# Florida-Specific NTCIP Management Information Base (MIB) For Closed-Circuit Television (CCTV) Camera 

Final Draft

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Description: This following MIB has been developed for use by FDOT. This proposed Florida-Specific NTCIP Management Information Base (MIB) For Closed-Circuit Television (CCTV) Camera MIB is based on the following documentations:

- NTCIP 1205 v01.08, NTCIP 1205 v0108 Amendment A "National Transportation Communications for ITS Protocol Object Definitions for Closed Circuit Television (CCTV) Camera Control"
- NTCIP 1201 v0110b
- Section 782: Intelligent Transportation Systems Video Requirement of the "Workbook of Implemented Modifications to the Standard Specifications for Road and Bridge Construction" by FDOT Specifications Office

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************************************************************************

CCTV-MIB1 DEFINITIONS ::= BEGIN
--the following OBJECT IDENTIFIERS are used in the CCTV MIB:

```
IMPORTS
    OBJECT-TYPE
        FROM RFC-1212
    profiles, devices
        FROM TMIB;
    cctv OBJECT IDENTIFIER ::= {devices 7}
        cctv
-- FROM NTCIP8004-A-2004;
```

PositionReference ::= OCTET STRING (SIZE (0..4))
-- PositionReference consists of those parameters required to
-- control the detailed movement of the camera. It is defined by an
-- aligned OER encoded value of the following structure:
-- CHOICE \{
-- stopMovement INTEGER (0) - stop movement,
-- delta SpeedOffset,
-- absolute SpeedOffset,
-- continuous INTEGER (-127..127) - scalar values where larger values denote increasing speed\}
-- SpeedOffset ::= SEQUENCE \{
-- speed INTEGER (-127..127),
-- offset INTEGER (0..65535)\}
-- For the purpose of this section, the following OBJECT IDENTIFIERS are used:
-- cctv OBJECT IDENTIFIER ::= \{devices 7\}

### 1.1 GLOBAL CONFIGURATION NODE

globalConfiguration OBJECT IDENTIFIER
::= \{ cctv 1 \}

### 1.1.1 Global Set ID Parameter

globalSetIDParameter OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-only
STATUS optional
DESCRIPTION
"<DEFINITION>Specifies a relatively unique ID for all user-changable parameters of the particular device-type currently implemented in the device.
Often this ID is calculated using a CRC algorithm.
<DescriptiveName>Controller.databaseID:number-ushort
<DataConceptType>Data Element"
::= \{ globalConfiguration 1\}

### 1.1.2 Maximum Modules Parameter

globalMaxModules OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>The number of rows that are listed in the Global Module Table.
<DescriptiveName>ModuleTable.maxModules:quantity-ubyte
<DataConceptType>Data Element
<Unit>module"
::= \{ globalConfiguration 2\}
1.1.3 Module Table
globalModuleTable OBJECT-TYPE
SYNTAX SEQUENCE OF ModuleEntry
ACCESS not-accessible
STATUS optional
DESCRIPTION
"<Definition>A table containing information regarding manufacturer of software and hardware and the associated module models and version numbers as well as an indicator if the module is hardware or software related. The number of rows in this table shall equal the value of the globalMaxModule object.
<DescriptiveName>ModuleTable
<DataConceptType>Entity Type
<TableType> static"
::= \{ globalConfiguration 3 \}
moduleEntry OBJECT-TYPE
SYNTAX ModuleTableEntry
ACCESS not-accessbile

STATUS optional
DESCRIPTION
"<Definition>This object defines an entry in the module table.
<DescriptiveName>Module
<DataConceptType>Entity Type"
INDEX \{ moduleNumber \}
::= \{ globalmoduleTable 1 \}
ModuleTableEntry ::= SEQUENCE \{ moduleNumber INTEGER, moduleDeviceNode OBJECT IDENTIFIER, moduleMake OCTET STRING, moduleModel OCTET STRING, moduleVersion OCTET STRING, module Type INTEGER \}
1.1.3.1 Module Number Parameter
moduleNumber OBJECT-TYPE
SYNTAX INTEGER (1..255)
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>This object contains the row number (1.255) within this table for the associated module.
<DescriptiveName>Module.number:identifier-positivebyte
<DataConceptType>Data Element"
::= \{ moduleTableEntry 1 \}
1.1.3.2 Module Device Node Parameter
moduleDeviceNode OBJECT-TYPE SYNTAX OBJECT IDENTIFIER
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>This object contains the device node number of the device-type,
e.g., an ASC signal controller would have an OID of 1.3.6.1.4.1.1206.4.2.1.
<DescriptiveName>Module.deviceNode:identifier-oid
<DataConceptType>Data Element"
::= \{ moduleTableEntry 2 \}

### 1.1.3.3 Module Make Parameter

moduleMake OBJECT-TYPE
SYNTAX OCTET STRING
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>This object specifies the manufacturer of the associated module. A nullstring shall be transmitted if this object has no entry.
<DescriptiveName>Module.make:text-unbounded
<DataConceptType>Data Element"
::= \{ moduleTableEntry 3 )
1.1.3.4 Module Model Parameter moduleModel OBJECT-TYPE SYNTAX OCTET STRING
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>This object specifies the model number (hardware) or firmware reference (software) of the associated module. A null-string shall be transmitted if this object has no entry.
<DescriptiveName>Module.model:text-unbounded
<DataConceptType>Data Element"
::= \{ moduleTableEntry 4 \}

### 1.1.3.5 Module Version Parameter

moduleVersion OBJECT-TYPE
SYNTAX OCTET STRING
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>This object specifies the version of the associated module. A nullstring shall be transmitted if this object has no entry.
<DescriptiveName>Module.version:text-unbounded
<DataConceptType>Data Element"
::= \{ moduleTableEntry 5 )
1.1.3.6 Module Type Parameter
moduleType OBJECT-TYPE
SYNTAX INTEGER \{
other (1),
hardware (2),
software (3) \}
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>This object specifies if the associated module is a hardware or software module.
<DescriptiveName>Module.type:code-controller-module-type
<DataConceptType>Data Element"
::= \{ moduleTableEntry 6 \}

### 1.2 Security Objects

security OBJECT IDENTIFIER ::= \{cctv 2$\}$

### 1.2.1. Community Name Administrator Parameter

communityNameAdmin OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(8..16))
ACCESS read-write
STATUS mandatory

## DESCRIPTION

"This object is the community name that must be used to specifically gain access to information under the security node. A message with this value in the community name field of an SNMP message has user read-write access to the security node objects and all other objects implemented in the device. The syntax is defined as an OCTET STRING and therefore any character can have a value of 0..255."
DEFVAL \{ "administrator" \}
$::=\{$ security 1 \}
1.2.2. Maximum Community Names Parameter
communityNamesMax OBJECT-TYPE
SYNTAX INTEGER (1..255)
ACCESS read-only
STATUS mandatory
DESCRIPTION
"This object specifies the maximum number of rows that are implemented in the community name table."
$::=\{$ security 2 \}
1.2.3. Community Names Table
communityNameTable OBJECT-TYPE
SYNTAX SEQUENCE OF CommunityNameTableEntry
ACCESS not-accessible
STATUS mandatory
DESCRIPTION
"This table defines the community names that can appear in the community name field of the SNMP message and access privileges associated with that community name."
$::=\{$ security 3 \}
communityNameTableEntry OBJECT-TYPE
SYNTAX CommunityNameTableEntry
ACCESS not-accessible
STATUS mandatory
DESCRIPTION
"This is the row index of information in the community name table."
INDEX \{ communityNameIndex \}
$::=\{$ communityNameTable 1\}
CommunityNameTableEntry::=SEQUENCE
\{ communityNameIndex INTEGER, communityNameUser OCTET STRING, communityNameAccessMask Gauge \}

### 1.2.3.1. Community Name Index Parameter

communityNameIndex OBJECT-TYPE
SYNTAX INTEGER (1..255)
ACCESS read-only

STATUS mandatory
DESCRIPTION
"This object defines the row index into the communityNameTable. This value shall not exceed the communityNamesMax object value."
::= \{ communityNameTableEntry 1 \}
1.2.3.2. User Community Name Parameter
communityNameUser OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(6..16))
ACCESS read-write
STATUS mandatory
DESCRIPTION
"This object defines a community name value that a security administrator can assign user read-write access to information (other than security) in a device. A message with this value in the community name field of an SNMP/SFMP message has user access rights as defined in the communityNameAccessMask. The syntax is defined as an OCTET STRING and therefore any character can have a value of 0..255."
DEFVAL \{ "public" \}
::= \{ communityNameTableEntry 2 \}
1.2.3.3. User Community Name Mask Parameter
communityNameAccessMask OBJECT-TYPE
SYNTAX Gauge
ACCESS read-write
STATUS mandatory
DESCRIPTION
"This object defines a 32 bit mask that can be used to associate 'write access' with a community name. A value of $0 x 00000000$ grants the community name user read-only access and overrides any individual object's read-write access clause. A value of 0xFF FF FF FF grants the community name user read-write access and an individual object's readwrite access clause applies. Values other than 0x00 000000 and $0 x F F$ FF FF FF are implementation specific and may limit viewing and/or accessing the information in a device."
DEFVAL \{ 4294967295 \}
::= \{ communityNameTableEntry 3 \}

