemovable(14)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The Module Form Factor."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

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[Section 13.7.6](#) ModuleInfo Record."

```
::= { ibBmaModuleInfoEntry 11 }
```

```
-- *****
-- BMA Chassis Info Group
--
-- DESCRIPTION: This group contains variables that describe
-- the InfiniBand chassis and slot-specific information for the
-- chassis VPD that can be accessed from an InfiniBand Module
-- or a CME.
-- *****
```

```
ibBmaChassisInfo          OBJECT IDENTIFIER ::= { ibBmaVpd 2 }
```

```
ibBmaChasInfoChassisGuid OBJECT-TYPE
```

```
SYNTAX OCTET STRING (SIZE(8))
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
"The GUID assigned to this chassis."
```

```
REFERENCE
```

```
"InfiniBand Architecture Release 1.0.a. Vol. 2.
```

```
Section 13.7.7 ChassisInfo Record iand Table 106."
```

```
::= { ibBmaChassisInfo 1 }
```

```
ibBmaChasInfoSlotCount OBJECT-TYPE
```

```
SYNTAX Integer32(1..254)
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
"Total number of InfiniBand module slots in this chassis."
```

```
REFERENCE
```

```
"InfiniBand Architecture Release 1.0.a. Vol. 2.
```

```
Section 13.7.7 ChassisInfo Record and Table 106."
```

```
::= { ibBmaChassisInfo 2 }
```

```
ibBmaChasInfoSlotTable OBJECT-TYPE
```

```
SYNTAX SEQUENCE OF IbBmaChasInfoSlotEntry
```

```
MAX-ACCESS not-accessible
```

```
STATUS current
```

```
DESCRIPTION
```

```
"This table contains objects that describe the Chassis
and slot-specific information for Chassis VPD accessed
from an InfiniBand Module or a CME."
```

```
::= { ibBmaChassisInfo 3 }
```

```
ibBmaChasInfoSlotEntry OBJECT-TYPE
```

```
SYNTAX IbBmaChasInfoSlotEntry
```

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The column definitions for the Chassis Info table."

INDEX { ibBmaChasInfoSlotIndex }

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```
::= { ibBmaChasInfoSlotTable 1 }
```

```
IbBmaChasInfoSlotEntry ::= SEQUENCE {  
    ibBmaChasInfoSlotIndex Integer32,  
    ibBmaChasInfoAssignedSlotNum Integer32,  
    ibBmaChasInfoSlotConnStatus INTEGER,  
    ibBmaChasInfoCmeAccess INTEGER,  
    ibBmaChasInfoProxyAccess INTEGER,  
    ibBmaChasInfoLockDrivesCtr INTEGER,  
    ibBmaChasInfoMechLockPresent INTEGER  
}
```

```
ibBmaChasInfoSlotIndex OBJECT-TYPE  
    SYNTAX Integer32(1..254)  
    MAX-ACCESS not-accessible  
    STATUS current  
    DESCRIPTION  
        "Chassis slot index."  
    ::= { ibBmaChasInfoSlotEntry 1 }
```

```
ibBmaChasInfoAssignedSlotNum OBJECT-TYPE  
    SYNTAX Integer32(1..255)  
    MAX-ACCESS read-only  
    STATUS current  
    DESCRIPTION  
        "Slot number assigned to the CME and the Chassis  
        containing the CME. If the slot number is unspecified  
        or occupied by a non-Module, the value returned  
        will be 0xFF(255)."  
    REFERENCE  
        "InfiniBand Architecture Release 1.0.a. Vol. 2.  
        Section 13.7.7 ChassisInfo Record and Table 106."  
    ::= { ibBmaChasInfoSlotEntry 2 }
```

```
ibBmaChasInfoSlotConnStatus OBJECT-TYPE  
    SYNTAX INTEGER  
        {  
            notImplemented(1),  
            oneConnectToStandardSlot(2),  
            oneConnectToTallSlot(3),  
            twoConnectToTallSlot(4)  
        }  
    MAX-ACCESS read-only  
    STATUS current  
    DESCRIPTION  
        "Chassis slot connector status."  
    REFERENCE  
        "InfiniBand Architecture Release 1.0.a. Vol. 2."
```

[Section 13.7.7](#) ChassisInfo Record and Table 106."

::= { ibBmaChasInfoSlotEntry 3 }

ibBmaChasInfoCmeAccess OBJECT-TYPE

SYNTAX INTEGER

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```
{
  unspecified(1),
  accessViaPriPort(2),
  notAccessible(3),
  reserved(4)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Chassis CME access."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.7](#) ChassisInfo Record and Table 106."

::= { ibBmaChasInfoSlotEntry 4 }

ibBmaChasInfoProxyAccess OBJECT-TYPE

SYNTAX INTEGER

```
{
  noProxyAccess(1),
  hasProxyAccess(2)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Chassis proxy access."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.7](#) ChassisInfo Record and Table 106."

