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# Classes

## MacInterfaceCapability

Applied stereotypes:

* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* OpenModelClass
* support: MANDATORY

Attributes for MacInterfaceCapability

Table 1: Attributes for MacInterfaceCapability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| hardwareMacAddress | MacAddress  00:00:00:00:00:00 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | Hardware MAC address of the interface. |
| macAddressConfigurationIsAvail | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | 1 = Device supports overwriting the hardware MAC address. |
| supportedMaximumFrameSizeList | Integer  -1 | 0..\* | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: Byte  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT | Must exclusively contain values, which are actually configurable at the hardware (except the default value -1, which has to be represented if maximum frame size cannot be configured at all). Might be all or just a subset of values actually configurable at the hardware. |
| supportedFrameFormatList | FrameFormatType  ./. | 1..\* | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | List of supported Ethernet frame formats |
| supportedFlowControlModeList | FlowControlModeType  ./. | 1..5 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | List of potential configurations of the Flow Control. |
| linkLossForwardingIsAvail | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | 1 = Sending a Link Loss message in case of link failure is supported by the device. |
| supportedLinkLossForwardingDelayList | Integer  -1 | 0..\* | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: 100ms  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_8\_BIT | Must exclusively contain values, which are actually configurable at the hardware (except the default value -1, which has to be represented if link loss forwarding delay cannot be configured at all). Might be all or just a subset of values actually configurable at the hardware. |
| broadcastFrameSuppressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | 1 = Interface is supporting limiting the maximum share of broadcast frames. |
| loopPortShutDownIsAvail | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | 1 = Device is supporting automated shut down of ports, which are affected by an Ethernet loop. |
| loopDetectionIsAvail | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | 1 = Device is supporting a feature for detecting Ethernet loops on this interface. |
| adminShutDownIsAvail | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | 1 = Manual switching on and off of the interface without deleting it (underlying OSI network layers are also not affected) is available. |
| supportedLoopBackKindList | LoopBackType  ./. | 1..3 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | List of supported kinds of looping back. |
| maintenanceTimerRange | String  Range of the maintenance timer not yet defined. | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: s  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | Available time periods for maintenance configurations to be described. Concrete values shall be separated by commas (e.g. '10, 60, 360'). Ranges shall be expressed as two values separated by a minus (e.g. '10-360'). |
| statisticsIsAvail | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | 1 = Continuous statistics counters are available. |

## MacInterfaceConfiguration

Applied stereotypes:

* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* OpenModelClass
* support: MANDATORY

Attributes for MacInterfaceConfiguration

Table 1: Attributes for MacInterfaceConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| interfaceName | String  Interface name not yet defined. | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Description of the interface, could be a name, could be a number. Free text field to be filled by the operator. |
| macAddressConfigurationIsOn | Boolean  false | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Only relevant if (macAddressConfigurationIsAvail==1). 1 = Activates overwriting the hardware MAC address by MacInterfaceConfiguration::configuredMacAddress. |
| configuredMacAddress | MacAddress  00:00:00:00:00:00 | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Only relevant if (macAddressConfigurationIsAvail==1 AND macAddressConfigurationIsOn==1). Overwriting the hardware MAC address with the configured value. |
| maximumFrameSize | Integer  -1 | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: Byte  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_16\_BIT | This value describes the maximum size of the Ethernet frame (in Byte) before sending. Validation result shall reflect hardware characteristics, even if these are exceeding the values stated in MacInterfaceCapability::supportedMaximumFrameSizeList. If a value, which is not supported by the hardware, would be tried to be configured, the device-software or mediator-software might either respond with operation-failed tag and error message '...Configuration value out of range of hardware capabilities...' or it could map the sent configuration value on the closest value, which is actually supported by the hardware. Configuration attempts with values lower than the minimum value or higher than the maximum value of the 'supportedMaximumFrameSizeList' must be answered with operation-failed tag and the error message '...Configuration value out of range of hardware capabilities...'. |
| fragmentationAllowed | FragmentationType  NOT\_YET\_DEFINED | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA |  |
| transmittedFrameFormat | FrameFormatType  NOT\_YET\_DEFINED | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Configuration of the format of the transmitted Ethernet frames. |
| flowControlMode | FlowControlModeType  NOT\_YET\_DEFINED | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Configures the mode of operation of Flow Control according to IEEE 802.3x on this interface. |
| linkLossForwardingIsOn | Boolean  false | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | 1 = Sending a Link Loss message in case of link failure is activated. |
| linkLossForwardingDelay | Integer  -1 | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: 100ms  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_8\_BIT | Delay (in 100ms steps) between a detected link failure and sending of a Link Loss message. In case of 1+1 hot stand by protection of a microwave, make sure configured value is higher than 5 (500ms). Validation result shall reflect hardware characteristics, even if these are exceeding the values stated in MacInterfaceCapability::supportedLinkLossForwardingDelayList. If a value, which is not supported by the hardware, would be tried to be configured, the device-software or mediator-software might either respond with operation-failed tag and error message '...Configuration value out of range of hardware capabilities...' or it could map the sent configuration value on the closest value, which is actually supported by the hardware. Configuration attempts with values lower than the minimum value or higher than the maximum value of the 'supportedLinkLossForwardingDelayList' must be answered with operation-failed tag and the error message '...Configuration value out of range of hardware capabilities...'. |
| broadcastFrameSuppressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | 1 = Limiting the share of broadcast frames is activated. |
| maximumShareOfBroadcastFrames | Integer  -1 | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: %  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_8\_BIT | Threshold for Broadcast frames becoming discarded in %. Value range from 0 to 100. |
| loopPortShutDownIsOn | Boolean  false | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | 1 = Feature for automated shut down in case of an Ethernet loop is activated on this interface. |
| loopDetectionIsOn | Boolean  false | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Maintenance Feature. 1 = Checking for Ethernet loops on this interface is currently switched on. |
| loopBackKindOn | LoopBackType  NOT\_YET\_DEFINED | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Maintenance Feature. Configuration of a loop back of Ethernet frames on this interface. |
| maintenanceTimer | Integer  -1 | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: s  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_32\_BIT | Time of existence of any maintenance configuration. 0 = maintenance timer is switched off. Valid values are defined in \*Capability::maintenanceTimerRange. |
| statisticsIsOn | Boolean  false | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Only relevant if (statisticsIsAvail==1). 1 = Continuous statistics counters are switched on. |

