

REMS API Documentation

Version history

Version	Date	Changes	Revised by
0.9	2021-02-24	Initial version	Endre Nordang
0.9.2	2021-03-26	VMS1/2 and surveillanceCamera1/2 replaced by VMS and surveillanceCameras array. OBUReaderKeyFilename was left in the example by mistake in previous version. Now removed. Added lanes to passagesWithFrontImage, passagesWithRearImage and passagesPerSignalCode	Endre Nordang
0.9.3	2021-04-19	Updated clarifications and descriptions: frontOCRAverageLast100Passages rearOCRAverageLast100Passages clockOffset imageDriveSpaceUsed transactionDriveSpaceUsed	Christian Høy Müller

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Background

This document describes the Roadside Equipment Monitoring System (REMS) API used to receive data from the roadside equipment.

Technical background

Authentication and authorization will be token based, where the consumers will request a token using username and password. The token will have a time to live of 2 minutes and must be passed in the request header.

Content-Type will be application/json and method will be POST.

Standard success and error responses will apply.

Roadside equipment suppliers will be expected to pass data to both API endpoints every 5 minutes.

This API is a “one size fits all”, so all fields will not be applicable to all suppliers or generations of roadside equipment.

There will be individual agreements stating which fields will be mandatory for the given supplier/generation of equipment.

Percentage values are integers, so use standard rules when rounding up/down (99.49 rounds down to 99, 99.50 rounds up to 100).

Endpoints

There are two endpoints. The {id} is ActorID + Charging point id, 9 digits (6+3).

Api/{id}/component-status

Used for posting the status of the components in the active and backup system

Api/{id}/system-status

Used for posting the status of the active system

Status of the components in the active system

Description	OBU readers active
Type	Array
Fields	OBUReaderNumber OBUReaderStatus
OBUReaderNumber	
Description	Number of the OBU Reader
Type	Integer
Expected values	1-n where n is the highest number of available OBU readers
OBUReaderStatus	
Description	OBU reader active
Type	Boolean
Expected values	true/false
Example	
<pre>"OBUReaders": [{ "OBUReaderNumber": 1, "OBUReaderStatus": true, }, { "OBUReaderNumber ": 2, "OBUReaderStatus ": true, }]</pre>	

lasers	
Description	lasers active
Type	Array
Fields	laserNumber laserStatus
laserNumber	
Description	Number of the laser
Type	Integer
Expected values	1-n where n is the highest number of available lasers
laserStatus	
Description	Laser active
Type	Boolean
Expected values	true/false
Example	
<pre>"lasers": [{ "laserNumber": 1, "laserStatus": true, }, { "laserNumber ": 2, "laserStatus ": true, }]</pre>	

frontCameraModules	
Description	Front camera modules active
Type	Array
Fields	frontCameraModuleNumber frontCameraModuleStatus
frontCameraModuleNumber	
Description	Number of the front camera module
Type	Integer
Expected values	1-n where n is the highest number of available front camera modules
frontCameraModuleStatus	
Description	Front camera module active
Type	Boolean
Expected values	true/false
Example	
<pre> "frontCameraModules": [{ "frontCameraModuleNumber": 1, "frontCameraModuleStatus": true, }, { "frontCameraModuleNumber ": 2, "frontCameraModuleStatus ": true, }] </pre>	

IRModuleFrontCameras	
Description	Front cameras IR module active
Type	Array
Fields	IRModuleFrontCameraNumber IRModuleFrontCameraStatus
IRModuleFrontCameraNumber	
Description	Number of the front camera IR module
Type	Integer
Expected values	1-n where n is the highest number of available front camera IR modules
IRModuleFrontCameraStatus	
Description	Front camera IR module active
Type	Boolean
Expected values	true/false
Example	
<pre> "IRModuleFrontCameras": [{ "IRModuleFrontCameraNumber": 1, "IRModuleFrontCameraStatus": true, }, { "IRModuleFrontCameraNumber ": 2, </pre>	

```

    "IRModuleFrontCameraStatus ": true,
  }
]

```

rearCameraModules	
Description	Rear camera modules active
Type	Array
Fields	rearCameraModuleNumber rearCameraModuleStatus
rearCameraModuleNumber	
Description	Number of the rear camera module
Type	Integer
Expected values	1-n where n is the highest number of available rear camera modules
rearCameraModuleStatus	
Description	Rear camera module active
Type	Boolean
Expected values	true/false
Example	
<pre> "rearCameraModules": [{ "rearCameraModuleNumber": 1, "rearCameraModuleStatus": true, }, { "rearCameraModuleNumber ": 2, "rearCameraModuleStatus ": true, }] </pre>	

IRModuleRearCameras	
Description	Rear cameras IR module active
Type	Array
Fields	IRModuleRearCameraNumber IRModuleRearCameraStatus
IRModuleRearCameraNumber	
Description	Number of the rear camera IR module
Type	Integer
Expected values	1-n where n is the highest number of available rear camera IR modules
IRModuleRearCameraStatus	
Description	Rear camera IR module active
Type	Boolean
Expected values	true/false
Example	
<pre> "IRModuleRearCameras": [{ "IRModuleRearCameraNumber": 1, "IRModuleRearCameraStatus": true, }] </pre>	

```

    },
    {
        "IRModuleRearCameraNumber ": 2,
        "IRModuleRearCameraStatus ": true,
    }
]

```

laneControllers

Description	Lane controllers active (unit or software)
Type	Array
Fields	laneControllerNumber laneControllerStatus

laneControllerNumber

Description	Number of the lane controller
Type	Integer
Expected values	1-n where n is the highest number of available lane controllers

laneControllerStatus

Description	Lane controller active
Type	Boolean
Expected values	true/false

Example

```

"laneControllers": [
    {
        "laneControllerNumber": 1,
        "laneControllerStatus": true,
    },
    {
        "laneControllerNumber": 2,
        "laneControllerStatus": true,
    }
]

```

tollPlazaComputer

Description	Toll plaza computer active (main computer for outgoing communication)
Type	Boolean
Expected values	true/false

Example

```

"tollPlazaComputer": true

```

videoServer

Description	Video server active (server that stores the images)
Type	Boolean
Expected values	true/false

Example

```

"videoServer": true

```

VMS	
Description	VMS active
Type	Array
Fields	VMSNumber VMSStatus
VMSNumber	
Description	Number of the VMS
Type	Integer
Expected values	1-n where n is the highest number of available lane controllers
VMSStatus	
Description	VMS active
Type	Boolean
Expected values	true/false
Example	
<pre>"VMS": [{ "VMSNumber": 1, "VMSStatus": true, }, { "VMSNumber": 2, "VMSStatus": true, }]</pre>	

surveillanceCameras	
Description	Surveillance cameras active
Type	Array
Fields	surveillanceCameraNumber surveillanceCameraStatus
VMSNumber	
Description	Number of the surveillance camera
Type	Integer
Expected values	1-n where n is the highest number of available lane controllers
VMSStatus	
Description	Surveillance camera active
Type	Boolean
Expected values	true/false
Example	
<pre>"surveillanceCameras": [{ "surveillanceCameraNumber": 1, "surveillanceCameraStatus": true, }, { "surveillanceCameraNumber": 2,</pre>	

```

    "surveillanceCameraStatus": true,
  }
]

```

Status of the components in the backup system

OBUReaders	
Description	OBU readers active
Type	Array
Fields	OBUReaderNumber OBUReaderStatus
OBUReaderNumber	
Description	Number of the OBU Reader
Type	Integer
Expected values	1-n where n is the highest number of available OBU readers
OBUReaderStatus	
Description	OBU reader active
Type	Boolean
Expected values	true/false
Example	
<pre> "OBUReaders": [{ "OBUReaderNumber": 1, "OBUReaderStatus": true, }, { "OBUReaderNumber ": 2, "OBUReaderStatus ": true, }] </pre>	

lasers	
Description	lasers active
Type	Array
Fields	laserNumber laserStatus
laserNumber	
Description	Number of the laser
Type	Integer
Expected values	1-n where n is the highest number of available lasers
laserStatus	
Description	Laser active

Type	Boolean
Expected values	true/false
Example	
<pre>"lasers": [{ "laserNumber": 1, "laserStatus": true, }, { "laserNumber ": 2, "laserStatus ": true, }]</pre>	

frontCameraModules	
Description	Front camera modules active
Type	Array
Fields	frontCameraModuleNumber frontCameraModuleStatus
frontCameraModuleNumber	
Description	Number of the front camera module
Type	Integer
Expected values	1-n where n is the highest number of available front camera modules
frontCameraModuleStatus	
Description	Front camera module active
Type	Boolean
Expected values	true/false
Example	
<pre>"frontCameraModules": [{ "frontCameraModuleNumber": 1, "frontCameraModuleStatus": true, }, { "frontCameraModuleNumber ": 2, "frontCameraModuleStatus ": true, }]</pre>	

IRModuleFrontCameras	
Description	Front cameras IR module active
Type	Array
Fields	IRModuleFrontCameraNumber IRModuleFrontCameraStatus
IRModuleFrontCameraNumber	
Description	Number of the front camera IR module
Type	Integer

Expected values	1-n where n is the highest number of available front camera IR modules
IRModuleFrontCameraStatus	
Description	Front camera IR module active
Type	Boolean
Expected values	true/false
Example	
<pre>"IRModuleFrontCameras": [{ "IRModuleFrontCameraNumber": 1, "IRModuleFrontCameraStatus": true, }, { "IRModuleFrontCameraNumber ": 2, "IRModuleFrontCameraStatus ": true, }]</pre>	

rearCameraModules	
Description	Rear camera modules active
Type	Array
Fields	rearCameraModuleNumber rearCameraModuleStatus
rearCameraModuleNumber	
Description	Number of the rear camera module
Type	Integer
Expected values	1-n where n is the highest number of available rear camera modules
rearCameraModuleStatus	
Description	Rear camera module active
Type	Boolean
Expected values	true/false
Example	
<pre>"rearCameraModules": [{ "rearCameraModuleNumber": 1, "rearCameraModuleStatus": true, }, { "rearCameraModuleNumber ": 2, "rearCameraModuleStatus ": true, }]</pre>	

IRModuleRearCameras	
Description	Rear cameras IR module active
Type	Array
Fields	IRModuleRearCameraNumber IRModuleRearCameraStatus

IRModuleRearCameraNumber	
Description	Number of the rear camera IR module
Type	Integer
Expected values	1-n where n is the highest number of available rear camera IR modules
IRModuleRearCameraStatus	
Description	Rear camera IR module active
Type	Boolean
Expected values	true/false
Example	
<pre>"IRModuleRearCameras": [{ "IRModuleRearCameraNumber": 1, "IRModuleRearCameraStatus": true, }, { "IRModuleRearCameraNumber ": 2, "IRModuleRearCameraStatus ": true, }]</pre>	

laneControllers	
Description	Lane controllers active (unit or software)
Type	Array
Fields	laneControllerNumber laneControllerStatus
laneControllerNumber	
Description	Number of the lane controller
Type	Integer
Expected values	1-n where n is the highest number of available lane controllers
laneControllerStatus	
Description	Lane controller active
Type	Boolean
Expected values	true/false
Example	
<pre>"laneControllers": [{ "laneControllerNumber": 1, "laneControllerStatus": true, }, { "laneControllerNumber": 2, "laneControllerStatus": true, }]</pre>	

tollPlazaComputer

Description	Toll plaza computer active (main computer for outgoing communication)
Type	Boolean
Expected values	true/false
Example	
"tollPlazaComputer": true	

videoServer	
Description	Video server active (server that stores the images)
Type	Boolean
Expected values	true/false
Example	
"videoServer": true	

Status of the active system

clockOffset	
Description	Clock used to stamp transactions compared to "internet clock" offset in milliseconds If the number is not available and you only have an alarm for deviations, you report 0 with normal operation and 1000 when the alarm is activated
Type	Integer
Expected values	-5000000 to 5000000
Example	
"clockOffset": -15	

UPSActive	
Description	UPS active (counts as active when the UPS in use and power grid is down)
Type	Boolean
Expected values	true/false
Example	

"UPSActive": false

temperatureAlarm	
-------------------------	--

Description	Cabinet temperature alarm
Type	Integer
Expected values	-1 for temperature too low 0 for temperature ok 1 for temperature too high

Example

"temperatureAlarm ": 0

statusFileName	
-----------------------	--

Description	Name of the OBU status file
Type	String
Expected values	Status file name

Example

"statusFileName": "obustatusfile_999999_20210223_01.dat"
--

tariffFileName	
-----------------------	--

Description	Name of the tariff file
Type	String
Expected values	Tariff file name

Example

"tariffFileName": "A_tarifffile_999999_20210223_01.dat"

AITFileName	
--------------------	--

Description	Name of the AIT file
Type	String
Expected values	AIT file name

Example

"AITFileName": "AIT9999992021022301_999999_999999"
--

cabinetClosed	
----------------------	--

Description	Cabinet door closed
Type	Boolean
Expected values	true/false

Example

"cabinetClosed": true

OBUShareLast100Passages	
--------------------------------	--

Description	Transactions with valid OBU of the last 100 passages (OBU is in status list)
Type	Array
Fields	laneNumber OBUSharePercentage

laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
OBUSharePercentage	
Description	Share in percentage
Type	Integer
Expected values	0-100
Example	
<pre>"OBUShareLast100Passages": [{ "laneNumber": 1, "OBUSharePercentage": 80 }, { "laneNumber": 2, "OBUSharePercentage": 82 }]</pre>	

pictureShareLast100Passages	
Description	Transactions without valid OBU of the last 100 passages
Type	Array
Fields	laneNumber pictureSharePercentage
laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
pictureSharePercentage	
Description	Share in percentage
Type	Integer
Expected values	0-100
Example	
<pre>"pictureShareLast100Passages": [{ "laneNumber": 1, "pictureSharePercentage": 20 }, { "laneNumber": 2, "pictureSharePercentage": 18 }]</pre>	

frontOCRAverageLast100Passages

Description	Front OCR average of picture confidence for the last 100 passages. Only the passages that has a logged confidence is used in the calculation
Type	Array
Fields	laneNumber frontOCRAveragePercentage
laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
frontOCRAveragePercentage	
Description	Front OCR average in percentage
Type	Integer
Expected values	0-100
Example	
<pre> "frontOCRAverageLast100Passages": [{ "laneNumber": 1, "frontOCRAveragePercentage": 15 }, { "laneNumber": 2, "frontOCRAveragePercentage": 15 }] </pre>	

rearOCRAverageLast100Passages	
Description	Rear OCR average of picture confidence for the last 100 passages. Only the passages that has a logged confidence is used in the calculation
Type	Array
Fields	laneNumber rearOCRAveragePercentage
laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
rearOCRAveragePercentage	
Description	Rear OCR average in percentage
Type	Integer
Expected values	0-100
Example	
<pre> "rearOCRAverageLast100Passages": [{ "laneNumber": 1, "rearOCRAveragePercentage": 15 }, { </pre>	

```

        "laneNumber": 2,
        "rearOCRAveragePercentage": 15
    }
]

```

passagesWithFrontImages	
Description	Percentage of signal code 22 passages with front image since last interval
Type	Array
Fields	laneNumber passagesWithFrontImage
laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
passagesWithFrontImage	
Description	Percentage of signal code 22 passages with front image since last interval
Type	Integer
Expected values	0-100
Example	
<pre> "passagesWithFrontImages": [{ "laneNumber": 1, "passagesWithFrontImage": 100 }, { "laneNumber": 2, "passagesWithFrontImage": 100 }] </pre>	

passagesWithRearImages	
Description	Percentage of signal code 22 passages with rear images since last interval
Type	Array
Fields	laneNumber passagesWithRearImage
laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
passagesWithRearImage	
Description	Percentage of signal code 22 passages with rear image since last interval
Type	Integer
Expected values	0-100

Example

```

"passagesWithRearImages": [
  {
    "laneNumber": 1,
    "passagesWithRearImage": 95
  },
  {
    "laneNumber": 2,
    "passagesWithRearImage": 100
  }
]

```

passagesPerSignalCode

Description	Number of passages per signal code Signal codes with no passages in the given interval should be excluded
Type	Array
Fields	laneNumber signalCode sum

laneNumber

Description	laneNumber
Type	Integer
Expected values	1-n where n is the highest number of available lanes

signalCode

Description	Signal code
Type	Integer
Expected values	0-99

sum

Description	Sum of passages for signal code
Type	Integer
Expected values	1-10000

Example

```

"passagesPerSignalCode": [
  {
    "laneNumber": 1,
    "signalCode": 02,
    "sum": 526
  },
  {
    "laneNumber": 1,
    "signalCode": 08,
    "sum": 3
  },
  {
    "laneNumber": 1,
    "signalCode": 22,

```

```

        "sum": 86
    },
    {
        "laneNumber": 2,
        "signalCode": 02,
        "sum": 526
    },
    {
        "laneNumber": 2,
        "signalCode": 08,
        "sum": 3
    },
    {
        "laneNumber": 2,
        "signalCode": 22,
        "sum": 86
    }
]

```

componentRestart	
Description	Restarted components since last interval
Type	Array
Fields	componentName timeOfRestart
componentName	
Description	Name of component
Type	String
Expected values	Name of component
timeOfRestart	
Description	Time of the component restart
Type	String
Expected values	DateTime in ISO 8601 format
Example	
<pre> "componentRestart": [{ "componentName": "Front camera module 1", "timeOfRestart": "2020-06-18T08:45:26.000Z" }] </pre>	

systemRestarts	
Description	Number of system restarts since last interval
Type	Integer
Expected values	0-5
Example	
"systemRestarts": 0	

imageDriveSpaceUsed	
Description	Hard drive for storing images, space used in percentage. If you have only one common disk for images and transactions, you report this on imageDrive and do not report transactionDrive. If the number is not available and you only have an alarm for deviations, you report 0 with normal operation and 99 when the alarm is activated.
Type	Integer
Expected values	0-100
Example	
"imageDriveSpaceUsed": 32	

transactionDriveSpaceUsed	
Description	Hard drive for storing transactions, space used in percentage. See comments on imageDriveSpaceUsed.
Type	Integer
Expected values	0-100
Example	
"transactionDriveSpaceUsed": 48	

lastTransactionFileTransfer	
Description	Time of the last transaction file transfer
Type	String
Expected values	DateTime in ISO 8601 format
Example	
"lastTransactionFileTransfer": "2020-06-18T08:46:03.000Z"	

lastPictureFileTransfer	
Description	Time of the last picture file transfer
Type	String
Expected values	DateTime in ISO 8601 format
Example	
"lastPictureFileTransfer": "2020-06-18T08:46:03.000Z"	

lastOBUTransactions	
Description	Time of the last OBU transactions
Type	Array
Fields	laneNumber lastOBUTransaction
laneNumber	
Description	Number of the lane
Type	Integer

Expected values	1-n where n is the highest number of available lanes
lastOBUTransaction	
Description	Time of the last OBU transaction
Type	String
Expected values	DateTime in ISO 8601 format
Example	
<pre>"lastOBUTransactions": [{ "laneNumber": 1, "lastOBUTransaction": "2020-06-18T08:46:03.000Z" }, { "laneNumber": 2, "lastOBUTransaction": "2020-06-18T08:46:03.000Z" }]</pre>	

lastPictureTransactions	
Description	Time of the last picture transactions
Type	Array
Fields	laneNumber lastPictureTransaction
laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
lastPictureTransaction	
Description	Time of the last picture transaction
Type	String
Expected values	DateTime in ISO 8601 format
Example	
<pre>"lastPictureTransactions": [{ "laneNumber": 1, "lastPictureTransaction": "2020-06-18T08:46:03.000Z" }, { "laneNumber": 2, "lastPictureTransaction": "2020-06-18T08:46:03.000Z" }]</pre>	