::= { ibBmaChasInfoSlotEntry 5 }

ibBmaChasInfoLockDrivesCtr OBJECT-TYPE

SYNTAX INTEGER

```
{
  unspecified(1),      -- non-Module application
  lockDrivesCmeCtr(2),
  lockReleaseForCmeCtr(3),
  reserved(4)          -- other
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates whether the lock (if present) keeps CME_CTR deasserted until the lock is released. The value lockDrivesCmeCtr(2) is used if the CME uses only the state of the lock to drive the CME_CTR. The value of lockReleaseFromCmeCtr(3) indicates that the CME_CTR will not be asserted unless the lock is released. Also, the CME has other criteria that can also cause the CME_CTR to be

kept deasserted."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.7](#) ChassisInfo Record and Table 106."

::= { ibBmaChasInfoSlotEntry 6 }

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ibBmaChasInfoMechLockPresent OBJECT-TYPE

SYNTAX INTEGER

```

    {
        unspecified(1), -- non-Module application
        hasLock(2),     -- mechanical lock present
        noLock(3),      -- no mechanical lock on slot
        reserved(4)     -- other
    }

```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates whether there is a mechanical lock associated with this slot. A mechanical lock physically prevents the removal of the Module from the slot. The implementation can be mechanical or electro-mechanical."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.7](#) ChassisInfo Record and Table 106."

```
 ::= { ibBmaChasInfoSlotEntry 7 }
```

```

-- *****
-- BMA Field Replaceable Unit (FRU) Info Group
--
-- DESCRIPTION: This group provides FRU information. This information
-- can help a user identify and inventory the FRU units that
-- make up a given Module, system, or subsystem. The FRU information
-- is presented in a table because there can be more than one FRU
-- info record within the managed device.
-- *****

```

```
ibBmaFruInfo OBJECT IDENTIFIER ::= { ibBmaVpd 3 }
```

ibBmaFruInfoTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbBmaFruInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains objects that describe the FRU records present in the managed device."

```
 ::= { ibBmaFruInfo 1 }
```

ibBmaFruInfoEntry OBJECT-TYPE

SYNTAX IbBmaFruInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The column definitions for the FRU Info table."

```
 INDEX { ibBmaFruInfoIndex }
```

```
::= { ibBmaFruInfoTable 1 }
```

```
IbBmaFruInfoEntry ::= SEQUENCE {  
    ibBmaFruInfoIndex Integer32,  
    ibBmaFruInfoType INTEGER,
```

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```
ibBmaFruInfoGuidType INTEGER,
ibBmaFruInfoGuidValue OCTET STRING,
ibBmaFruInfoSerialNumber OCTET STRING,
ibBmaFruInfoPartNumber OCTET STRING,
ibBmaFruInfoModelName OCTET STRING,
ibBmaFruInfoVersion OCTET STRING,
ibBmaFruInfoManufacturerName OCTET STRING,
ibBmaFruInfoProductName OCTET STRING,
ibBmaFruInfoManufacturerID OCTET STRING,
ibBmaFruInfoManDateAndTime DateAndTime
}
```

```
ibBmaFruInfoIndex OBJECT-TYPE
    SYNTAX Integer32(1..254)
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "FRU Info index."
    ::= { ibBmaFruInfoEntry 1 }
```

```
ibBmaFruInfoType OBJECT-TYPE
    SYNTAX INTEGER
        {
            unspecified(1),
            infinibandModule(2),
            infinibandModBackplane(3),
            infinibandSwitchMod(4),
            mainChassis(5),
            platformSystem(6),
            standaloneProduct(7),
            boardOrCard(8),
            powerConverterSupplyMod(9),
            otherModAssembly(10),
            coolingModule(11),
            subChassis(12),
            processorModule(13),
            memoryModule(14),
            memoryCard(15),
            oem(16)
        }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The Field Replaceable Unit (FRU) type."
    REFERENCE
        "InfiniBand Architecture Release 1.0.a. Vol. 2. Section 13.7.8 FRUInfo Record. Table 107 FRUInfo Record."
    ::= { ibBmaFruInfoEntry 2 }
```

ibBmaFruInfoGuidType OBJECT-TYPE

SYNTAX INTEGER

{
 none(1), -- none specified; GUID value is 0

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```
    guid64(2), -- EUI-64 (8 bytes)
    guid48(3), -- EUI-48 (6 bytes)
    guid16(4), -- SMBIOS/IPMI/OSF/WFM/MSFT GUID/UUID (16 bytes)
    guid8(5)   -- SMBus 2.0 UDID (8 bytes)
  }
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The FRU GUID type."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
Record."

::= { ibBmaFruInfoEntry 3 }

ibBmaFruInfoGuidValue OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The GUID assigned to this FRU. Needs to hold the longest possible
GUID type (guid16(4))."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
Record."

::= { ibBmaFruInfoEntry 4 }

ibBmaFruInfoSerialNumber OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The FRU serial number."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
Record."

::= { ibBmaFruInfoEntry 5 }

ibBmaFruInfoPartNumber OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The FRU Part Number."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
Record."

::= { ibBmaFruInfoEntry 6 }

ibBmaFruInfoModelName OBJECT-TYPE

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SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The model name is assigned by the FRU manufacturer."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
 Record."
::= { ibBmaFruInfoEntry 7 }

ibBmaFruInfoVersion OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The FRU version is assigned by the FRU manufacturer."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
 Record."
::= { ibBmaFruInfoEntry 8 }

ibBmaFruInfoManufacturerName OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The FRU Manufacturer Name."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
 Record."
::= { ibBmaFruInfoEntry 9 }

ibBmaFruInfoProductName OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The FRU Product name."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
 Record."
::= { ibBmaFruInfoEntry 10 }

ibBmaFruInfoManufacturerID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The FRU Manufacturer ID."