## MacInterfaceLpSpec

Applied stereotypes:

* OpenInterfaceModelClass
* objectCreationNotification: YES
* objectDeletionNotification: YES
* OpenModelClass
* support: MANDATORY

Attributes for MacInterfaceLpSpec

Table 1: Attributes for MacInterfaceLpSpec

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_macInterface\_Pac | MacInterface\_Pac  ./. | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | See referenced class |

## MacInterfaceStatus

Applied stereotypes:

* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* OpenModelClass
* support: MANDATORY

Attributes for MacInterfaceStatus

Table 1: Attributes for MacInterfaceStatus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| interfaceStatus | InterfaceStatusType  NOT\_YET\_DEFINED | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Operational status of the interface. |
| macAddressCur | MacAddress  00:00:00:00:00:00 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | If (macAddressConfigurationIsAvail==0), maxAddressCur = MacInterfaceCapability::hardwareMacAddress. If (macAddressConfigurationIsAvail==1 AND macAddressConfigurationIsOn==1), maxAddressCur = MacInterfaceConfiguration::configuredMacAddress. |
| receivedEthernetFrameFormatCur | FrameFormatType  NOT\_YET\_DEFINED | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Ethernet frame format of the currently received frames. |
| flowControlModeCur | FlowControlModeType  NOT\_YET\_DEFINED | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Currently operative mode (none, send, receive, both) of operation of the Flow Control according to IEEE 802.3x on this interface. |
| loopDetectionResult | loopDetectionResultType  NOT\_YET\_DEFINED | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | Result of the Ethernet loop detection feature. |
| loopBackKindUp | LoopBackType  NOT\_YET\_DEFINED | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | The currently active (not just configured) type of loop back. |
| statisticsIsUp | Boolean  false | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA | 1 = Statistics are currently collected and aggregated. |
| timestamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | The timestamp associated with when the statistic values were read/retrieved. |
| last10SecFrameInputRate | Integer  -1 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: frame/s  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT | Frame receive rate at this MAC interface over the last 10 second interval. |
| last10SecFrameOutputRate | Integer  -1 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: frame/s  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT | Frame transmit rate at this MAC interface over the last 10 second interval. |
| oversizedFramesIngress | Integer  -1 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: frame  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT | The total number of frames received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed. |
| undersizedFramesIngress | Integer  -1 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: frame  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT | The total number of frames received that were less than 64 octets long (excluding framing bits, but including FCS octets) and were otherwise well formed. |
| jabberFramesIngress | Integer  -1 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: frame  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT | Number of jabber frames received on the interface. Jabber frames are typically defined as oversize frames which also have a bad CRC. Implementations may use slightly different definitions of what constitutes a jabber frame. Often indicative of a NIC hardware problem. |
| fragmentedFramesIngress | Integer  -1 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: frame  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT | The total number of frames received that were less than 64 octets in length (excluding framing bits but including FCS octets) and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error). |
| unknownProtocolFramesInput | Integer  -1 | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: frame  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT | Total number of received frames that were transporting an unknown protocol. |

