

14 Management entities

14.4 Branch 0xDB “extended attributes”

This subclause lists extended management attributes, which are not part of the definitions in IEEE Std 802.3, Clause 30. The extended attributes shown in Table 14-56 shall be supported.

The extended attributes can be part of *eOAM_Get_Request*, *eOAM_Get_Response*, *eOAM_Set_Request*, and *eOAM_Set_Response* eOAMPDUs.

Table 14-1—Extended attributes defined in branch 0xDB

Leaf	Attribute	Defined in
Object group: ONU management		
0x00-02	aOnuId	14.4.1.2
0x00-03	aOnuFwVersion	14.4.1.3
0x00-04	aOnuInfoChipset	14.4.1.4
0x00-05	aOnuInfoDateManufacture	14.4.1.5
0x00-06	aOnuInfoManufacturer	14.4.1.6
0x00-07	aOnuLlidCapability	14.4.1.7
0x00-08	aOnuPonPortCount	14.4.1.8
0x00-0A	aOnuInfoPacketBuffer	14.4.1.9
0x00-0C	aLlidForwardState	14.4.1.10
0x00-0D	aLlidOamFrameRate	14.4.1.11
0x00-0E	aOnuManOrgName	14.4.1.12
0x00-0F	aOnuCvcCvsValidity	14.4.1.13
0x00-10	aOnuSrvPortCapability	14.4.1.14
0x00-11	aVendorName	14.4.1.15
0x00-12	aModelNumber	14.4.1.16
0x00-13	aHardwareVersion	14.4.1.17
0x00-14	aLineRateMode	14.4.1.18
<u>0x00-15</u>	<u>aMediaTypeSupported</u>	<u>14.4.1.20</u>
<u>0x00-16</u>	<u>aMediaTypeUsed</u>	<u>14.4.1.21</u>
0x01-0E	aOnuFwFileName	14.4.1.19
Object group: Bridging		
0x01-01	aOnuDynMacTableSize	14.4.2.1
0x01-02	aOnuDynMacAgeLimit	14.4.2.2
0x01-03	aUniDynMacTable	14.4.2.3
0x01-04	aUniStatMacTable	14.4.2.4
0x01-05	aUniPortAutoNeg	14.4.2.5
0x01-06	aUniAdmissionControl	14.4.2.6
0x01-07	aUniMinLearnMacCount	14.4.2.7
0x01-08	aUniMaxLearnMacCount	14.4.2.8
0x01-09	aOnuMaxLearnMacCount	14.4.2.9
0x01-0A	aUniLengthDiscard	14.4.2.10
0x01-0B	aUniFloodUnknown	14.4.2.11
0x01-0C	aUniLocalSwitching	14.4.2.12
0x01-0F	aUniMacTableFull	14.4.2.13
0x01-12	aOnuMaxFrameSizeCapability	14.4.2.14
0x01-13	aUniMaxFrameSizeLimit	14.4.2.15
0x01-20	aLlidType	14.4.2.16
0x01-21	aSrvPortType	14.4.2.17
0x01-22	aQueueInfo	14.4.2.18

Leaf	Attribute	Defined in
Object group: Statistics and counters		
0x02-01	aCountRxFramesGreen	14.4.3.1
0x02-02	aCountTxFramesGreen	14.4.3.2
0x02-03	aCountRxFrames2Short	14.4.3.3
0x02-04	aCountRxFrames64	14.4.3.4
0x02-05	aCountRxFrames65to127	14.4.3.5
0x02-06	aCountRxFrames128to255	14.4.3.6
0x02-07	aCountRxFrames256to511	14.4.3.7
0x02-08	aCountRxFrames512to1023	14.4.3.8
0x02-09	aCountRxFrames1024to1518	14.4.3.9
0x02-0A	aCountRxFrames1519	14.4.3.10
0x02-0B	aCountTxFrames64	14.4.3.11
0x02-0C	aCountTxFrames65to127	14.4.3.12
0x02-0D	aCountTxFrames128to255	14.4.3.13
0x02-0E	aCountTxFrames256to511	14.4.3.14
0x02-0F	aCountTxFrames512to1023	14.4.3.15
0x02-10	aCountTxFrames1024to1518	14.4.3.16
0x02-11	aCountTxFrames1519	14.4.3.17
0x02-12	aQueueDelayThr	14.4.3.18
0x02-13	aQueueDelayValue	14.4.3.19
0x02-14	aCountFramesDropped	14.4.3.20
0x02-15	aCountOctetsDropped	14.4.3.21
0x02-16	aCountOctetsDelayed	14.4.3.22
0x02-17	aCountUsOctetsUnused	14.4.3.23
0x02-1D	aPonOptMonitTemp	14.4.3.24
0x02-1E	aPonOptMonitVcc	14.4.3.25
0x02-1F	aPonOptMonitBias	14.4.3.26
0x02-20	aPonOptMonitTxPower	14.4.3.27
0x02-21	aPonOptMonitRxPower	14.4.3.28
0x02-22	aCounterRxFramesY	14.4.3.29
0x02-23	aCounterTxFramesY	14.4.3.30
0x02-24	aCounterTxOctetsG	14.4.3.31
0x02-25	aCounterRxOctetsY	14.4.3.32
0x02-26	aCounterRxOctetsG	14.4.3.33
0x02-27	aCounterTxOctetsY	14.4.3.34
0x02-28	aCounterTxFramesL2Unicast	14.4.3.35
0x02-29	aCounterTxFramesL2Multicast	14.4.3.36
0x02-2A	aCounterTxFramesL2Broadcast	14.4.3.37
0x02-2B	aCounterRxFramesL2Unicast	14.4.3.38
0x02-2C	aCounterRxFramesL2Multicast	14.4.3.39
0x02-2D	aCounterRxFramesL2Broadcast	14.4.3.40
0x02-2E	aOnuCounterNumber	14.4.3.41
0x02-2F	aCounterRxFramesL2CP	14.4.3.42
0x02-30	aCounterRxOctetsL2CP	14.4.3.43
0x02-31	aCounterTxFramesL2CP	14.4.3.44
0x02-32	aCounterTxOctetsL2CP	14.4.3.45
0x02-33	aCounterDiscardFramesL2CP	14.4.3.46
0x02-34	aCounterDiscardOctetsL2CP	14.4.3.47
0x02-35	aCounterL2TxErrors	14.4.3.48
0x02-36	aCounterL2RxErrors	14.4.3.49
0x02-37	aCountFramesOverLimitDroppedUni	14.4.3.50
0x02-38	aCountOctetsOverLimitDroppedUni	14.4.3.51

Leaf	Attribute	Defined in
Object group: Alarms		
0x03-01	aAlarmPortStatThr	14.4.4.1
0x03-02	aAlarmLlidStatThr	14.4.4.2
0x03-03	aAlarmStatusControl	14.4.4.3
Object group: Encryption		
0x04-01	aEncryptionKeyExpiration	14.4.5.1
0x04-02	aEncryptionMode	14.4.5.2
Object group: Frame processing		
0x05-01	aRuleSetConfig	14.4.6.1
0x05-02	aRuleCustomField	14.4.6.2
0x05-03	aRuleTpidCAAlter	14.4.6.3
0x05-04	aRuleTpidSAAlter	14.4.6.4
0x05-06	aRuleTpidIAAlter	14.4.6.6
0x05-07	aRuleTpidBAAlter	14.4.6.7
Object group: Service-level agreements		
0x06-01	aRateLimitBroadcast	14.4.7.1
0x06-04	aQueueCIR	14.4.7.2
0x06-05	aFecMode	14.4.7.3
0x06-06	aQueueEIR	14.4.7.4
0x06-07	aQueueColorMarking	14.4.7.5
0x06-08	aQueueRateLimiterCap	14.4.7.6
0x06-09	aCouplingFlag	14.4.7.7
Object group: Clock transport		
0x07-01	aClockTranspCapab	14.4.10.1
0x07-02	aClockTranspStatus	14.4.10.2
0x07-03	aClockTranspTransfer	14.4.10.3
0x07-04	aClockTranspPropagParam	14.4.10.4
0x07-05	aClockTranspRtt	14.4.10.5
0x08-00	Reserved, ignored on reception	
0x08-01	Reserved, ignored on reception	
0x08-02	Reserved, ignored on reception	
0x08-03	Reserved, ignored on reception	
Object group: UNI management		
0x08-20	aEeeStatus	14.4.11.1
0x08-21	aPoeStatus	14.4.11.2
0x08-22	aMediaType	14.4.11.3
Object group: Optical Line Protection		
0x09-00	aOnuProtectionCapability	14.4.9.1
0x09-01	aOnuConfigProtection	14.4.9.2
0x09-02	aOnuConfigPonActive	14.4.9.3
0x09-03	aONUConfigHoldoverPeriod	14.4.9.4
Object group: Power saving		
0xFF-FF	aOnuPwrSavingCap	14.4.8.1

All other Leaf values are reserved and ignored on reception.

14.4.1 ONU management

14.4.1.20 Attribute *aMediaTypeSupported* (0xDB/0x00-15)

This attribute represents the list of media types supported by the given context object. This attribute consists of the following sub-attributes: *sMediaTypeCount* and *sMediaTypeValue[sMediaTypeCount]*.

Sub-attribute *aMediaTypeSupported.sMediaTypeCount*:

Syntax:	Unsigned integer
Remote access:	Read-Only
Description:	This sub-attribute represents the number of media types supported by the given context object.

Sub-attribute *aMediaTypeSupported.sMediaTypeValue[sMediaTypeCount]*:

Syntax:	Enumeration
Remote access:	Read-Only
Description:	This sub-attribute represents the given media type supported by the given context object. The values defined in Table 14-XX are supported.

**Table 14-XX—Supported values for sub-attribute
*aMediaTypeSupported.sMediaTypeValue[sMediaTypeCount]***

Media Type	Description	Value
<u>N/A</u>	<u>No media attached</u>	<u>0x00</u>
<u>25/10GBASE-PQG-U2</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x01</u>
<u>25/10GBASE-PQG-U3</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x02</u>
<u>25/10GBASE-PQX-U2</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x03</u>
<u>25/10GBASE-PQX-U3</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x04</u>
<u>25GBASE-PQG-U2</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x05</u>
<u>25GBASE-PQG-U3</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x06</u>
<u>25GBASE-PQX-U2</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x07</u>
<u>25GBASE-PQX-U3</u>	<u>One single mode fiber, 1 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x08</u>
<u>50/10GBASE-PQG-U2</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x09</u>
<u>50/10GBASE-PQG-U3</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x0A</u>
<u>50/10GBASE-PQX-U2</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x0B</u>
<u>50/10GBASE-PQX-U3</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 10.3125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x0C</u>
<u>50/25GBASE-PQG-U2</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x0D</u>

<u>Media Type</u>	<u>Description</u>	<u>Value</u>
<u>50/25GBASE-PQG-U3</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x0E</u>
<u>50/25GBASE-PQX-U2</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x0F</u>
<u>50/25GBASE-PQX-U3</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 1 × 25.78125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x10</u>
<u>50GBASE-PQG-U2</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 2 × 25.78125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x11</u>
<u>50GBASE-PQG-U3</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 2 × 25.78125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x12</u>
<u>50GBASE-PQX-U2</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 2 × 25.78125 GBd burst mode transmission, medium power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x13</u>
<u>50GBASE-PQX-U3</u>	<u>One single mode fiber, 2 × 25.78125 GBd continuous reception / 2 × 25.78125 GBd burst mode transmission, high power class, as specified in IEEE Std 803.2ca, Clause 141</u>	<u>0x14</u>
<u>100BASE-TX</u>	<u>Two-pair Category 5 twisted-pair cabling as specified in IEEE Std 802.3, Clause 25</u>	<u>0x15</u>
<u>1000BASE-T</u>	<u>Four-pair Category 5 twisted-pair cabling PHY as specified in IEEE Std 802.3, Clause 40</u>	<u>0x16</u>
<u>2.5GBASE-T</u>	<u>Four-pair twisted-pair balanced copper cabling PHY as specified in IEEE Std 802.3, Clause 126</u>	<u>0x17</u>
<u>5GBASE-T</u>	<u>Four-pair twisted-pair balanced copper cabling PHY as specified in IEEE Std 802.3, Clause 126</u>	<u>0x18</u>
<u>10GBASE-T</u>	<u>Four-pair twisted-pair balanced copper cabling PHY as specified in IEEE Std 802.3, Clause 55</u>	<u>0x19</u>
<u>25GBASE-T</u>	<u>Four-pair twisted-pair balanced copper cabling PHY as specified in IEEE Std 802.3, Clause 113</u>	<u>0x1A</u>
<u>40GBASE-T</u>	<u>Four-pair twisted-pair balanced copper cabling PHY as specified in IEEE Std 802.3, Clause 113</u>	<u>0x1B</u>

A single Media Type Supported TLV (0xDB/0x00-15) may carry up to 128 instances of the sub-attribute sMediaTypeValue[sMediaTypeCount].

The aMediaTypeSupported attribute is associated with the PON port object or the Service Port object (see 14.4.1.1). The Variable Container TLV for the aMediaTypeSupported attribute shall be as specified in Table 14-YY.

If the context object is a Service Port of a type other than uni_port, the aMediaTypeSupported attribute shall contain a single value 0x00 (No media attached).

Table 14-YY—Media Type Supported TLV (0xDB/0x00-15)

<u>Size (octets)</u>	<u>Field (name)</u>	<u>Value</u>	<u>Notes</u>
<u>1</u>	<u>Branch</u>	<u>0xDB</u>	<u>Branch identifier</u>
<u>2</u>	<u>Leaf</u>	<u>0x00-15</u>	<u>Leaf identifier</u>
<u>1</u>	<u>Length</u>	<u>M</u>	<u>The size of TLV fields following the Length field, where M is the number of individual media type entries</u>

<u>Size (octets)</u>	<u>Field (name)</u>	<u>Value</u>	<u>Notes</u>
<u>1</u>	<u>MediaTypeValue[0]</u>	<u>Varies</u>	<u>Value of <i>sMediaTypeValue[0]</i> sub-attribute, per Table 14-XX</u>
<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>
<u>1</u>	<u>MediaTypeValue[M-1]</u>	<u>Varies</u>	<u>Value of <i>sMediaTypeValue[M-1]</i> sub-attribute, per Table 14-XX</u>

14.4.1.20 Attribute *aMediaTypeUsed* (0xDB/0x00-16)

This attribute represents the media type used by the given context object.

Attribute *aMediaTypeUsed*:

Syntax: Enumeration

Remote access: Read-Only

Description: This sub-attribute represents the given media type used by the given context object. The values defined in Table 14-XX are supported.

The *aMediaTypeUsed* attribute is associated with the PON port object or the Service Port object (see 14.4.1.1). The Variable Container TLV for the *aMediaTypeUsed* attribute shall be as specified in Table 14-ZZ.

If the context object is a Service Port of a type other than *uni port*, the *aMediaTypeUsed* attribute shall contain a single value 0x00 (No media attached).

Table 14-ZZ—Media Type Used TLV (0xDB/0x00-16)

<u>Size (octets)</u>	<u>Field (name)</u>	<u>Value</u>	<u>Notes</u>
<u>1</u>	<u>Branch</u>	<u>0xDB</u>	<u>Branch identifier</u>
<u>2</u>	<u>Leaf</u>	<u>0x00-16</u>	<u>Leaf identifier</u>
<u>1</u>	<u>Length</u>	<u>1</u>	<u>The size of TLV fields following the Length field.</u>
<u>1</u>	<u>MediaTypeUsed</u>	<u>Varies</u>	<u>Value of <i>sMediaTypeValue[0]</i> sub-attribute, per Table 14-XX</u>