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REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
Record."

::= { ibBmaFruInfoEntry 11 }

ibBmaFruInfoManDateAndTime OBJECT-TYPE

SYNTAX DateAndTime

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Manufacture date and time."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.8](#) FRUInfo Record. Table 107 FRUInfo
Record."

::= { ibBmaFruInfoEntry 12 }

```
-- *****  
-- BMA Port Connection Info Group  
--  
-- DESCRIPTION: This group provides information about the entity to  
-- which the port connects.  
-- *****
```

ibBmaPortConnectInfo OBJECT IDENTIFIER ::= { ibBmaVpd 4 }

ibBmaPortConNumConnection OBJECT-TYPE

SYNTAX Integer32(1..254)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of port connections."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.9](#) PortConnectionInfo Record. Table 108
PortConnectionInfoRecord."

::= { ibBmaPortConnectInfo 1 }

ibBmaPortConnectTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbBmaPortConnectEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains objects that describe the Port
Connections present in the managed device."

::= { ibBmaPortConnectInfo 2 }

ibBmaPortConnectEntry OBJECT-TYPE
SYNTAX IbBmaPortConnectEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION

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"The column definitions for the Port Connection table."

```
INDEX { ibBmaPortConnectIndex }  
::= { ibBmaPortConnectTable 1 }
```

```
IbBmaPortConnectEntry ::= SEQUENCE {  
    ibBmaPortConnectIndex Integer32,  
    ibBmaPortConInternalCon INTEGER,  
    ibBmaPortConMediaClass INTEGER,  
    ibBmaPortConConClass INTEGER  
}
```

```
ibBmaPortConnectIndex OBJECT-TYPE  
    SYNTAX Integer32(1..254)  
    MAX-ACCESS not-accessible  
    STATUS current  
    DESCRIPTION  
        "Index for the Port Connection table."  
    ::= { ibBmaPortConnectEntry 1 }
```

```
ibBmaPortConInternalCon OBJECT-TYPE  
    SYNTAX INTEGER  
        {  
            unspecified(1),  
            terminateWithoutGoing(2),  
            terminateAfterGoing(3),  
            noInternalConnection(4)  
        }  
    MAX-ACCESS read-only  
    STATUS current  
    DESCRIPTION  
        "Internal connection type."  
    REFERENCE  
        "InfiniBand Architecture Release 1.0.a. Vol. 2.  
        Section 13.7.9 PortConnectionInfo Record. Table 108  
        PortConnectionInfoRecord."  
    ::= { ibBmaPortConnectEntry 2 }
```

```
ibBmaPortConMediaClass OBJECT-TYPE  
    SYNTAX INTEGER  
        {  
            unspecified(1),  
            copper(2),  
            fiber(3),  
            pcb(4),  
            repeaterThenCopper(5),  
            repeaterThenFiber(6),  
            repeaterThenNode(7),  
            reserved(8)  
        }
```

```
}  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION  
    "Connection Media Class."
```

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REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.9](#) PortConnectionInfo Record. Table 108
 PortConnectionInfoRecord."

::= { ibBmaPortConnectEntry 3 }

ibBmaPortConConClass OBJECT-TYPE

SYNTAX INTEGER

```
{
  unspecified(1),
  nonSpecifyRemovable(2),
  backplaneSide(3),
  moduleSide(4),
  nonRemovable(5),
  noInfo(6),
  reserved(7)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Connection Class."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.9](#) PortConnectionInfo Record. Table 108
 PortConnectionInfoRecord."

::= { ibBmaPortConnectEntry 4 }

```
-- *****
-- BMA Module Power Info Group
--
-- DESCRIPTION: This group provides information about the power
-- consumption, startup characteristics, and power management
-- capabilities for a Module.
-- *****
```

ibBmaModPowerInfo OBJECT IDENTIFIER ::= { ibBmaVpd 5 }

ibBmaOperThermalPower OBJECT-TYPE

SYNTAX Integer32(0..131071)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Maximum amount of power dissipated under normal operation
 including any vendor supplied exerciser over any sliding
 60 second window expressed in mW. If this value is
 unspecified, a 0 should be returned."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.10](#) ModulePowerInfo Record. Table 109

ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 1 }

ibBmaOperCurrent OBJECT-TYPE

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SYNTAX Integer32(0..16383)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Maximum amount of current drawn under normal operation including any vendor supplied exerciser across the range of VBulk (expressed in mA). If this value is unspecified, a 0 should be returned."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 2 }

ibBmaIdleCurrent OBJECT-TYPE

SYNTAX Integer32(0..16383)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Amount of current that a fully initialized device draws when waiting for functional requests (in mA). If this value is unspecified, a 0 will be returned."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 3 }

ibBmaInitCurrent OBJECT-TYPE

SYNTAX Integer32(0..16383)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Amount of current drawn during Modules Built-in self test or self-initialization execution across the range of VBulk (in mA). If this value is unspecified, a 0 will be returned."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 4 }

ibBmaInitTime OBJECT-TYPE

SYNTAX Integer32(0..65535)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Amount of time (in 10's of ms) from the end of Module Reset to the end of BIST and/or module self-initialization complete under non-fault conditions. The module must be ready for normal operation at the conclusion of this time, excluding any external software driven initialization.

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If the value is unspecified, a 0 will be returned."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 5 }

ibBmaIsMStandbySupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag to indicate if MStandby is supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 6 }

ibBmaIsPowerMgmtSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag to indicate if power management is
supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 7 }

ibBmaIsUSleepSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag to indicate if USleep is supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

::= { ibBmaModPowerInfo 8 }

ibBmaIsUStandbySupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag to indicate if UStandby is supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.10](#) ModulePowerInfo Record. Table 109

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```
ModulePowerInfoRecord."  
 ::= { ibBmaModPowerInfo 9 }
```

ibBmaPowerClass OBJECT-TYPE

SYNTAX INTEGER

```
{  
    unspecified(1),  
    powerClass1(2),  
    powerClass2(3),  
    other(4)  
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Power class."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

```
 ::= { ibBmaModPowerInfo 10 }
```

ibBmaRedundantPower OBJECT-TYPE

SYNTAX INTEGER

```
{  
    unspecified(1),  
    noRedundancy(2),  
    redundancy(3),  
    reserved(4)  
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Redundant power converter capability."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.10](#) ModulePowerInfo Record. Table 109
ModulePowerInfoRecord."

```
 ::= { ibBmaModPowerInfo 11 }
```

```
-- *****  
-- IOC Power Management Info Group  
--  
-- DESCRIPTION: This group describes the power management  
-- capabilities of the IOCs associated with an IOUnit. If a  
-- Module contains multiple IOUnits and several IOCs, the  
-- information about all such IOCs appear sequentially in  
-- the IOCPMInfo record.  
-- *****
```

ibBmaPowerMgmtInfo OBJECT IDENTIFIER ::= { ibBmaVpd 6 }

ibBmaPowerMgmtIocCount OBJECT-TYPE
SYNTAX Integer32(1..255)

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MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of IOC capabilities."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.11](#) IOCOMInfo Record. Table 110

IOCPMInfo Record."

::= { ibBmaPowerMgmtInfo 1 }

ibBmaPowerMgmtIocTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbBmaPowerMgmtIocEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains objects that describe the Power
Management for each IOC."

::= { ibBmaPowerMgmtInfo 2 }

ibBmaPowerMgmtIocEntry OBJECT-TYPE

SYNTAX IbBmaPowerMgmtIocEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The column definitions for the Power Managment IOC table."

INDEX { ibBmaPowerMgmtIocIndex }

::= { ibBmaPowerMgmtIocTable 1 }

IbBmaPowerMgmtIocEntry ::= SEQUENCE {

ibBmaPowerMgmtIocIndex Integer32,

ibBmaPMIsIDozeSupported TruthValue,

ibBmaPMIsINapSupported TruthValue,

ibBmaPMIsISleepSupported TruthValue,

ibBmaPMIsIStandbySupported TruthValue,

ibBmaPMWREIsIDozeSupported TruthValue,

ibBmaPMWREIsINapSupported TruthValue,

ibBmaPMWREIsISleepSupported TruthValue,

ibBmaPMWREIsIStandbySupported TruthValue,

ibBmaPwrMgtIDozeCurrent Integer32,

ibBmaPwrMgtINapCurrent Integer32,

ibBmaPwrMgtISleepCurrent Integer32,

ibBmaPwrMgtIStandbyCurrent Integer32

}

ibBmaPowerMgmtIocIndex OBJECT-TYPE

SYNTAX Integer32(1..254)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index for the Power Management IOC table."
::= { ibBmaPowerMgmtIocEntry 1 }

ibBmaPMIsIDozeSupported OBJECT-TYPE

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SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Flag for Is I Doze supported."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.11](#) IOCOMInfo Record. Table 110
 IOCPMInfo Record."
::= { ibBmaPowerMgmtIocEntry 2 }

ibBmaPMIsINapSupported OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Flag for Is I Nap supported."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.11](#) IOCOMInfo Record. Table 110
 IOCPMInfo Record."
::= { ibBmaPowerMgmtIocEntry 3 }

ibBmaPMIsISleepSupported OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Flag for Is I Sleep supported."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.11](#) IOCOMInfo Record. Table 110
 IOCPMInfo Record."
::= { ibBmaPowerMgmtIocEntry 4 }

ibBmaPMIsIStandbySupported OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Flag for Is I Standby supported."
REFERENCE
 "InfiniBand Architecture Release 1.0.a. Vol. 2.
 [Section 13.7.11](#) IOCOMInfo Record. Table 110
 IOCPMInfo Record."
::= { ibBmaPowerMgmtIocEntry 5 }

ibBmaPMWREIsIDozeSupported OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Flag for Is WRE I Doze supported."

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REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.11](#) IOCOMInfo Record. Table 110
IOCPMInfo Record."

::= { ibBmaPowerMgmtIocEntry 6 }

ibBmaPMWREIsINapSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag for Is WRE I Nap supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.11](#) IOCOMInfo Record. Table 110
IOCPMInfo Record."

::= { ibBmaPowerMgmtIocEntry 7 }

ibBmaPMWREIsISleepSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag for Is WRE I Sleep supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.11](#) IOCOMInfo Record. Table 110
IOCPMInfo Record."

::= { ibBmaPowerMgmtIocEntry 8 }

ibBmaPMWREIsISleepSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag for Is WRE I Standby supported."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.11](#) IOCOMInfo Record. Table 110
IOCPMInfo Record."

::= { ibBmaPowerMgmtIocEntry 9 }

ibBmaPwrMgtIDozeCurrent OBJECT-TYPE

SYNTAX Integer32(0..16384)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The amount of total current drawn from the Bulk Power

while in I-Doze PM state. The range is from 0 to 16,384
milliAmps."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.11](#) IOCOMInfo Record. Table 110

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```
    IOCPMInfo Record."
 ::= { ibBmaPowerMgmtIocEntry 10 }
```

```
ibBmaPwrMgtINapCurrent OBJECT-TYPE
    SYNTAX Integer32(0..16384)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The amount of total current drawn from the Bulk Power
        while in I-Nap PM state. The range is from 0 to 16,384
        milliAmps."
    REFERENCE
        "InfiniBand Architecture Release 1.0.a. Vol. 2.
        Section 13.7.11 IOCOMInfo Record. Table 110
        IOCPMInfo Record."
 ::= { ibBmaPowerMgmtIocEntry 11 }
```

```
ibBmaPwrMgtISleepCurrent OBJECT-TYPE
    SYNTAX Integer32(0..16384)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The amount of total current drawn from the Bulk Power
        while in I-Sleep PM state. The range is from 0 to 16,384
        milliAmps."
    REFERENCE
        "InfiniBand Architecture Release 1.0.a. Vol. 2.
        Section 13.7.11 IOCOMInfo Record. Table 110
        IOCPMInfo Record."
 ::= { ibBmaPowerMgmtIocEntry 12 }
```

```
ibBmaPwrMgtISleepCurrent OBJECT-TYPE
    SYNTAX Integer32(0..16384)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The amount of total current drawn from the Auxilliary Power
        while in I-Sleep PM state. The Bulk Power drawn is defined
        to be 0 amps. The range is from 0 to 16,384 milliAmps."
    REFERENCE
        "InfiniBand Architecture Release 1.0.a. Vol. 2.
        Section 13.7.11 IOCOMInfo Record. Table 110
        IOCPMInfo Record."
 ::= { ibBmaPowerMgmtIocEntry 13 }
```

```
-- *****
-- CME Info Group
--
```

```
-- DESCRIPTION: This group contains additional information
-- about the CME.
-- *****
```

```
ibBmaCmeInfo OBJECT IDENTIFIER ::= { ibBmaVpd 7 }
```

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ibBmaCmeGuidType OBJECT-TYPE

SYNTAX INTEGER

```
{
    none(1),    -- none specified; GUID value is 0
    guid64(2),  -- EUI-64 (8 bytes)
    guid48(3),  -- EUI-48 (6 bytes)
    guid16(4),  -- SMBIOS/IPMI/OSF/WFM/MSFT GUID/UUID (16 bytes)
    guid8(5)    -- SMBus 2.0 UDID (8 bytes)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The CME GUID type."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.12](#); Table 111 CmeInfo Record."

::= { ibBmaCmeInfo 1 }

ibBmaCmeGuidValue OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The GUID assigned to this CME. Needs to hold the longest
possible GUID type (guid16(4))."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.12](#); Table 111 CmeInfo Record."

::= { ibBmaCmeInfo 2 }

ibBmaCmeFirmMinorRev OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(1))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The minor revision of the CME firmware."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.12](#); Table 111 CmeInfo Record."

::= { ibBmaCmeInfo 3 }

ibBmaCmeFirmMajorRev OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(1))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The major revision of the CME firmware."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.12](#); Table 111 CmeInfo Record."
::= { ibBmaCmeInfo 4 }

ibBmaCmeSlotNumbers OBJECT-TYPE

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SYNTAX OCTET STRING (SIZE(32))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A 256 bit mask representing IB ports for which the CME provides IB-ML access. The mask allows slot numbers to be non-sequential. Slot numbers must be in the range 1 to 254. 0 is assigned to the CME and its containing Chassis via CME."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2. [Section 13.7.12](#); Table 111 CmeInfo Record."

::= { ibBmaCmeInfo 5 }

```
-- *****
-- OEM Info Group
--
-- DESCRIPTION: This group contains OEM records of OEM-specified data.
-- *****
```

ibBmaOemInfo OBJECT IDENTIFIER ::= { ibBmaVpd 8 }

ibBmaOemTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbBmaOemEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains objects that describe the OEM entries."

::= { ibBmaOemInfo 1 }

ibBmaOemEntry OBJECT-TYPE

SYNTAX IbBmaOemEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The column definitions for the OEM table."

INDEX { ibBmaOemIndex }

::= { ibBmaOemTable 1 }

IbBmaOemEntry ::= SEQUENCE {

ibBmaOemIndex Integer32,

ibBmaOemIdType INTEGER,

ibBmaOemIdValue OCTET STRING,

ibBmaOemDataLength Integer32,

ibBmaOemDataBuf OCTET STRING

}

ibBmaOemIndex OBJECT-TYPE

SYNTAX Integer32(1..254)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
 "Index for the OEM table."

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```
::= { ibBmaOemEntry 1 }
```

```
ibBmaOemIdType OBJECT-TYPE
```

```
SYNTAX INTEGER
```

```
    {
        other(1),           -- reserved
        companyId(2),       -- company ID
        enterpriseNumBased(3) -- enterprise number based ID
    }
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The OEM ID type."
```

```
::= { ibBmaOemEntry 2 }
```

```
ibBmaOemIdValue OBJECT-TYPE
```

```
SYNTAX OCTET STRING (SIZE(3))
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The OEM ID value."
```

```
::= { ibBmaOemEntry 3 }
```

```
ibBmaOemDataLength OBJECT-TYPE
```

```
SYNTAX Integer32(0..255)
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The OEM Data field length."
```

```
::= { ibBmaOemEntry 4 }
```

```
ibBmaOemDataBuf OBJECT-TYPE
```

```
SYNTAX OCTET STRING (SIZE(255))
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The OEM Data buffer."
```

```
::= { ibBmaOemEntry 5 }
```

```
-- *****
```

```
-- Buddy Info Group
```

```
--
```

```
-- DESCRIPTION: This group contains the Buddy count and the Node
```

```
-- GUIDs of the InfiniBand nodes (and other entities) that
```

```
-- belong to the same enclosure.
```

```
-- *****
```

```
ibBmaBuddyInfo OBJECT IDENTIFIER ::= { ibBmaVpd 9 }
```

ibBmaBuddyCount OBJECT-TYPE
SYNTAX Integer32(1..65535)
MAX-ACCESS read-only
STATUS current

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DESCRIPTION

"The Buddy count. This is the number of InfiniBand nodes, excluding this node, that belong to the same enclosure as the node reporting this record. If no other node belongs to the same enclosure, the value will be 0 and there will be no entries in the ibBmaBuddyTable."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.14](#); Table 113 BuddyInfo Record."

::= { ibBmaBuddyInfo 1 }

ibBmaBuddyTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbBmaBuddyEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table containing BMA Buddy Record information."

::= { ibBmaBuddyInfo 2 }

ibBmaBuddyEntry OBJECT-TYPE

SYNTAX IbBmaBuddyEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A conceptual row of the ibBmaBuddyTable containing information about a particular Buddy table entry."

INDEX { ibBmaBuddyIndex }

::= { ibBmaBuddyTable 1 }

IbBmaBuddyEntry ::= SEQUENCE {

ibBmaBuddyIndex Integer32,

ibBmaBuddyGuidType INTEGER,

ibBmaBuddyGuidValue OCTET STRING

}

ibBmaBuddyIndex OBJECT-TYPE

SYNTAX Integer32(1..65535)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index that identifies this Buddy table entry."

::= { ibBmaBuddyEntry 1 }

ibBmaBuddyGuidType OBJECT-TYPE

SYNTAX INTEGER

{

none(1), -- none specified; GUID value is 0

guid64(2), -- EUI-64 (8 bytes)

```
guid48(3), -- EUI-48 (6 bytes)
guid16(4), -- SMBIOS/IPMI/OSF/WFM/MSFT GUID/UUID (16 bytes)
guid8(5)   -- SMBus 2.0 UDID (8 bytes)
}
```

MAX-ACCESS read-only

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STATUS current

DESCRIPTION

"The Buddy node GUID type."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.14](#); Table 113 BuddyInfo Record."

::= { ibBmaBuddyEntry 2 }

ibBmaBuddyGuidValue OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The GUID assigned to this node. Needs to hold the longest
 possible GUID type (guid16(4))."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.
[Section 13.7.14](#); Table 113 BuddyInfo Record."

::= { ibBmaBuddyEntry 3 }

```
-- *****
-- BMA Asset Tag Info Group
--
-- DESCRIPTION: This group provides information about the Asset
-- Tags.
-- *****
```

ibBmaAssetTagInfo OBJECT IDENTIFIER ::= { ibBmaVpd 10 }

ibBmaAssetTagTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbBmaAssetTagEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table containing BMA Asset Tag information."

::= { ibBmaAssetTagInfo 1 }

ibBmaAssetTagEntry OBJECT-TYPE

SYNTAX IbBmaAssetTagEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A conceptual row of the ibBmaAssetTagTable containing
 information about a particular Asset Tag entry."

INDEX { ibBmaAssetTagIndex }

::= { ibBmaAssetTagTable 1 }

IbBmaAssetTagEntry ::= SEQUENCE {

```
ibBmaAssetTagIndex Integer32,  
ibBmaAssetTagFruHandle Integer32,  
ibBmaAssetTagLength Integer32,  
ibBmaAssetTagValue OCTET STRING  
}
```

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ibBmaAssetTagIndex OBJECT-TYPE

SYNTAX Integer32(1..65535)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index that identifies this Asset Tag table entry."

::= { ibBmaAssetTagEntry 1 }

ibBmaAssetTagFruHandle OBJECT-TYPE

SYNTAX Integer32(1..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The FRU handle."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.15](#); Table 114 AssetTagRecord."

::= { ibBmaAssetTagEntry 2 }

ibBmaAssetTagLength OBJECT-TYPE

SYNTAX Integer32(1..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The length of the ibBmaAssetTagValue object."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.15](#); Table 114 AssetTagRecord."

::= { ibBmaAssetTagEntry 3 }

ibBmaAssetTagValue OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(255))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The Asset Tag."

REFERENCE

"InfiniBand Architecture Release 1.0.a. Vol. 2.

[Section 13.7.15](#); Table 114 AssetTagRecord."

::= { ibBmaAssetTagEntry 4 }

```
-- *****
-- Module Conformance Statement
--
-- DESCRIPTION: The module conformance statement includes the
-- compliance statements and the units of conformance
-- section.
-- *****
```

ibBmaCompliances OBJECT IDENTIFIER ::= { ibBmaConformance 1 }

ibBmaGroups OBJECT IDENTIFIER ::= { ibBmaConformance 2 }

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```
-- *****
-- Compliance Statements
-- *****

ibBmaBasicNodeCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The basic node implementation requirements for agents that
        support the IPOIB BMA MIB."
    MODULE -- this module
        MANDATORY-GROUPS {
            ibBmaBmuInfoGroup
        }
    ::= { ibBmaCompliances 1 }

ibBmaFullNodeCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The full node implementation requirements for agents that
        support the IPOIB BMA MIB."
    MODULE -- this module
        MANDATORY-GROUPS {
            ibBmaBmuInfoGroup,
            ibBmaBKeyInfoGroup,
            ibBmaModuleInfoGroup,
            ibBmaChassisInfoGroup,
            ibBmaFruInfoGroup,
            ibBmaPortConnectInfoGroup,
            ibBmaModPowerInfoGroup,
            ibBmaPowerMgmtInfoGroup,
            ibBmaCmeInfoGroup,
            ibBmaOemInfoGroup,
            ibBmaBuddyInfoGroup,
            ibBmaAssetTagInfoGroup
        }
    ::= { ibBmaCompliances 2 }

-- *****
-- Units Of Conformance
-- *****

ibBmaBmuInfoGroup OBJECT-GROUP
    OBJECTS {
        ibBmaBaseboardManagedUnitType,
        ibBmaIsIBMLSupported,
        ibBmaIBMLImplementation
    }
    STATUS current
```

DESCRIPTION

"The `ibBmaBmuInfoGroup` defines the MIB objects that describe information about the Baseboard Management Unit (BMU)."
 ::= { `ibBmaGroups` 1 }

ibBmaBKeyInfoGroup OBJECT-GROUP**OBJECTS {**

ibBmaIsBKeyNVRAM,
ibBmaBKeyValue,
ibBmaBKeyProtectBit,
ibBmaBKeyLeasePeriod,
ibBmaBKeyViolations

}**STATUS current****DESCRIPTION**

"The ibBmaBKeyInfo Group defines the MIB objects that describe information about the Baseboard Management keys (B_Keys)."

::= { ibBmaGroups 2 }**ibBmaModuleInfoGroup OBJECT-GROUP****OBJECTS {**

ibBmaModInfoModGuid,
ibBmaModInfoModType,
ibBmaModInfoModClass,
ibBmaModInfoNodeCount,
ibBmaModInfoLinkCount,
ibBmaModInfoBckplaneLinkCnt,
ibBmaModInfoIbmlCount,
ibBmaModInfoBckPlaneIbmlCnt,
ibBmaModInfoModuleSize,
ibBmaModInfoFormFactor

}**STATUS current****DESCRIPTION**

"The ibBmaModuleInfo Group defines the MIB objects that describe information about the module."

::= { ibBmaGroups 3 }**ibBmaChassisInfoGroup OBJECT-GROUP****OBJECTS {**

ibBmaChasInfoChassisGuid,
ibBmaChasInfoSlotCount,
ibBmaChasInfoAssignedSlotNum,
ibBmaChasInfoSlotConnStatus,
ibBmaChasInfoCmeAccess,
ibBmaChasInfoProxyAccess,
ibBmaChasInfoLockDrivesCtr,
ibBmaChasInfoMechLockPresent

}**STATUS current****DESCRIPTION**

"The ibBmaChassisInfo Group defines the MIB objects that describe information about a managed chassis."

```
::= { ibBmaGroups 4 }
```

```
ibBmaFruInfoGroup OBJECT-GROUP  
    OBJECTS {  
        ibBmaFruInfoType,
```

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```
    ibBmaFruInfoGuidType,  
    ibBmaFruInfoGuidValue,  
    ibBmaFruInfoSerialNumber,  
    ibBmaFruInfoPartNumber,  
    ibBmaFruInfoModelName,  
    ibBmaFruInfoVersion,  
    ibBmaFruInfoManufacturerName,  
    ibBmaFruInfoProductName,  
    ibBmaFruInfoManufacturerID,  
    ibBmaFruInfoManDateAndTime
```

```
}
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The ibBmaFruInfo Group defines the MIB objects that describe  
    information about the Fru attributes."
```

```
::= { ibBmaGroups 5 }
```

```
ibBmaPortConnectInfoGroup OBJECT-GROUP
```

```
OBJECTS {
```

```
    ibBmaPortConNumConnection,  
    ibBmaPortConInternalCon,  
    ibBmaPortConMediaClass,  
    ibBmaPortConConClass
```

```
}
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The ibBmaPortConnectInfo Group defines the MIB objects that  
    describe information about the port connections."
```

```
::= { ibBmaGroups 6 }
```

```
ibBmaModPowerInfoGroup OBJECT-GROUP
```

```
OBJECTS {
```

```
    ibBmaOperThermalPower,  
    ibBmaOperCurrent,  
    ibBmaIdleCurrent,  
    ibBmaInitCurrent,  
    ibBmaInitTime,  
    ibBmaIsMStandbySupported,  
    ibBmaIsPowerMgmtSupported,  
    ibBmaIsUSleepSupported,  
    ibBmaIsUStandbySupported,  
    ibBmaPowerClass,  
    ibBmaRedundantPower
```

```
}
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The ibBmaModPowerInfo Group defines the MIB objects that  
    describe information about the power attributes of the module."
```

```
::= { ibBmaGroups 7 }
```

```
ibBmaPowerMgmtInfoGroup OBJECT-GROUP  
    OBJECTS {  
        ibBmaPowerMgmtIocCount,
```

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```
    ibBmaPMIsIDozeSupported,  
    ibBmaPMIsINapSupported,  
    ibBmaPMIsISleepSupported,  
    ibBmaPMIsIStandbySupported,  
    ibBmaPMWREIsIDozeSupported,  
    ibBmaPMWREIsINapSupported,  
    ibBmaPMWREIsISleepSupported,  
    ibBmaPMWREIsIStandbySupported,  
    ibBmaPwrMgtIDozeCurrent,  
    ibBmaPwrMgtINapCurrent,  
    ibBmaPwrMgtISleepCurrent,  
    ibBmaPwrMgtIStandbyCurrent
```

```
}
```

STATUS current

DESCRIPTION

"The ibBmaPowerMgmtInfo Group defines the MIB objects that describe information about power management."

```
::= { ibBmaGroups 8 }
```

ibBmaCmeInfoGroup OBJECT-GROUP

OBJECTS {

```
    ibBmaCmeGuidType,  
    ibBmaCmeGuidValue,  
    ibBmaCmeFirmMinorRev,  
    ibBmaCmeFirmMajorRev,  
    ibBmaCmeSlotNumbers
```

```
}
```

STATUS current

DESCRIPTION

"The ibBmaCmeInfo Group defines the MIB objects that describe information about the CME."

```
::= { ibBmaGroups 9 }
```

ibBmaOemInfoGroup OBJECT-GROUP

OBJECTS {

```
    ibBmaOemIdType,  
    ibBmaOemIdValue,  
    ibBmaOemDataLength,  
    ibBmaOemDataBuf
```

```
}
```

STATUS current

DESCRIPTION

"The ibBmaOemInfo Group defines the MIB objects that describe information about OEM data."

```
::= { ibBmaGroups 10 }
```

ibBmaBuddyInfoGroup OBJECT-GROUP

OBJECTS {

```
        ibBmaBuddyCount,  
        ibBmaBuddyGuidType,  
        ibBmaBuddyGuidValue  
    }  
    STATUS current
```

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DESCRIPTION

"The ibBmaBuddyInfo Group defines the MIB objects that describe information about the Buddy Info."

::= { ibBmaGroups 11 }

ibBmaAssetTagInfoGroup OBJECT-GROUP

OBJECTS {
 ibBmaAssetTagFruHandle,
 ibBmaAssetTagLength,
 ibBmaAssetTagValue
}

STATUS current

DESCRIPTION

"The ibBmaAssetTagInfo Group defines the MIB objects that describe information about the asset tags."

::= { ibBmaGroups 12 }

END

5. Security Considerations

SNMPv1 by itself is not a secure environment. Even if the network itself is secure (for example by using IPSec), even then, there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) the objects in this MIB.

It is recommended that the implementers consider the security features as provided by the SNMPv3 framework. Specifically, the use of the User-based Security Model [RFC 2574](#) [[RFC2574](#)] and the View-based Access Control Model [RFC 2575](#) [[RFC2575](#)] is recommended.

It is then a customer/user responsibility to ensure that the SNMP entity giving access to an instance of this MIB, is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change/create/delete) them.

6. IANA Considerations

IANA is requested to make a MIB OID assignment under the transmission branch, that is, assign the infinibandMIB under { transmission 199 }. This sub-id is requested because 199 is the ifType for infiniband(199) and is available under transmission.

In the future, IPOIB related standards track MIB modules should be rooted under the infinibandMIB subtree. The IANA is requested to manage that namespace. New assignments can only be made via a

Standards Action as specified in [[RFC2434](#)].

This document also requests IANA to assign { infinibandMIB 5 } to the IB-BMA-MIB specified in this document.

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7. References

7.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC2434] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP: 26, [RFC 2434](#), October 1998.
- [RFC2578] McCloghrie, K., Perkins, D., Schoenwaelder, J., Case, J., Rose, M. and S. Waldbusser, "Structure of Management Information Version 2 (SMIv2)", STD 58, [RFC 2578](#), April 1999.
- [RFC2579] McCloghrie, K., Perkins, D., Schoenwaelder, J., Case, J., Rose, M. and S. Waldbusser, "Textual Conventions for SMIv2", STD 58, [RFC 2579](#), April 1999.
- [RFC2580] McCloghrie, K., Perkins, D., Schoenwaelder, J., Case, J., Rose, M. and S. Waldbusser, "Conformance Statements for SMIv2", STD 58, [RFC 2580](#), April 1999.
- [INFINIV1] InfiniBand Architecture Specification Volume 1, Release 1.1, November 6, 2002.

7.2. Informative References

- [RFC3410] Case, J., Mundy, R., Partain, D. and B. Stewart, "Introduction and Applicability Statements for Internet-Standard Management Framework", [RFC 3410](#), December 2002.

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