## MacInterface\_Pac

Applied stereotypes:

* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* OpenModelClass
* support: MANDATORY

Attributes for MacInterface\_Pac

Table 1: Attributes for MacInterface\_Pac

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_macInterfaceCapability | MacInterfaceCapability  ./. | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | See referenced class |
| \_macInterfaceConfiguration | MacInterfaceConfiguration  ./. | 1 | RW | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | See referenced class |
| \_macInterfaceStatus | MacInterfaceStatus  ./. | 1 | R | OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA | See referenced class |

# Data Types

# Enumeration Types

## FlowControlModeType

Contains Enumeration Literals:

* NONE:
  + Flow Control is switched off.
* SEND\_ONLY:
  + Only sending of pause frames according to IEEE 802.3x (Ethernet Flow Control).
* RECEIVE\_ONLY:
  + Only listening for incoming pause frames according to IEEE 802.3x (Ethernet Flow Control).
* SEND\_AND\_RECEIVE:
  + Sending and listening for pause frames according to IEEE 802.3x (Ethernet Flow Control).
* AUTO\_NEGOTIATION:
* NOT\_YET\_DEFINED:

## FragmentationType

Contains Enumeration Literals:

* DISABLE:
* ENABLE\_256\_BYTE:
* ENABLE\_512\_BYTE:
* NOT\_YET\_DEFINED:

## FrameFormatType

Contains Enumeration Literals:

* ETHERNET\_2:
* 802.2\_SNAP:
* 802.2\_LLC:
* 802.3:
* NOT\_YET\_DEFINED:

## InterfaceStatusType

Current Interface Status

Contains Enumeration Literals:

* UP:
  + Ready to pass packets. It is expected that the LogicalTerminationPoint::operationalState attribute is expressing this logical layer being available for use (means: ENABLED), while this value occurs.
* DOWN:
  + The interface does not pass any packets. It is expected that the LogicalTerminationPoint::operationalState attribute is expressing this logical layer being NOT available for use (means: DISABLED), while this value occurs.
* SHUT\_DUE\_LOOP:
  + Only relevant if (loopPortShutDownIsAvail==1) AND (loopPortShutDownIsOn==1). 1 = port has been automatically shut down, because an Ethernet loop has been detected on this interface.
* TESTING:
  + In some test mode. No operational packets can be passed. It is expected that the LogicalTerminationPoint::operationalState attribute is expressing this logical layer being NOT available for use (means: DISABLED), while this value occurs.
* UNKNOWN:
  + Status cannot be determined for some reason. While this value occurs, the LogicalTerminationPoint::operationalState attribute, which is expressing the availability of the logical layer for being used, might have either ENABLED or DISABLED as value.
* DORMANT:
  + Waiting for some external event. It is expected that the LogicalTerminationPoint::operationalState attribute is expressing this logical layer being available for use (means: ENABLED), while this value occurs.
* NOT\_PRESENT:
  + Some component (typically hardware) is missing. It is expected that the LogicalTerminationPoint::operationalState attribute is expressing this logical layer being NOT available for use (means: DISABLED), while this value occurs.
* NOT\_YET\_DEFINED:
  + While this value occurs, the LogicalTerminationPoint::operationalState attribute, which is expressing the availability of the logical layer for being used, might have either ENABLED or DISABLED as value.

## LayerProtocolNameType

A controlled list of LayerProtocol names.

Contains Enumeration Literals:

* LAYER\_PROTOCOL\_NAME\_TYPE\_MAC\_LAYER:

## LoopBackType

Contains Enumeration Literals:

* NONE:
* BACK\_TO\_LOCAL:
  + Returning Ethernet frames of the local site on the Ethernet MAC interface back to the local site.
* BACK\_TO\_REMOTE:
  + Returning Ethernet frames of the remote site on the Ethernet MAC interface back to the remote site.
* NOT\_YET\_DEFINED:

## loopDetectionResultType

Contains Enumeration Literals:

* LOOP\_DETECTED:
* NO\_LOOP\_DETECTED:
* DETECTION\_SWITCHED\_OFF:
* NOT\_YET\_DEFINED: