

## 14 Management entities

### 14.4 Branch 0xDB “extended attributes”

#### 14.4.1 ONU management

##### 14.4.1.1

##### 14.4.1.18 Attribute *aLineRateMode* (0xDB/0x00-14)

This attribute represents the EPON mode(s) supported by the given ONU. - The ONU only reports the data rate at which the ONU can fully instantiate. Full instantiation of a particular data rate depends on factors such as hardware configuration, both internal and pluggable to the ONU, software configuration, and other factors. As an example, an ONU that has internal hardware capable of supporting a 50Gb/s data rate, but an optical module only capable of supporting a 25 Gb/s rate does not report a 50 Gb/s data rate capability.

Sub-attribute *aLineRateMode.sDownstream1G*:

**Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the downstream data rate of 1 Gbps. The following values are defined:  
yes: the ONU supports the downstream data rate of 1 Gbps.  
no: the ONU does not support the downstream data rate of 1 Gbps.

Sub-attribute *aLineRateMode.sDownstream2G*:

**Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the downstream data rate of 2 Gbps. The following values are defined:  
yes: the ONU supports the downstream data rate of 2 Gbps.  
no: the ONU does not support the downstream data rate of 2 Gbps.

Sub-attribute *aLineRateMode.sDownstream10G*:

**Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the downstream data rate of 10 Gbps. The following values are defined:  
yes: the ONU supports the downstream data rate of 10 Gbps.  
no: the ONU does not support the downstream data rate of 10 Gbps.

Sub-attribute *aLineRateMode.sDownstream25G*:

**Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the downstream data rate of 25 Gb/s. The following values are defined:  
yes: the ONU supports the downstream data rate of 25 Gb/s.  
no: the ONU does not support the downstream data rate of 25 Gb/s.

Sub-attribute *aLineRateMode.sDownstream50G*:

**Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the downstream data rate of 50 Gb/s. The following values are defined:  
yes: the ONU supports the downstream data rate of 50 Gb/s.  
no: the ONU does not support the downstream data rate of 50 Gb/s.

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**Sub-attribute *aLineRateMode.sUpstream1G*:**

- Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the Upstream data rate of 10 ~~Gbps~~Gb/s. The following values are defined:  
    yes: the ONU supports the Upstream data rate of 10 ~~Gbps~~Gb/s.  
    no: the ONU does not support the Upstream data rate of 10 ~~Gbps~~Gb/s.

**Sub-attribute *aLineRateMode.sUpstream25G*:**

- Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the Upstream data rate of 25 Gb/s. The following values are defined:  
    yes: the ONU supports the Upstream data rate of 25 Gb/s.  
    no: the ONU does not support the Upstream data rate of 25 Gb/s.

**Sub-attribute *aLineRateMode.sUpstream50G*:**

- Syntax:** Boolean  
**Remote access:** Read-Only  
**Description:** This sub-attribute indicates whether the ONU supports the Upstream data rate of 50 Gb/s. The following values are defined:  
    yes: the ONU supports the Upstream data rate of 50 Gb/s.  
    no: the ONU does not support the Upstream data rate of 50 Gb/s.

The *aLineRateMode* attribute is associated with the ONU object (see 14.4.1.1). The Variable Container TLV for the *aLineRateMode* attribute shall be as specified in ~~Table 14-1~~Table 14-74.

**Table 14-174—EPON Line Rate Mode TLV (0xDB/0x00-14)**

Size (octets)	Field (name)	Value	Notes
1	Branch	0xDB	Branch identifier
2	Leaf	0x00-14	Leaf identifier
1	Length	2	The size of TLV fields following the Length field

Size (octets)	Field (name)	Value	Notes
1	Downstream	Varies	<p>bit 0: value of <i>aLineRateMode.sDownstream1G</i> sub-attribute, defined as follows:  <del>yes: 0b1</del>  <del>no: 0b0</del></p> <p>bit 1: value of <i>aLineRateMode.sDownstream2G</i> sub-attribute, defined as follows:  <del>yes: 0b1</del>  <del>no: 0b0</del></p> <p>bit 2: value of <i>aLineRateMode.sDownstream10G</i> sub-attribute, defined as follows:  <del>yes: 0b1</del>  <del>no: 0b0</del></p> <p>bit 1: value of <i>aLineRateMode.sDownstream25G</i> sub-attribute, defined as follows:  <del>yes: 0b1</del>  <del>no: 0b0</del></p> <p>bit 2: value of <i>aLineRateMode.sDownstream50G</i> sub-attribute, defined as follows:  <del>yes: 0b1</del>  <del>no: 0b0</del></p> <p>bits <del>0, 33</del> to 7: reserved and ignored on reception</p>

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Size (octets)	Field (name)	Value	Notes
1	Upstream	Varies	<p>bit 0: value of <i>aLineRateMode.sUpstream1G</i> sub-attribute, defined as follows:  <del>yes: 0b1</del>  <del>no: 0b0</del></p> <p>bit 1: value of <i>aLineRateMode.sUpstream2G</i> sub-attribute, defined as follows:  <del>yes: 0b1</del>  <del>no: 0b0</del></p> <p>bit 20: value of <i>aLineRateMode.sUpstream10G</i> sub-attribute, defined as follows:  yes: 0b1  no: 0b0</p> <p><del>bit 1: value of <i>aLineRateMode.sUpstream25G</i> sub-attribute, defined as follows:  yes: 0b1  no: 0b0</del></p> <p>bit 2: value of <i>aLineRateMode.sUpstream50G</i> sub-attribute, defined as follows:  yes: 0b1  no: 0b0</p> <p>bits <del>3-3</del> to 7: reserved and ignored on reception</p>