### 1.3 GLOBAL TIME MANAGEMENT NODE

 globalTimeManagement OBJECT IDENTIFIER$::=\{\operatorname{cctv} 3\}$
1.3.1 Global Time Parameter
globalTime OBJECT-TYPE
SYNTAX Counter
ACCESS read-write
STATUS optional
DESCRIPTION:
"<Definition>The current UTC (a.k.a. Zulu or GMT) time in seconds since the epoch of 00:00:00 (midnight) January 1, 1970 UTC.
<DescriptiveName>Controller.time:quantity-counter
<DataConceptType>Data Element
<Unit>second"
DEFVAL $\{0\}$
$::=\{$ globalTimeManagement 1\}
1.3.2 Global Daylight Savings Parameter
globalDaylightSaving OBJECT-TYPE
SYNTAX INTEGER \{ other (1),
disableDST (2),
enableUSDST (3),
enableEuropeDST (4),
enableAustraliaDST (5),
enableTasmaniaDST (6) \}
ACCESS read-write
STATUS optional
DESCRIPTION:
"<Definition>This object specifies if the Daylight Savings Time (DST) is enabled, disabled or some other form of daylight savings time is active. other - DST adjustments by a mechanism not defined within this standard. disableDST - DST clock adjustments shall NOT occur. enableUSDST - DST clock adjustments shall occur in accordance with USA practice: DST shall begin the first Sunday in April and shall end the last Sunday of October. All changes of time occur at 2:00AM. enableEuropeDST - DST clock adjustments shall occur in accordance with European practice: DST shall start the last Sunday of March at 2:00 AM and ends the last Sunday of October at 3:00 AM. enableAustraliaDST - DST clock adjustments shall occur in accordance with Australian practice: DST shall start the last Sunday in October at 2:00 AM and ends the last Sunday in March at 2:00 AM. enableTasmaniaDST - DST clock adjustments shall occur in accordance with Tasmanian practice: DST shall start the first Sunday in October at 2 a.m. and ends the last Sunday in March at 3 a.m.
<DescriptiveName>Controller.daylightSavingsMode:code-daylight-savings
<DataConceptType>Data Element"
DEFVAL \{ disableDST \}
REFERENCE
"NEMA TS 2 Clause 3.8.2; http://fatty.law.cornell.edu/uscode/15/260a.html; http://www.timing.se/Daylight.htm;
http://www.dstc.qut.edu.au/DST/marg/daylight.html\#cutoffs;
http://www.dstc.qut.edu.au/DST/marg/daylight.html\#cutoffs "
$::=\{$ globalTimeManagement 2 \}

### 1.4 PMPP OBJECT NODE

-- NOTE: These objects will be moved to NTCIP 2101 at some point in the future. profilesPMPP OBJECT IDENTIFIER ::= \{ cctv 4$\}$
1.4.1 Maximum HDLC Group Address Parameter
maxGroupAddresses OBJECT-TYPE

SYNTAX INTEGER (0..255)
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>The maximum number of group addresses this device supports.
This object indicates the maximum number of rows in the Data Link Layer group address table.
<DescriptiveName>Secondary.maxGroupAddresses:quantity-ubyte
<DataConceptType>Data Element
<Unit>address"
::= \{profilesPMPP 1 \}

### 1.4.2 HDLC Group Address Table

hdlcGroupAddressTable OBJECT-TYPE SYNTAX SEQUENCE OF HdlcGroupAddressEntry
ACCESS not-accessable
STATUS optional
DESCRIPTION
"<Definition> A table containing group addresses at which a device may receive frames.
<DescriptiveName> HDLCGroupAddressTable
<DataConceptType> Entity Type
<TableType> static"
$::=\{$ profilesPMPP 2 \}
hdlcGroupAddressEntry OBJECT-TYPE
SYNTAX HdlcGroupAddressEntry
ACCESS not-accessible
STATUS optional
DESCRIPTION
"<Definition> An entry in the group address table that contains a device's data link layer group address at which it will accept frames.
<DescriptiveName> HdlcGroupAddress
<DataConceptType> Entity Type"
INDEX \{ hdlcGroupAddressIndex \}
$::=\{$ hdlcGroupAddressTable 1 \}
HdlcGroupAddressEntry ::= SEQUENCE \{
hdlcGroupAddressIndex INTEGER,
hdlcGroupAddressNumber INTEGER \}
1.4.2.1 HDLC Group Address Index Parameter
hdlcGroupAddressIndex OBJECT-TYPE
SYNTAX INTEGER (1..255)
ACCESS read-only
STATUS optional
DESCRIPTION
"<Definition>The index number for the group address in this row.
<DescriptiveName>GroupAddress.index:identifier-positivebyte
<DataConceptType>Data Element"
::= \{ hdlcGroupAddressEntry 1\}
1.4.2.2 HDLC Group Address Parameter
hdlcGroupAddress OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-write
STATUS deprecated
DESCRIPTION
"A group address for the data link layer. For PMPP, the syntax is an 8 or 16 bit entry with the second low order bit set to a one indicating that this is a group address."
REFERENCE
"NEMA TS 3.3 Clause 3.3.3.1"
::= \{ hdlcGroupAddressEntry 2 \}
1.4.2.3 HDLC Group Address Number Parameter
hdlcGroupAddressNumber OBJECT-TYPE
SYNTAX INTEGER (1..62)
ACCESS read-write
STATUS optional
DESCRIPTION
"<Definition>A group address number prior to any encoding for the data link layer. The address of 63 is reserved for the all stations address.
<DescriptiveName>GroupAddress.address:number-unbounded
<DataConceptType>Data Element"
REFERENCE
"NTCIP 2101"
::= \{ hdlcGroupAddressEntry 3\}

### 1.5 CCTV RANGE OBJECTS

cctvRange OBJECT IDENTIFIER $::=\{\operatorname{cctv} 5\}$

### 1.5.1 Maximum Number of Presets Parameter

```
rangeMaximumPreset OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-only
STATUS mandatory
DESCRIPTION "A preset is the pre-specified position where a camera is pointed to a fixed point in space (includes positions for pan, tilt, and zoom). The maximumPreset is a number indicating the total number of possible preset positions supported by the device. A value of zero (0) identifies that the device does not support presets."
::= \{cctvRange 1\}
```


### 1.5.2 Pan Left Limit Parameter

rangePanLeftLimit OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the panning left range limit in 1/100th degree units in a clockwise direction from the Home Position. If the rangePanLeftLimit and the rangePanRightLimit are both zero (0), then the device does not support panning movement. If the rangePanLeftLimit and the rangePanRightLimit are both 65535, then the device does not support the concept of right and left limits." ::= \{ cctvRange 2\}

### 1.5.3 Pan Right Limit Parameter

rangePanRightLimit OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the panning right range limit in 1/100th degree units in a clockwise direction from the Home Position. If the rangePanLeftLimit and the rangePanRightLimit are both zero (0), then the device does not support panning movement. If the rangePanLeftLimit and the rangePanRightLimit are both 65535, then the device does not support the concept of right and left limits." $::=\{$ cctvRange 3\}

### 1.5.4 Pan Home Position Parameter

rangePanHomePosition OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies an arbitrary point on a circle from which the left and right limits are measured in 1/100th degree units. The value of 65535 means that Home position referencing is not supported for the horizontal plane.."
$::=\{$ cctvRange 4\}

### 1.5.5 True North Offset Parameter

rangeTrueNorthOffset OBJECT-TYPE
SYNTAX INTEGER (0..35999 | 65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Specifies the offset from the Home Position to True North in a clockwise direction in 1/100th degree units. When read, this object returns last value written. If the Home Position is true North, then set this value to zero (0). The value of 65535 means that a true North offset from the Home position is not
supported. The actual direction of North is not defined by this standard. True North offset can be used to create an arbitrary coordinate reference position." ::= \{ cctvRange 5\}

### 1.5.6 Tilt Up Limit Parameter

rangeTiltUpLimit OBJECT-TYPE
SYNTAX INTEGER (0..35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the tilting up range limit in 1/100th degree units. The zero point for measurement is any point on the horizontal plane. The horizontal plane is orthogonal to the vertical line extending from the camera's movement point and the center of the earth. The horizontal plane is through the camera's movement point. Tilting upward indicates a positive direction. If the rangeTiltUpLimit and the rangeTiltDownLimit are both zero (0), then the device does not support tilting movement. If the rangeTiltUpLimit and the rangeTiltDownLimit are both 65535, then the device does not support the concept of up and down limits."
::= \{ cctvRange 6\}

### 1.5.7 Tilt Down Limit Parameter

rangeTiltDownLimit OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the tilting down range limit in 1/100th degree units. The zero point for measurement is any point on the horizontal plane. The horizontal plane is orthogonal to the vertical line extending from the camera's movement point and the center of the earth. The horizontal plane is through the camera's movement point. Tilting upward indicates a positive direction. If the rangeTiltUpLimit and the rangeTiltDownLimit are both zero (0), then the device does not support tilting movement. If the rangeTiltUpLimit and the rangeTiltDownLimit are both 65535, then the device does not support the concept of up and down limits."
$::=\{$ cctvRange 7$\}$

### 1.5.8 Zoom Limit Parameter

rangeZoomLimit OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the zoom range in arbitrary units. Used for absolute or offset control. Zero (0) identifies that zoom limits are not supported. This
number represents the scalar zoom positioning beginning with one (1) for wide and ending with 65535 for telephoto."
$::=\{$ cctvRange 8$\}$

### 1.5.9 Focus Limit Parameter

rangeFocusLimit OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the focus range in arbitrary units. Used for absolute or offset control. Zero (0) identifies that focus limits are not supported. This number represents the scalar focus positioning beginning with one (1) for near and ending with 65535 for far."
$::=\{$ cctvRange 9$\}$

### 1.5.10 Iris Limit Parameter

rangelrisLimit OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the iris range in arbitrary units. Used for absolute or offset control. Zero (0) identifies that iris limits are not supported. This number represents the scalar zoom positioning beginning with one (1) for open and ending with 65535 for closed. Open is defined as the largest aperture setting. Closed is defined as the smallest aperture setting."
$::=\{$ cctvRange 10\}

### 1.5.11 Minimum Pan Step Angle Parameter

rangeMinimumPanStepAngle OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Specifies the minimum incremental angle in 1/100th degree units for the minimum pan step size to guarantee movement in the horizontal plane. A value of 65535 means that minimum pan step angle is not supported."
::= \{ cctvRange 11\}

### 1.5.12 Minimum Tilt Step Angle Parameter

| rangeMinimumTiltStepAngle OBJECT-TYPE |  |
| :--- | :--- | :--- |
| SYNTAX | INTEGER $(0 . .35999 \mid 65535)$ |
| ACCESS | read-only |
| STATUS | mandatory |

DESCRIPTION "Specifies the minimum incremental angle in 1/100th degree units for the minimum tilt step size to guarantee movement in the vertical plane. A value of 65535 means that minimum tilt step angle is not supported."
$::=\{$ cctvRange 12 $\}$

### 1.6 CCTV TIMEOUT OBJECTS

cctvTimeout OBJECT IDENTIFIER ::=\{ cctv 6$\}$

### 1.6.1 Pan Timeout Parameter

timeoutPan OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "A number indicating the total number of milliseconds that a panning motion can continue without the reissue of a pan command. A value of zero (0) identifies that panning timeout is not supported."
::= \{cctvTimeout 1\}

### 1.6.2 Tilt Timeout Parameter

timeoutTilt OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "A number indicating the total number of milliseconds that a tilting motion can continue without the reissue of a tilt command. A value of zero (0) identifies that tilting timeout is not supported."
::= \{cctvTimeout 2\}

### 1.6.3 Zoom Timeout Parameter

timeoutZoom OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "A number indicating the total number of milliseconds that a zoom motion can continue without the reissue of a zoom command. A value of zero (0) identifies that zooming timeout is not supported."
::= \{cctvTimeout 3\}

### 1.6.4 Focus Timeout Parameter

```
timeoutFocus OBJECT-TYPE
SYNTAX INTEGER (0..65535)
```

ACCESS read-write
STATUS mandatory
DESCRIPTION "A number indicating the total number of milliseconds that a focus motion can continue without the reissue of a focus type command. A value of zero (0) identifies that focusing timeout is not supported."
::= \{cctvTimeout 4\}

### 1.6.5 Iris Timeout Parameter

| timeoutlris | OBJECT-TYPE |
| :--- | :--- |
| SYNTAX | INTEGER (0..65535) |
| ACCESS | read-write |
| STATUS | mandatory |

DESCRIPTION "A number indicating the total number of milliseconds that an iris motion can continue without the reissue of a iris type command. A value of zero (0) identifies that iris timeout is not supported."
::= \{cctvTimeout 5\}

### 1.7 CCTV LABEL OBJECTS

cctvLabel OBJECT IDENTIFIER $::=\{\operatorname{cctv} 7\}$

### 1.7.1 Maximum Number of Labels Parameter

labelMaximum OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Defines the maximum number of labels in the camera control label table. A label is defined as text with position, font, and color information. "
$::=\{$ cctvLabel 1\}

### 1.7.2 Label Table

| labelTable | OBJECT-TYPE |
| :--- | :--- |
| SYNTAX | SEQUENCE OF |
| ACCESS | not-accessible |
| STATUS $\quad$ mandatory |  |
| DESCRIPTION "This table con |  |
| defined as text with position, |  |
| identifies a single label." |  |
| $::=\{$ cctvLabel 2$\}$ |  |
|  |  |
| labelEntry | OBJECT-TYPE |
| SYNTAX | LabelEntry |

ACCESS not-accessible
STATUS mandatory
DESCRIPTION "Parameters of the camera control label table."
INDEX \{labelIndex\}
::= \{labelTable 1\}

```
LabelEntry ::= SEQUENCE {
    labelIndex
    labeIText
    labeIFontType
    labelHeight
    labelColor
    labeIStartRow
    labeIStartColumn
    labeIStatus
    labelActive
    labelFontNumber
    }
```

INTEGER, OCTET STRING, INTEGER, INTEGER, INTEGER, INTEGER, INTEGER, OCTET STRING, OCTET STRING, INTEGER

### 1.7.2.1 Label Index Parameter

labellndex OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-only
STATUS mandatory
DESCRIPTION "The number associated with each individual label."
$::=\{$ labelEntry 1$\}$

### 1.7.2.2 Label Text Parameter

labelText OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(0..255))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Text for the label. The label text must fit within the frame-size available for the application."
$::=\{$ labelEntry 2$\}$

### 1.7.2.3 Label Font Type Parameter

labelFontType OBJECT-TYPE SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS deprecated
DESCRIPTION "Designates the style of font to be displayed. The ASCII font style must be supported and that font style is taken to be the default style.

```
Value Meaning
1 designates ASCII text characters to be displayed,
2 designates Bit Mapped Characters to be displayed."
\(::=\{\) labelEntry 3\(\}\)
```


### 1.7.2.4 Label Height Parameter

labelHeight OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Height of this label text represented as a percent of screen filled by the text and scaled to a range of zero (0) and 255 to fit the height of screen. A height of zero (0) indicates that a label is not displayed and a height of 255 indicates that the label is presented at a maximum height. If the requested label height cannot be supported then the nearest label height will be used. When read, the actual label height implemented will be returned."
$::=\{$ labelEntry 4\}

### 1.7.2.5 Label Color Parameter

labelColor OBJECT-TYPE SYNTAX INTEGER \{
blue(1),
green(2),
cyan(3),
red(4),
magenta(5),
brown(6),
white(7),
grey(8),
lightBlue(9),
lightGreen(10),
lightCyan(11),
lightRed(12),
lightMagenta(13),
yellow(14),
brightWhite(15),
black(16)\}
ACCESS read-write
STATUS mandatory
DESCRIPTION "Color of the label characters. The default color of white must always be supported. The color is defined as follows:

Value Meaning
1 blue,
2 green,

3 cyan,
4 red,
5 magenta,
6 brown,
7 white,
8 grey,
9 lightBlue,
10 lightGreen,
11 lightCyan,
12 lightRed,
13 lightMagenta,
14 yellow,
15 brightWhite,
16 black.
When read, this object returns the last value written."
::= \{ labelEntry 5\}

### 1.7.2.6 Label Start Row Parameter

labelStartRow OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Start of text row number representing the vertical position on the screen where the text is to be displayed, with the display being scaled to a range of zero (0) to 255. Zero (0) is designated as the upper-most row of the display. When read, this object returns the last value written."
$::=\{$ labelEntry 6$\}$

### 1.7.2.7 Label Start Column Parameter

labelStartColumn OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Start of text column number representing the horizontall position on the screen where the text is to be displayed, with the display being scaled to a range of zero (0) to 255 . Zero (0) is designated as the left-most column of the display."
::= \{ labelEntry 7\}

### 1.7.2.8 Label Status Parameter

| labelStatus | OBJECT-TYPE |
| :--- | :--- |
| SYNTAX | OCTET STRING (SIZE(1)) |
| ACCESS | read-only |

STATUS mandatory
DESCRIPTION "The object denotes whether or not the label is currently being displayed, as outlined below:

Bit7 $\quad 0=$ NO, $1=$ YES denotes that the label is valid for display (MSB),
Bit6 $0=$ OFF, $1=$ ON for the display status of the label,
Bits5.. $0 \quad$ Reserved (Bit $0=$ LSB)."
$::=\{$ labelEntry 8$\}$

### 1.7.2.9 Label Active Control Parameter

labelActive OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-write
STATUS mandatory
DESCRIPTION "The object denotes whether or not the label is enabled for display.

Bit7 $0=$ DISABLED, 1 = ENABLED for display of the label (MSB), Bits6..0 Reserved (Bit0 = LSB)."
$::=$ \{ labelEntry 9 $\}$

### 1.7.2.10 Label Font Number Parameter

 labelFontNumber OBJECT-TYPE SYNTAX INTEGER (1..255)ACCESS read-write
STATUS mandatory
DESCRIPTION "Designates the font number to be displayed. Only one font style may be supported and that font style is taken to be the default style. When read, this object returns last value written.

Value Meaning
1 other,
2 designates the default ASCII encoded text characters [0-9, A-Z , colon
(:), period (.), slash (/), apostrophe (') and space ( )] to be displayed,
3.. 255 reserved."

DEFVAL $\{2$ \}
::= \{ labelEntry 10\}

### 1.7.3 Label Location Parameter

labelLocationLabel OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Defines the label index in the camera control label table for this camera location. The location label is commonly used to identify a street name, intersection, or other pertinent information to be displayed on a monitor. A
value of zero (0) turns the location reference label off at this location. When read, this object returns last value written."
::= \{cctvLabel 3\}

### 1.7.4 Enable Label Text Display

```
labelEnableTextDisplay OBJECT-TYPE
SYNTAX OCTET STRING (SIZE (1))
ACCESS read-write
STATUS mandatory
DESCRIPTION "The object provides a control mechanism for activating or
deactivating all labels regardless of individual display status, as outlined below:
    Bit7 0 = OFF, 1 = ON for the for controlling the display for all
                                    labels at once (MSB),
    Bit6..0 Reserved (Bit 0 = LSB)."
::= {cctvLabel 4}
```


### 1.8 CCTV SYSTEM FEATURE CONTROL OBJECTS

cctvSystem OBJECT IDENTIFIER ::= \{cctv 8\}

### 1.8.1 System Camera Feature Control Parameter

systemCameraFeatureControl OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(2))
ACCESS read-write
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:
Byte1
Bit7 $0=$ OFF, $1=$ ON for the selection of Camera Power (MSB),
Bit6 $0=$ OFF, $1=$ ON for the selection of Heater Power,
Bit5 $0=$ OFF, $1=$ ON for the selection of Wiper,
Bit4 $0=$ OFF, $1=$ ON for the selection of Washer,
Bit3 $0=$ OFF, $1=$ ON for the selection of Blower,
Bits2..0 Reserved (Bit0 = LSB),
Byte 2
Bit7 $\quad 0=\mathrm{OFF}, 1=\mathrm{ON}$ for activation and deactivation of the camera component (MSB),
Bits6.. $0 \quad$ Reserved (Bit0 = LSB).
When read, this object returns last value written."
::= \{cctvSystem 1\}

### 1.8.2 System Camera Feature Status

systemCameraFeatureStatus OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))

ACCESS read-only
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:
Bit7 $\quad 0=$ OFF, $1=$ ON for status of Camera Power (MSB),
Bit6 $0=$ OFF, $1=$ ON for status of Heater Power,
Bit5 $0=$ OFF, $1=$ ON for status of Wiper,
Bit4 $0=$ OFF, $1=$ ON for status of Washer,
Bit3 $0=$ OFF, $1=\mathrm{ON}$ for status of Blower,
Bits2..0 Reserved (Bit0 = LSB),"
::= \{cctvSystem 2\}

### 1.8.3 System Camera Equipment Availability Parameter

systemCameraEquipped OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:
Bit7 $\quad 0=$ NO, $1=$ YES denotes the availability of a controllable Camera Power supply(MSB),
Bit6 $\quad 0=\mathrm{NO}, 1=$ YES denotes the availability of a controllable Heater Power supply,
Bit5 $\quad 0=$ NO, $1=$ YES denotes the availability of a controllable Wiper,
Bit4 $\quad 0=$ NO, $1=$ YES denotes the availability of a controllable Washer, Bit3 $0=$ NO, $1=$ YES denotes the availability of a controllable Blower, Bits2..0 Reserved (Bit0 = LSB).
::= \{cctvSystem 3\}

### 1.8.4 System Lens Feature Control Parameter

systemLensFeatureControl OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(2))
ACCESS read-write
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:
Byte1
Bit $7 \quad 0=$ OFF, $1=$ ON for the selection of Auto Iris (MSB),
Bit $6 \quad 0=\mathrm{OFF}, 1=\mathrm{ON}$ for the selection of Auto Focus,
Bits5.. $0 \quad$ Reserved (Bit $0=$ LSB),
Byte2
Bit7 $0=$ OFF, $1=O N$ for activation and deactivation of the lens component (MSB),
Bits6..0 Reserved (Bit0 = LSB).
When read, this object returns last value written."
$::=\{c c t v S y s t e m 4\}$

### 1.8.5 System Lens Feature Status Parameter

systemLensFeatureStatus OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:
Bit $7 \quad 0=$ OFF, $1=$ ON for Auto Iris status (MSB),
Bit $6 \quad 0=$ OFF, $1=O N$ for Auto Focus status,
Bits5.. $0 \quad$ Reserved (Bit $0=L S B$ ),"
$::=\{$ cctvSystem 5\}

### 1.8.6 System Lens Equipment Availability Parameter

systemLensEquipped OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:
Bit $7 \quad 0=\mathrm{NO}, 1=\mathrm{YES}$ denotes the availability of a controllable Auto Iris (MSB),
Bit $6 \quad 0=\mathrm{NO}, 1=\mathrm{YES}$ denotes the availability of a controllable Auto Focus,
Bits5..0 Reserved (Bit $0=L S B$ ).
::= \{cctvSystem 6\}

### 1.9 CCTV ALARM OBJECTS

cctvAlarm OBJECT IDENTIFIER $::=\{\operatorname{cctv} 9\}$

### 1.9.1 Alarm Status Parameter

alarmStatus OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "Alarm status denotes a bit mapped value that indicates the current status of alarms, as outlined below:
Bit7 $0=$ OFF, $1=\mathrm{ON}$ for the active status of the Cabinet Alarm signifying cabinet entry (MSB),
Bit6 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of the Enclosure Alarm signifying enclosure entry,
Bit5 $0=$ OFF, $1=\mathrm{ON}$ for the active status of the Video Loss Alarm signifying presence of video sync,

Bit4 $0=$ OFF, $1=$ ON for the active status of the Temperature Alarm signifying a value outside the allowable threshold range for internal camera enclosure temperature,
Bit3 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of the Pressure Alarm signifying a current value outside the allowable threshold range for the internal camera enclosure pressure,
Bit2 0 = Local, 1 = Remote for the active status of the Local/Remote Alarm,
Bit1 $0=$ OFF, $1=$ ON for the active status of the Washer Fluid Alarm signifying a current value outside the allowable threshold range for the washer fluid capacity,
Bit0 Reserved (LSB)."
$::=\{$ cctvAlarm 1\}

### 1.9.2 Alarm Latch Status Parameter

alarmLatchStatus OBJECT-TYPE
SYNTAX OCTET STRING (SIZE (1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "Latch status denotes a bit mapped value that indicates the presence of a latched alarm, indicating that an alarm has occurred since the previous latch was cleared, as outlined below:
Bit7 $\quad 0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the Cabinet Alarm (MSB),
Bit6 $0=$ OFF, $1=$ ON for the latch status of the Enclosure Alarm,
Bit5 $0=$ OFF, $1=$ ON for the latch status of the Video Loss Alarm,
Bit4 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the Temperature Alarm,
Bit3 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the Pressure Alarm,
Bit2 $0=$ Local, $1=$ Remote for the latch status of the Local/Remote Alarm,
Bit1 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the Washer Fluid Alarm,
Bit0 Reserved (LSB)."
$::=\{$ cctvAlarm 2\}

### 1.9.3 Alarm Latch Clear Parameter

alarmLatchClear OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Latch clear denotes a bit mapped value that clears the presence of a latched alarm, as outlined below:
Bit7 $0=$ OFF, $1=$ ON for clearing the alarm latch for the Cabinet Alarm (MSB),
Bit6 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for clearing the alarm latch for the Enclosure Alarm,
Bit5 $0=$ OFF, $1=$ ON for clearing the alarm latch for the Video Loss Alarm,
Bit4 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for clearing the alarm latch for the Temperature Alarm,

Bit3 $0=$ OFF, $1=$ ON for clearing the alarm latch for the Pressure Alarm,
Bit2 $0=$ Local, $1=$ Remote for clearing the alarm latch for the Local/Remote Alarm,
Bit1 $0=$ OFF, $1=\mathrm{ON}$ for clearing the alarm latch for the Washer Fluid Alarm, Bit0 Reserved (LSB).
When read, the value of this object returns the last value written until the latched is cleared and then zero (0) for each bit position."
::= \{cctvAlarm 3\}

### 1.9.4 Temperature Alarm High-Low Threshold

alarmTemperatureHighLowThreshold OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(2))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Identifies the high and low thresholds for the temperature alarm, as shown below;
Byte1 Low Threshold denotes the value of minimum internal camera enclosure temperature measured in degrees C,
Byte2 HighThreshold denotes the value of maximum internal camera enclosure temperature measured in degrees C.
When read, this object returns the last written value."
$::=\{$ cctvAlarm 4\}

### 1.9.5 Temperature Alarm Current Value Parameter

alarmTemperatureCurrentValue OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "Identifies the current value for the temperature within the camera enclosure measured in degrees $C$."
::= \{cctvAlarm 5\}

### 1.9.6 Pressure Alarm High-Low Threshold Parameter

alarmPressureHighLowThreshold OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(2))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Identifies the high and low thresholds for the pressure alarm, as shown below;
Byte1 Low Threshold denotes the value of minimum pressure within the camera enclosure measured in psig,
Byte2 HighThreshold denotes the value of maximum pressure within the camera enclosure measured in psig.

When read, this object returns the last written value."
::= \{cctvAlarm 6\}

### 1.9.7 Pressure Alarm Current Value Parameter

## alarmPressureCurrentValue OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "Identifies the current value for the pressure within the camera enclosure measured in psig."
::= \{cctvAlarm 7\}

### 1.9.8 Washer Fluid Alarm High-Low Threshold Parameter

alarmWasherFluidHighLowThreshold OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(2))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Identifies the high and low thresholds for the washer fluid alarm, as shown below;
Byte1 Low Threshold denotes the percentage of minimum filled capacity between zero ( 0 ) and 100 percent,
Byte2 HighThreshold denotes the percentage of maximum filled capacity between zero (0) and 100 percent."
::= \{cctvAlarm 8\}

### 1.9.9 Washer Fluid Alarm Current Value Parameter

## alarmWasherFluidCurrentValue OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "Identifies the current value for the washer fluid level measured as the amount of filled capacity between zero (0) and 100 percent."
::= \{cctvAlarm 9\}

### 1.9.10 Alarm Label Index Parameter

alarmLabellndex OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(7))
ACCESS read-write
STATUS mandatory
DESCRIPTION "The label number identifies the entry into the camera control label table that provides additional text information or on-screen text information. Labels are text strings with formatting, positioning, and display information. A
value of zero (0) indicates that there is no camera control label table entry for the alarm. The alarms are identified below:

Byte1 for the Cabinet Alarm label number,
Byte2 for the Enclosure Alarm label number,
Byte3 for the Video Loss Alarm label number,
Byte4 for the Temperature Alarm label number,
Byte5 for the Pressure Alarm label number,
Byte6 for the Local/Remote Alarm label number,
Byte7 for the Washer Fluid Alarm label number.
When read, this object returns the last written value."
$::=\{$ cctvAlarm 10\}

### 1.9.11 Alarm Label Source Parameter

## alarmLabelSource OBJECT-TYPE <br> SYNTAX OCTET STRING (SIZE(1)) <br> ACCESS read-write <br> STATUS mandatory

DESCRIPTION "Designates the source of the alarm label as being displayed upon the current status of the alarm as indicated by the alarmStatus parameter or continuously displayed during the presence of a
latched alarm as indicated by the alarmLatchStatus. The command for designating the alarm label source is as follows:

Bit7 $0=$ Status, 1 = LatchedStatus for the Cabinet Alarm (MSB),
Bit6 $0=$ Status, $1=$ LatchedStatus for the Enclosure Alarm,
Bit5 $0=$ Status, $1=$ LatchedStatus for the Video Loss Alarm,
Bit4 $0=$ Status, $1=$ LatchedStatus for the Temperature Alarm,
Bit3 $0=$ Status, 1 = LatchedStatus for the Pressure Alarm,
Bit2 $0=$ Status, $1=$ LatchedStatus for the Local/Remote Alarm,
Bit1 $0=$ Status, $1=$ LatchedStatus for the Washer Fluid Alarm,
Bit0 Reserved (LSB).
When read, this object returns the last value written."
$::=\{$ cctvAlarm 11\}

### 1.10 CCTV DISCRETE INPUT OBJECTS

cctvInput OBJECT IDENTIFIER $::=\{$ cctv 10$\}$

### 1.10.1 Discrete Input Status Parameter

```
inputStatus OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "Input status denotes a bit mapped value that indicates the current state of eight (8) user defined discrete inputs, as outlined below:
Bit7 \(0=\mathrm{OFF}, 1=\mathrm{ON}\) for the active status of discrete Input 8 (MSB),
```

Bit6 $0=$ OFF, $1=$ ON for the active status of discrete Input 7,
Bit5 $0=$ OFF, $1=$ ON for the active status of discrete Input 6,
Bit4 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of discrete Input 5,
Bit3 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of discrete Input 4,
Bit2 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of discrete Input 3,
Bit1 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of discrete Input 2,
Bit0 $0=$ OFF, $1=$ ON for the active status of discrete Input 1 (LSB).
Please note that user defined discrete inputs may reduce interoperability of the device."
$::=\{$ cctvinput 1$\}$

### 1.10.2 Discrete Input Latch Status Parameter

inputLatchStatus OBJECT-TYPE
SYNTAX OCTET STRING (SIZE (1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "Latch status denotes a bit mapped value that indicates the presence of a latched input for eight (8) user defined discrete inputs, indicating that an input has occurred since the previous latch was cleared, as outlined below:
Bit7 $0=$ OFF, $1=$ ON for the latch status of the discrete Input 8 (MSB),
Bit6 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the discrete Input 7,
Bit5 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the discrete Input 6,
Bit4 $0=$ OFF, $1=$ ON for the latch status of the discrete Input 5,
Bit3 $0=$ OFF, $1=$ ON for the latch status of the discrete Input 4,
Bit2 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the discrete Input 3,
Bit1 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the discrete Input 2,
Bit0 $\quad 0=\mathrm{OFF}, 1=\mathrm{ON}$ for the latch status of the discrete Input 1 (LSB).
Please note that user defined discrete inputs may reduce interoperability of the device."
$::=\{$ cctvInput 2$\}$

### 1.10.3 Discrete Input Latch Clear Parameter

inputLatchClear OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Latch clear denotes a bit mapped value that clears the presence of a latched input for eight (8) user defined discrete inputs, as outlined below:

Bit7 $\quad 0=$ OFF, $1=$ ON for clearing the input latch for discrete Input 8 (MSB),
Bit6 $0=$ OFF, $1=0 N$ for clearing the input latch for discrete Input 7,

Bit5 $\quad 0=$ OFF, $1=0 N$ for clearing the input latch for discrete Input 6 ,
Bit4 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for clearing the input latch for discrete Input 5,
Bit3 $0=$ OFF, $1=$ ON for clearing the input latch for discrete Input 4,
Bit2 $\quad 0=$ OFF, $1=$ ON for clearing the input latch for discrete Input 3,
Bit1 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for clearing the input latch for discrete Input 2,
Bit0 $\quad 0=\mathrm{OFF}, 1=\mathrm{ON}$ for clearing the input latch for discrete Input 1 (LSB).
When read, the value of this object returns the last value written until the latched is cleared and then zero (0) for each bit position. Please note that user defined discrete inputs may reduce interoperability of the device."
::= \{cctvInput 3\}

### 1.10.4 Discrete Input Label Index Parameter

## inputLabellndex OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))
ACCESS read-write
STATUS mandatory
DESCRIPTION "The label number identifies the entry into the camera control label table that provides additional text information or on-screen text information. Labels are text strings with formatting, positioning, and display information. Labels are displayed while the input latch status is ON. A value of zero (0) indicates that there is no camera control label table entry for the input. The user defined discrete inputs are identified below:

Byte1
Byte2
Byte3
Byte4
Byte5
Byte6
Byte7
Byte8
for the discrete Input 1 label number (MSB),
for the discrete Input 2 label number,
for the discrete Input 3 label number, for the discrete Input 4 label number, for the discrete Input 5 label number, for the discrete Input 6 label number,
for the discrete Input 7 label number,
for the discrete Input 8 label number (LSB)."
$::=\{$ cctvInput 4\}

### 1.10.5 Discrete Input Preset Index Parameter

inputPresetIndex OBJECT-TYPE SYNTAX OCTET STRING (SIZE(8))
ACCESS read-write
STATUS mandatory

DESCRIPTION "The preset index denotes a bit-mapped value representing the preset to which the device is commanded to move to upon the active status of a discrete input as indicated by the inputStatus parameter. A value of zero (0) indicates that there is no preset for the input. The user defined discrete inputs are identified below:

Byte1 for the discrete Input 1 preset number (MSB),
Byte2 for the discrete Input 2 preset number,
Byte3 for the discrete Input 3 preset number,
Byte4 for the discrete Input 4 preset number,
Byte5 for the discrete Input 5 preset number,
Byte6 for the discrete Input 6 preset number,
Byte7 for the discrete Input 7 preset number,
Byte8 for the discrete Input 8 preset number (LSB).
When read, this object returns the last value written."
$::=\{$ cctvInput 5$\}$

### 1.10.6 Input Label Source Parameter

inputLabelSource OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Designates the source of the input label as being displayed upon the current status of the input as indicated by the inputStatus parameter or continuously displayed during the presence of a
latched input as indicated by the inputLatchStatus. The command for designating the input label source is as follows:

Bit7 0 = Status, 1 = LatchedStatus for discrete Input 8 (MSB),
Bit6 0 = Status, 1 = LatchedStatus for discrete Input 7,
Bit5 0 = Status, 1 = LatchedStatus for discrete Input 6,
Bit4 0 = Status, 1 = LatchedStatus for discrete Input 5,
Bit3 0 = Status, 1 = LatchedStatus for discrete Input 4,
Bit2 0 = Status, 1 = LatchedStatus for discrete Input 3,
Bit1 0 = Status, 1 = LatchedStatus for discrete Input 2,
Bit0 0 = Status, 1 = LatchedStatus for discrete Input 1 (LSB).
When read, this object returns the last value written."
::= \{cctvInput 6\}

### 1.11 CCTV DISCRETE OUTPUT OBJECTS

cctvOutput OBJECT IDENTIFIER ::= \{ cctv 11$\}$

### 1.11.1 Discrete Output Status Parameter

```
outputStatus OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
```

ACCESS read-only
STATUS mandatory
DESCRIPTION "Output status denotes a bit mapped value that indicates the current state of eight (8) user defined discrete outputs, as outlined below:
Bit7 $0=$ OFF, $1=$ ON for the active status of discrete Output 8 (MSB),
Bit6 $0=$ OFF, $1=$ ON for the active status of discrete Output 7,
Bit5 $0=$ OFF, $1=$ ON for the active status of discrete Output 6,
Bit4 $0=$ OFF, $1=$ ON for the active status of discrete Output 5,
Bit3 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of discrete Output 4,
Bit2 $0=\mathrm{OFF}, 1=\mathrm{ON}$ for the active status of discrete Output 3,
Bit1 $0=$ OFF, $1=\mathrm{ON}$ for the active status of discrete Output 2,
Bit0 $\quad 0=$ OFF, $1=O N$ for the active status of discrete Output 1 (LSB).
Please note that user defined discrete outputs may reduce interoperability of the device."
::= \{cctvOutput 1\}

### 1.11.2 Discrete Output Control Parameter

outputControl OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(2))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Output control activates and deactivates individual user defined discrete outputs as outlined below: Byte1

Bit7 $0=$ NOT SELECT, 1 = SELECT designates the control of Output 8 (MSB),
Bit6 0 = NOT SELECT, 1 = SELECT designates the control of Output 7,
Bit5 0 = NOT SELECT, 1 = SELECT designates the control of Output 6,
Bit4 0 = NOT SELECT, 1 = SELECT designates the control of Output 5,
Bit3 0 = NOT SELECT, 1 = SELECT designates the control of Output 4,
Bit2 0 = NOT SELECT, 1 = SELECT designates the control of Output 3,
Bit1 0 = NOT SELECT, 1 = SELECT designates the control of Output 2,
Bit0 $0=$ NOT SELECT, 1 = SELECT designates the control of Output 1 (LSB),
Byte2
Bit7 $0=$ OFF, $1=$ ON for the desired active state of discrete Output 8 (MSB),
Bit6 0 = OFF, 1 = ON for the desired active state of discrete Output 7,
Bit5 $0=$ OFF, $1=$ ON for the desired active state of discrete Output 6,
Bit4 $0=$ OFF, $1=$ ON for the desired active state of discrete Output 5,
Bit3 $0=$ OFF, $1=$ ON for the desired active state of discrete Output 4,
Bit2 $0=$ OFF, $1=$ ON for the desired active state of discrete Output 3,
Bit1 $0=$ OFF, $1=$ ON for the desired active state of discrete Output 2,

Bit0 $0=$ OFF, $1=$ ON for the desired active state of discrete Output 1 (LSB).
Please note that user defined discrete outputs may reduce interoperability of the device."
$::=\{\operatorname{cctvOutput} 2\}$

### 1.11.3 Discrete Output Label Index

```
outputLabelIndex OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(8))
ACCESS read-write
STATUS mandatory
DESCRIPTION "The label number identifies the entry into the camera control
label table that provides additional text information or on-screen text information.
Labels are text strings with formatting, positioning, and display information. A
value of zero (0) indicates that there is no camera control label table entry for the
input. The user defined discrete outputs are identified below:
    Byte1 for the discrete Output }1\mathrm{ label number,
    Byte2 for the discrete Output 2 label number,
    Byte3 for the discrete Output 3 label number,
    Byte4 for the discrete Output 4 label number,
    Byte5 for the discrete Output 5 label number,
    Byte6 for the discrete Output 6 label number,
    Byte7 for the discrete Output }7\mathrm{ label number,
    Byte8 for the discrete Output 8 label number."
::= {cctvOutput 3}
```


### 1.12 CCTV ZONE OBJECTS

cctvZone OBJECT IDENTIFIER ::= \{ cctv 12$\}$

### 1.12.1 Maximum Number of Zones Parameter

zoneMaximum OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Defines the maximum number of zones for this device. A zone is a region in space defined by pan and tilt limits."
::= \{cctvZone 1\}

### 1.12.2 Zone Table

| zoneTable | OBJECT-TYPE |
| :--- | :--- |
| SYNTAX | SEQUENCE OF ZoneEntry |
| ACCESS | not-accessible |

STATUS mandatory
DESCRIPTION "A table containing information about zones. Each row in the table identifies a single zone. A zone is a region in space defined by pan and tilt limits."
$::=\{$ cctvZone 2\}

```
zoneEntry OBJECT-TYPE
SYNTAX ZoneEntry
ACCESS not-accessible
STATUS mandatory
DESCRIPTION "Parameters of the zone table."
INDEX {zoneIndex}
::= {zoneTable 1}
ZoneEntry ::= SEQUENCE {
    zoneIndex INTEGER,
    zoneLabel INTEGER,
    zonePanLeftLimit INTEGER,
    zonePanRightLimit INTEGER,
    zoneTiltUpLimit INTEGER,
    zoneTiltDownLimit INTEGER,
    zoneVideoControl OCTET STRING
    }
```


### 1.12.2.1 Zone Index Parameter

| zoneIndex | OBJECT-TYPE |
| :--- | :--- |
| SYNTAX | INTEGER (0..255) |
| ACCESS | read-only |
| STATUS | mandatory |

DESCRIPTION "The number associated with each individual zone. A zone is a region in space defined by pan and tilt limits."
$::=\{$ zoneEntry 1$\}$

### 1.12.2.2 Zone Label Parameter

zoneLabel OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Defines the label index from the camera control label table that is associated with this zone number. When the camera enters the zone, the label text associated with the label index is displayed. If zones overlap, at least one label will be displayed in the overlapped area. A value of zero (0) means that no label is associated with this zone. When read, this object returns the last value written."
::= \{zoneEntry 2$\}$

### 1.12.2.3 Zone Pan Left Limit Parameter

zonePanLeftLimit OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Specifies the panning left zone limit in 1/100th degree units in a clockwise direction from the Home Position. The value of 65535 means that a pan left limit is not supported. When read, this object returns the last value written."
::= \{ zoneEntry 3\}

### 1.12.2.4 Zone Pan Right Limit Parameter

zonePanRightLimit OBJECT-TYPE
SYNTAX INTEGER (0..35999 | 65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Specifies the panning right zone limit in 1/100th degree units in a clockwise direction from the Home Position. The value of 65535 means that a pan right limit is not supported. When read, this object returns the last value written."
::= \{ zoneEntry 4\}

### 1.12.2.5 Zone Tilt Up Limit Parameter

zoneTiltUpLimit OBJECT-TYPE
SYNTAX INTEGER (0..35999 | 65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Specifies the tilting up zone limit in $1 / 100$ th degree units.
The zero point for measurement is the horizontal plane. The value of 65535 means that a tilt up limit is not supported. When read, this object returns the last value written."
::= \{ zoneEntry 5\}

### 1.12.2.6 Zone Tilt Down Limit Parameter

zoneTiltDownLimit OBJECT-TYPE
SYNTAX INTEGER (0..35999 | 65535)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Specifies the tilting down zone limit in 1/100th degree units.
The zero point for measurement is the horizontal plane. The value of 65535
means that a tilt down limit is not supported. When read, this object returns the last value written."
$::=\{$ zoneEntry 6$\}$

### 1.12.2.7 Zone Video Control Parameter

zoneVideoControl OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Denotes a bit mapped value that commands the device to turn the video signal output OFF upon entering a zone. The default video signal shall be ON. The command for video control within a zone is as follows:

Bit $70=\mathrm{OFF}, 1=\mathrm{ON}$ for controlling video signal output from the camera within a zone (MSB),
Bits6..0 Reserved (Bit $0=$ LSB).
When read, this object returns the last value written."
::= \{zoneEntry 7\}

### 1.12.3 Camera Zone Functions Availability Parameter

zoneCameraEquipped OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:
Bit7 $0=$ NO, $1=$ YES denotes the availability of zones (MSB),
Bit6 $0=$ NO, $1=$ YES denotes the availability of zone labels,
Bit5 $0=$ NO, $1=$ YES denotes the availability of the control of video signal within a zone,
Bits4..0 Reserved (Bit0 = LSB)."
$::=\{$ cctvZone 3\}

### 1.13 CCTV PRESET OBJECTS

cctvPreset OBJECT IDENTIFIER $::=\{$ cctv 13$\}$

### 1.13.1 Go To Preset Position Parameter

presetGotoPosition OBJECT-TYPE
SYNTAX INTEGER (1..255)
ACCESS read-write
STATUS mandatory

DESCRIPTION "Writing to this object commands the device to move to a preset if that preset exists. When read, this object returns the last value written. " ::= \{cctvPreset 1\}

### 1.13.2 Store Preset Position Parameter

```
presetStorePosition OBJECT-TYPE
SYNTAX INTEGER (1..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Writing to this object commands the device to save the
current pan, tilt, zoom, and focus positions to the specified preset. When read,
this object returns the last value written."
::= {cctvPreset 2}
```


### 1.13.3 Preset Position Query Parameter

presetPositionQuery OBJECT-TYPE
SYNTAX INTEGER (0..255)

ACCESS read-only
STATUS mandatory
DESCRIPTION "This object indicates the number of the preset where the device is currently positioned.
A value of zero (0) indicates that the device is not currently at a preset position."
::= \{cctvPreset 3\}

### 1.14 CCTV POSITIONING OBJECTS

cctvPosition OBJECT IDENTIFIER ::= \{ cctv 14$\}$

### 1.14.1 Pan Position Parameter

```
positionPan OBJECT-TYPE
SYNTAX PositionReference
ACCESS read-write
STATUS mandatory
DESCRIPTION "Object is 4 bytes in length:
```

Byte 1 is the mode of operation defined as stop movement, delta, absolute, or continuous movement,
Byte 2 is speed defined as the value of the speed of movement with positive (+) being clockwise and negative (-) being counterclockwise, Bytes 3 and 4 specify a position or offset measurement in 1/100th degrees.
The minimum amount of movement shall be one step as defined by the rangeMinimumPanStepAngle. The use of absolute in the PositionReference choice is measured from the Home position. When read, this object returns last value written."
::= \{cctvPosition 1\}

### 1.14.2 Tilt Position Parameter

positionTilt OBJECT-TYPE
SYNTAX PositionReference
ACCESS read-write
STATUS mandatory
DESCRIPTION "Object is 4 bytes in length:
Byte 1 is the mode of operation defined as stop movement, delta, absolute, or continuous movement,
Byte 2 is speed defined as the value of the speed of movement with positive (+) being up and negative (-) being down,
Bytes 3 and 4 specify a position or offset measurement in 1/100th degrees.
The minimum amount of movement shall be one step as defined by the rangeMinimumTiltStepAngle. When read, this object returns last value written." ::= \{cctvPosition 2\}

### 1.14.3 Lens Zoom Position Parameter

positionZoomLens OBJECT-TYPE
SYNTAX PositionReference
ACCESS read-write
STATUS mandatory
DESCRIPTION "Object is 4 bytes in length:
Byte 1 is the mode of operation defined as stop movement, delta, absolute, or continuous movement,
Byte 2 is speed defined as the value of the speed of movement with positive (+) being telephoto and negative (-) being wide,
Bytes 3 and 4 specify a position or offset measurement in scalar units with a maximum value of the specified limit. When read, this object returns last value written."
$::=$ \{cctvPosition 3\}

### 1.14.4 Lens Focus Position Parameter

```
positionFocusLens OBJECT-TYPE
SYNTAX PositionReference
ACCESS read-write
STATUS mandatory
DESCRIPTION "Object is 4 bytes in length:
```

Byte 1 is the mode of operation defined as stop movement, delta, absolute, or continuous movement,
Byte 2 is speed defined as the value of the speed of movement with positive (+) being far and negative (-) being near,

Bytes 3 and 4 specify a position or offset measurement in scalar units with a maximum value of the specified limit. When read, this object returns last value written."
$::=\{$ cctvPosition 4\}

### 1.14.5 Lens Iris Position Parameter

positionlrisLens OBJECT-TYPE
SYNTAX PositionReference
ACCESS read-write
STATUS mandatory
DESCRIPTION "Object is 4 bytes in length:
Byte 1 is the mode of operation defined as stop movement, delta, absolute, or continuous movement,
Byte 2 is speed defined as the value of the speed of movement with positive (+) being closed and negative (-) being opened,
Bytes 3 and 4 specify a position or offset measurement in scalar units with a maximum value of the specified limit. When read, this object returns last value written."
$::=\{$ cctvPosition 5$\}$

### 1.14.6 Pan Position Query Parameter

positionQueryPan OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "This object indicates the angle in 1/100th degree units for the current pan position in the horizontal plane, measured in a clockwise direction from the Home position. A value of 65535 indicates that a query of the pan position is not supported."
$::=\{$ cctvPosition 6\}

### 1.14.7 Tilt Position Query Parameter

positionQueryTilt OBJECT-TYPE
SYNTAX INTEGER (0.. 35999 | 65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "This object indicates the angle in 1/100th degree units for the current tilt position in the vertical plane, measured from the horizontal plane. Tilting upward indicates a positive direction. A value of 65535 indicates that a query of the pan position is not supported. This object is always reported as values between 270 degrees to 359.99 degrees and 0 degrees to 90 degrees." ::= \{cctvPosition 7\}

### 1.14.8 Zoom Position Query Parameter

```
positionQueryZoom OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-only
STATUS mandatory
DESCRIPTION "This object indicates the value for the current zoom position,
beginning with one (1) for wide and ending with 65535 for telephoto. A value of
zero (0) indicates that a query of the zoom position
is not supported."
::= {cctvPosition 8}
```


### 1.14.9 Focus Position Query Parameter

positionQueryFocus OBJECT-TYPE

SYNTAX INTEGER (0..65535)
ACCESS read-only
STATUS optional
DESCRIPTION "This object indicates the value for the current focus position, beginning with one (1) for near and ending with 65535 for far. A value of zero (0) indicates that a query of the focus position is not
supported."
::= \{cctvPosition 9\}

### 1.14.10 Iris Position Query Parameter

positionQuerylris OBJECT-TYPE
SYNTAX INTEGER (0..65535)
ACCESS read-only
STATUS optional
DESCRIPTION "This object indicates the value for the current iris position, beginning with one (1) for open and ending with 65535 for closed. A value of zero (0) indicates that a query of the iris position is not supported."
::= \{cctvPosition 10\}

### 1.15 CCTV ON-SCREEN CAMERA MENU OBJECTS

cctvMenu OBJECT IDENTIFIER ::= $\{$ cctv 15$\}$

### 1.15.1 Activate Menu Parameter

menuActivate OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION "Activates the internal camera menu.

Value
0
1.. 254

Meaning turns off the internal camera menu, activates the internal camera menu for the number of seconds expressed by the value indicated between 1 and 254,
255 activates the menu for an indefinite period of time."
::= \{cctvMenu 1\}

### 1.15.2 Menu Control Parameter

```
menuControl OBJECT-TYPE
SYNTAX INTEGER { pageDown(1),
                                    pageUp(2),
    cursorUp(3),
    cursorDown(4),
    cursorRight(5),
    cursorLeft(6),
    incrementValue(7),
    decrementValue(8),
    enterValue(9),
    noMenu(255)}
ACCESS read-write
STATUS mandatory
```

DESCRIPTION "Object value that manipulates the internal camera menu.
Basic menu manipulations are described as follows:

Value
1 Page Down,
2 Page Up,
3 Cursor Up
4 Cursor Down,
5 Cursor Right,
6 Cursor Left,
7 Increment value pointed at current cursor position,
8 Decrement value pointed at current cursor position,
9 Enter value shown,
10.. 254 Reserved,

255 Menu not supported by the device."
::= \{cctvMenu 2\}

### 1.16 CCTV TOUR OBJECTS (Proposed Florida-Specific Objects)

-- To be included to CCTV NTCIP Florida MIB Requirements if adopted.
cctvTour OBJECT IDENTIFIER ::= \{ cctv 16$\}$

### 1.16.1 Maximum Number of Tours Parameter

```
tourMaximum
OBJECT-TYPE
```

SYNTAX INTEGER (0..8)
ACCESS read-only
STATUS mandatory
DESCRIPTION "Defines the maximum number of tours for this device. A tour is a series of events or actions defined by a sequence of presets and dwell times. When read, this object returns last value written."
$::=\{\operatorname{cctv}$ Tour 1$\}$

### 1.16.2 Tour Table

tourTable OBJECT-TYPE
SYNTAX SEQUENCE OF TourEntry
ACCESS not-accessible
STATUS mandatory
DESCRIPTION "A table containing information about tours. Each row in the table identifies a single tour. A tour is a series of events or actions defined by a sequence of presets and dwell times."
$::=\{c c t v T o u r 2\}$
tourEntry OBJECT-TYPE
SYNTAX TourEntry
ACCESS not-accessible
STATUS mandatory
DESCRIPTION "Parameters of the tour table."
INDEX \{tourIndex\}
$::=\{$ tourTable 1\}

| TourEntry $::=$ |  |  |
| ---: | :--- | ---: |
|  | SEQUENCE $\{$ |  |
|  | tourIndex | INTEGER, |
|  | tourPresetIndex | INTEGER, |
|  | INTEGER, |  |
|  | tourDwellIndex |  |
|  |  | INTEGER |

### 1.16.2.1 Tour Index Parameter

tourIndex OBJECT-TYPE
SYNTAX INTEGER (1..8)
ACCESS read-only
STATUS mandatory
DESCRIPTION "The number associated with each individual tour. A tour is a series of events or actions defined by a sequence of presets and dwell times."
::= \{tourEntry 1\}

### 1.16.2.2 Tour Label Parameter

| tourLabel | OBJECT-TYPE |
| :--- | :--- |
| SYNTAX | INTEGER (0..255) |
| ACCESS | read-write |
| STATUS | mandatory |

DESCRIPTION "Defines the label number index from the camera control label table that is associated with this tour number. When the camera starts a tour, the label text associated with the label index is displayed. A value of zero (0) means that no label is associated with this tour. When read, this object returns the last value written."
::= \{tourEntry 2\}

### 1.16.2.3 Tour Preset Index Parameter

## tourPresetIndex OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(32))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Specifies the sequence of presets in a tour. The preset index denotes a value representing the preset number to which the device is commanded to move to upon the active status of a tour. A value of zero (0) indicates that preset is not set for the tour. The user defined preset numbers are identified below:

Byte1
for the preset number 1 (MSB),
Byte2 to Byte31
Byte32 for the preset number 2 to 31, for the preset number 32 (LSB).
When read, this object returns the last value written."
$::=\{$ tourEntry 3$\}$

### 1.16.2.4 Tour Dwell Index Parameter

tourDwellIndex OBJECT-TYPE SYNTAX OCTET STRING (SIZE(32))
ACCESS read-write
STATUS mandatory
DESCRIPTION "Specifies the sequence of dwell time in a tour. The dwell index denotes a value represeting the dwell time to which device is commanded to stay in upon the active of a next event or action as indicated by tourPresetIndex parameter. The user defined dwell times are identified below:

Byte1
Byte2 to Byte31
Byte32
dwell time for the preset number 1 (MSB),
dwell times for the preset number 2 to 31,
dwell time for the preset number 32 (LSB).
When read, this object returns the last value written."
$::=\{$ tourEntry 4\}

### 1.16.3 Camera Tour Functions Availability Parameter

tourCameraEquipped OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(1))
ACCESS read-only
STATUS mandatory
DESCRIPTION "A bit mapped value as defined below:

Bit7
Bit6
Bits5.. 0
$::=\{$ cctvTour 3\}
$0=\mathrm{NO}, 1$ = YES denotes the availability of tours (MSB),
$0=$ NO, 1 = YES denotes the availability of tour labels, Reserved (Bit0 = LSB)."

END

## APPENDIX

Table 1: The summary of the FDOT CCTV NTCIP MIB Object Range

| Section | CONFORMANCE GROUP | REF | [1] | [2] | NATIONAL NTCIP REQ'D OBJECT RANGE | FDOT REQ'D. object range |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.1 | Global Configuration | $\begin{gathered} 1201 \\ \text { v0110b } \end{gathered}$ | $\begin{gathered} \mathbf{M} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \mathrm{M} \\ \text { Group } \end{gathered}$ |  |  |
|  | globalSetIDParameter | 2.2.1 | 0 | M | $0 . .65535$ | $0 . .65535$ |
|  | globalMaxModules* | 2.2.2 | M | M | $0 . .255$ | $0 . .255$ |
|  | globalModuleTable | 2.2.3 | M | M |  |  |
|  | moduleNumber* | 2.2.3.1 | M | M | $1 . .255$ | 1.. 255 |
|  | moduleDeviceNode* | 2.2.3.2 | M | M | Object Identifier | Object Identifier |
|  | moduleMake* | 2.2.3.3 | M | M | Octet String | Octet String |
|  | moduleModel* | 2.2.3.4 | M | M | Octet String | Octet String |
|  | moduleVersion* | 2.2.3.5 | M | M | Octet String | Octet String |
|  | moduleType* | 2.2.3.6 | M | M | $1 . .3$ | $1 . .3$ |
| 1.2 | Security | $\begin{gathered} \hline 1201 \\ \text { v0110b } \\ \hline \end{gathered}$ | $\begin{gathered} \mathbf{M} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \mathbf{M} \\ \text { Group } \end{gathered}$ |  |  |
|  | community NameAdmin | 2.8.1 | M | M | Octet String | Octet String |
|  | communityNamesMax | 2.8.2 | M | M | 1.. 255 | $3 . .255$ |
|  | communityNameTable | 2.8.3 | M | M |  |  |
|  | community NameIndex | 2.8.3.1 | M | M | $1 . .255$ | 1.. 255 |
|  | communityNameUser | 2.8.3.2 | M | M | Octet String | Octet String |
|  | communityNameAccessMask | 2.8.3.3 | M | M | $0 . .4294967295$ | 0.. 4294967295 |
| 1.3 | Time Management | $\begin{gathered} \hline 1201 \\ \text { v0110b } \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ |  |  |
|  | GlobalTime | 2.4.1 | 0 | M | Counter | Counter |
|  | globalDaylightSaving | 2.4.2 | 0 | M | Integer | Integer |
| 1.4 | PMPP | $\begin{gathered} \hline 1201 \\ \mathrm{v0110b} \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ |  |  |
|  | maxGroupAddresses | 2.6.1 | M | M | $0 . .255$ | 100.. 255 |
|  | hdlcGroupAddressTable | 2.6.2 | M | M |  |  |
|  | hdlcGroupAddressIndex | 2.6.2.1 | M | M | $0 . .255$ | 100.. 255 |
|  | hdlcGroupAddress | 2.6.2.2 | M | M | Integer | Integer |
|  | hdlcGroupAddressNumber | 2.6.2.3 | M | M |  |  |
| 1.5 | CCTV Configuration - Range | $\begin{gathered} \hline 1205 \\ \text { v0108a } \\ \hline \end{gathered}$ | $\begin{gathered} \mathbf{M} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \mathbf{M} \\ \text { Group } \end{gathered}$ |  |  |
|  | rangeMaximumPreset* | 3.2.1 | M | M | $0 . .255$ | $\begin{gathered} \hline 64 . .255 \mid \\ 32 . .255 \\ \text { (see note) } \\ \hline \end{gathered}$ |
|  | rangePanLeftLimit* | 3.2.2 | M | M | $\begin{gathered} \hline 0.35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 18000 . .35999 \mid \\ 65535 \end{gathered}$ |
|  | rangePanRightLimit* | 3.2.3 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 18000 . .35999 \mid \\ 65535 \end{gathered}$ |


|  | rangePanHomePosition* | 3.2.4 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | rangeTrueNorthOffset | 3.2.5 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ |
|  | rangeTiltUpLimit* | 3.2.6 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} \hline 1500 . .35999 \mid \\ 6000 . .35999 \\ 65535 \text { (see } \\ \text { note) } \end{gathered}$ |
|  | rangeTiltDownLimit* | 3.2.7 | M | M | $\begin{gathered} 0.35999 \mid \\ 65535 \end{gathered}$ | 9000.. 35999 |
|  | rangeZoomLimit* | 3.2.8 | M | M | $0 . .65535$ | $0 . .65535$ |
|  | rangeFocusLimit* | 3.2.9 | M | M | $0 . .65535$ | $0 . .65535$ |
|  | rangelrisLimit* | 3.2.10 | M | M | $0 . .65535$ | $0 . .65535$ |
|  | rangeMinimumPanStepAngle* | 3.2.11 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 10 . .35999 \mid \\ 65535 \end{gathered}$ |
|  | rangeMinimumTiltStepAngle* | 3.2.12 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 10 . .35999 \mid \\ 65535 \end{gathered}$ |
| 1.6 | CCTV Configuration - Timeout | $\begin{gathered} 1205 \\ \mathrm{v} 0108 \mathrm{a} \end{gathered}$ | M Group | M Group |  |  |
|  | timeoutPan | 3.3.1 | M | M | $0 . .65535$ | 5000.. 65535 |
|  | timeoutTilt | 3.3.2 | M | M | $0 . .65535$ | 5000..65535 |
|  | timeoutZoom | 3.3.3 | M | M | $0 . .65535$ | 5000..65535 |
|  | timeoutFocus | 3.3.4 | M | M | $0 . .65535$ | 5000..65535 |
|  | timeoutlris | 3.3 .5 | M | M | $0 . .65535$ | 5000..65535 |
| 1.7 | CCTV Configuration - Label | $\begin{gathered} 1205 \\ \mathrm{v} 0108 \mathrm{a} \end{gathered}$ | M Group | M Group |  |  |
|  | labelMaximum* | 3.11 .1 | M | M | $0 . .255$ | $80 . .255$ |
|  | labelTable | 3.11.2 | M | M |  |  |
|  | labelIndex* | 3.11.2.1 | M | M | $0 . .255$ | $0 . .255$ |
|  | labelText | 3.11.2.2 | M | M | $\begin{gathered} \hline \text { Octet String } \\ (\text { Size(0..255)) } \end{gathered}$ | Octet String (Size(0..255)) |
|  | labelFontType | 3.11.2.3 | D | D | $0 . .255$ | $0 . .255$ |
|  | labelHeight | 3.11.2.4 | M | M | $0 . .255$ | $0 . .255$ |
|  | labelColor | 3.11.2.5 | M | M | 1.. 16 | 1.. 16 |
|  | labelStartRow | 3.11.2.6 | M | M | $0 . .255$ | $0 . .255$ |
|  | labelStartColumn | 3.11.2.7 | M | M | $0 . .255$ | $0 . .255$ |
|  | labelStatus* | 3.11.2.8 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | labelActive | 3.11.2.9 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | labelFontNumber | 3.11.2.10 | M | M | $1 . .255$ | $1 . .255$ |
|  | labelLocationLabel | 3.11.3 | M | M | $0 . .255$ | $0 . .255$ |
|  | labelEnableTextDisplay | 3.11.4 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
| 1.8 | Extended Functions - System | $\begin{gathered} 1205 \\ \mathrm{v} 0108 a \end{gathered}$ | 0 Group | M Group |  |  |


|  | systemCameraFeatureControl | 3.6.1 | M | M | Octet String (Size(2)) | Octet String (Size(2)) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | systemCameraFeatureStatus* | 3.6.2 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | systemCameraEquipped* | 3.6.3 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | systemLensFeatureControl | 3.6.4 | M | M | Octet String (Size(2)) | Octet String (Size(2)) |
|  | systemLensFeatureStatus* | 3.6.5 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | systemLensEquipped* | 3.6.6 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
| 1.9 | Extended Functions - Alarm | $\begin{gathered} 1205 \\ \text { v0108a } \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | M Group |  |  |
|  | alarmStatus* | 3.7.1 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | alarmLatchStatus* | 3.7.2 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | alarmLatchClear | 3.7.3 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | alarmTemperatureHighLowThreshold | 3.7.4 | M | M | Octet String (Size(2)) | Octet String (Size(2)) |
|  | alarmTemperatureCurrentValue* | 3.7.5 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | alarmPressureHighLowThreshold | 3.7.6 | M | M | Octet String (Size(2)) | Octet String (Size(2)) |
|  | alarmPressureCurrentValue* | 3.7.7 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | alarmWasherFluidHighLowThershold | 3.7.8 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | alarmWasherFluidCurrentValue* | 3.7.9 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | alarmLabellndex | 3.7.10 | M | M | Octet String (Size(7)) | $\begin{gathered} \text { Octet String } \\ (\text { Size(7)) } \end{gathered}$ |
|  | alarmLabelSource | 3.7.11 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
| 1.10 | Extended Functions - Input | $\begin{gathered} 1205 \\ v 0108 a \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | M Group |  |  |
|  | inputStatus* | 3.8.1 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | inputLatchStatus* | 3.8.2 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | inputLatchClear | 3.8.3 | M | M | Octet String (Size(1)) | Octet String (Size(1)) |
|  | inputLabelIndex | 3.8.4 | M | M | $\begin{aligned} & \text { Octet String } \\ & (\text { Size(8)) } \end{aligned}$ | $\begin{aligned} & \text { Octet String } \\ & (\text { Size(8)) } \end{aligned}$ |
|  | inputPresetIndex | 3.8.5 | M | M | Octet String (Size(8)) | Octet String (Size(8)) |


|  | inputLabelSource | 3.8.6 | M | M | $\begin{aligned} & \hline \text { Octet String } \\ & \text { (Size(1)) } \end{aligned}$ | Octet String (Size(1)) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.11 | Extended Functions - Output | $\begin{gathered} \hline 1205 \\ \text { v0108a } \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | $\begin{gathered} M \\ \text { Group } \end{gathered}$ |  |  |
|  | outputStatus* | 3.9.1 | M | M | $\begin{aligned} & \hline \text { Octet String } \\ & \text { (Size(1)) } \end{aligned}$ | $\begin{gathered} \hline \text { Octet String } \\ \text { (Size(1)) } \\ \hline \end{gathered}$ |
|  | outputControl | 3.9.2 | M | M | $\begin{gathered} \text { Octet String } \\ \text { (Size(2)) } \end{gathered}$ | Octet String (Size(2)) |
|  | outputLabellndex | 3.9.3 | M | M | Octet String (Size(8)) | Octet String (Size(8)) |
| 1.12 | Extended Functions - Zone | $\begin{gathered} \hline 1205 \\ \text { v0108a } \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \mathbf{M} \\ \text { Group } \end{gathered}$ |  |  |
|  | zoneMaximum* | 3.10 .1 | M | M | $0 . .255$ | 8.. 255 |
|  | zoneTable | 3.10.2 | M | M |  |  |
|  | zoneIndex* | 3.10.2.1 | M | M | $0 . .255$ | $0 . .255$ |
|  | zoneLabel | 3.10.2.2 | M | M | $0 . .255$ | $0 . .255$ |
|  | zonePanLeftLimit | 3.10.2.3 | M | M | $\begin{gathered} \hline 0.35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 18000 . .35999 \mid \\ 65535 \end{gathered}$ |
|  | zonePanRightLimit | 3.10.2.4 | M | M | $\begin{gathered} \hline 0.35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 18000 . .35999 \mid \\ 65535 \end{gathered}$ |
|  | zoneTiltUpLimit | 3.10.2.5 | M | M | $\begin{gathered} \hline 0.35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} \hline 1500 . .35999 \\ 6000 . .35999 \\ 65535 \\ \text { (see note) } \\ \hline \end{gathered}$ |
|  | zoneTiltDownLimit | 3.10.2.6 | M | M | $\begin{gathered} \hline 0.35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 9000 . .35999 \mid \\ 65535 \end{gathered}$ |
|  | zoneVideoControl | 3.10.2.7 | M | M | $\begin{gathered} \hline \text { Octet String } \\ \text { (Size(1)) } \end{gathered}$ | $\begin{gathered} \hline \text { Octet String } \\ \text { (Size(1)) } \end{gathered}$ |
|  | zoneCameraEquipped* | 3.10.3 | M | M | $\begin{aligned} & \text { Octet String } \\ & \text { (Size(1)) } \end{aligned}$ | Octet String (Size(1)) |
| 1.13 | Motion Control - Preset | $\begin{gathered} \hline 1205 \\ \text { v0108a } \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \text { M } \\ \text { Group } \end{gathered}$ |  |  |
|  | presetGotoPosition | 3.4.1 | M | M | 1.. 255 | $\begin{gathered} \hline 64.255 \mid \\ 32 . .255 \\ \text { (see note) } \\ \hline \end{gathered}$ |
|  | presetStorePosition | 3.4.2 | M | M | 1.. 255 | $\begin{gathered} \hline 64.255 \mid \\ 32 . .255 \\ \text { (see note) } \\ \hline \end{gathered}$ |
|  | presetPositionQuery* | 3.4.3 | M | M | $0 . .255$ | $\begin{gathered} \hline 64 . .255 \mid \\ 32 . .255 \\ \text { (see note) } \end{gathered}$ |
| 1.14 | Motion Control - Position | $\begin{gathered} \hline 1205 \\ \text { v0108a } \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{O} \\ \text { Group } \end{gathered}$ | $\begin{gathered} \text { M } \\ \text { Group } \end{gathered}$ |  |  |
|  | positionPan | 3.5.1 | M | M | FSOR | MSOR |
|  | positionTilt | 3.5.2 | M | M | FSOR | MSOR |
|  | positionZoomLens | 3.5.3 | M | M | FSOR | MSOR |
|  | positionFocusLens | 3.5.4 | M | M | FSOR | MSOR |
|  | positionlrisLens | 3.5.5 | M | M | FSOR | MSOR |


|  | positionQueryPan* | 3.5.6 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | positionQueryTilt* | 3.5.7 | M | M | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ | $\begin{gathered} 0 . .35999 \mid \\ 65535 \end{gathered}$ |
|  | positionQueryZoom* | 3.5.8 | M | M | $0 . .65535$ | $0 . .65535$ |
|  | positionQueryFocus* | 3.5.9 | O | O | $0 . .65535$ | $0 . .65535$ |
|  | positionQuerylris* | 3.5.10 | O | O | $0 . .65535$ | $0 . .65535$ |
| 1.15 | On-Screen Menu Control | $\begin{gathered} 1205 \\ \text { v0108a } \end{gathered}$ | 0 Group | M Group |  |  |
|  | menuActivate | 3.12.1 | M | M | $0 . .255$ | $0 . .255$ |
|  | menuControl | 3.12.2 | M | M | 1..9, 255 | 1..9, 255 |
| 1.16 | CCTV Tours | NA | NA | M Group |  |  |
|  | tourMaximum* | NA | NA | M | NA | $0 . .8$ |
|  | tourTable | NA | NA | M | NA |  |
|  | tourIndex | NA | NA | M | NA | $1 . .8$ |
|  | tourLabel | NA | NA | M | NA | $0 . .255$ |
|  | tourPresetIndex | NA | NA | M | NA | Octet String (Size(32)) |
|  | tourDwellindex | NA | NA | M | NA | Octet String (Size(32)) |
|  | tourCameraEquipped* | NA | NA | M | NA | Octet String (Size(1)) |
|  |  |  |  |  |  |  |

Table 2: Notes and Abbreviations

| Symbol | Definition |
| :---: | :--- |
| FSOR | Full Standard Object Range |
| MSOR | Manufacturer Specific Object Range |
| M | Indicates mandatory status for objects and conformance groups. |
| O | Indicates optional status for objects and conformance groups. |
| D | Deprecated |
| NA | Not applicable. |
| $*$ | read-only values |
| $(1)$ | Dome-type CCTV does not support this functional requirement. The value should be <br> 65535 |
| $\mathrm{X} \mid \mathrm{Y}$ | Value of X is for dome type CCTV camera. Value of Y is for positioner type camera. |
| $[1]$ | Conformance Requirement |
| $[2]$ | FDOT Requirement |
|  |  |


| Color | Significance |
| :---: | :--- |
| Black | Status and range requirements in black indicate that the relevant NTCIP standard and <br> FDOT requirement status are all in agreement. |
| Red | Status and range requirements in red indicate deviations from NTCIP standards |