lastDetectionsReverse	
Description	Last detections reverse
Type	Array
Fields	laneNumber lastDetectionReverse

laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
lastDetectionReverse	
Description	Last detection reverse
Type	String
Expected values	DateTime in ISO 8601 format
Example	
<pre>"lastDetectionsReverse": [{ "laneNumber": 1, "lastDetectionReverse": "2020-06-18T08:46:03.000Z" }, { "laneNumber": 2, "lastDetectionReverse": "2020-06-18T08:46:03.000Z" }]</pre>	

pictureTransactionMissingPicture	
Description	Number of picture transactions with missing picture since last interval
Type	Integer
Expected values	0-10000
Example	
"pictureTransactionMissingPicture": 0	

rejectedDetections	
Description	Number rejected detections (e.g MC filter) last 24 hours
Type	Array
Fields	laneNumber rejectedDetectionCount
laneNumber	
Description	Number of the lane
Type	Integer
Expected values	1-n where n is the highest number of available lanes
rejectedDetectionCount	
Description	Last detection reverse
Type	Integer
Expected values	0-10000
Example	
<pre>"rejectedDetections": [{</pre>	

```
        "laneNumber": 1,  
        "rejectedDetectionCount": 25  
    },  
    {  
        "laneNumber": 2,  
        "rejectedDetectionCount": 16  
    }  
]
```

Body examples

Api/{id}/component-status

```
{  
  "activeSystem" {  
    "OBUReaders": [  
      {  
        "OBUReaderNumber": 1,  
        "OBUReaderStatus": true,  
      },  
      {  
        "OBUReaderNumber": 2,  
        "OBUReaderStatus": true,  
      }  
    ],  
    "lasers": [  
      {  
        "laserNumber": 1,  
        "laserStatus": true,  
      },  
      {  
        "laserNumber": 2,  
        "laserStatus": true,  
      }  
    ],  
    "frontCameraModules": [  
      {  
        "frontCameraModuleNumber": 1,  
        "frontCameraModuleStatus": true,  
      },  
      {  
        "frontCameraModuleNumber": 2,  
        "frontCameraModuleStatus": true,  
      }  
    ],  
    "IRModuleFrontCameras": [  
      {  
        "IRModuleFrontCameraNumber": 1,  
        "IRModuleFrontCameraStatus": true,  
      },  
      {  
        "IRModuleFrontCameraNumber": 2,  
      }  
    ]  
  }  
}
```

```
        "IRModuleFrontCameraStatus": true,
    },
],
"rearCameraModules": [
    {
        "rearCameraModuleNumber": 1,
        "rearCameraModuleStatus": true,
    },
    {
        "rearCameraModuleNumber": 2,
        "rearCameraModuleStatus": true,
    }
],
"IRModuleRearCameras": [
    {
        "IRModuleRearCameraNumber": 1,
        "IRModuleRearCameraStatus": true,
    },
    {
        "IRModuleRearCameraNumber": 2,
        "IRModuleRearCameraStatus": true,
    }
],
"laneControllers": [
    {
        "laneControllerNumber": 1,
        "laneControllerStatus": true,
    },
    {
        "laneControllerNumber": 2,
        "laneControllerStatus": true,
    }
],
"tollPlazaComputer": true,
"videoServer": true,
"VMS": [
    {
        "VMSNumber": 1,
        "VMSStatus": true,
    },
    {
        "VMSNumber": 2,
        "VMSStatus": true,
    }
],
"surveillanceCameras": [
    {
        "surveillanceCameraNumber": 1,
        "surveillanceCameraStatus": true,
    },
    {
        "surveillanceCameraNumber": 2,
        "surveillanceCameraStatus": true,
    }
]
],
"backupSystem" {
    "OBUReaders": [
        {
            "OBURedReaderNumber": 1,
            "OBURedReaderStatus": true,
        }
    ]
}
```

```
    },
    {
      "OBUReaderNumber ": 2,
      "OBUReaderStatus ": true,
    }
  ],
  "lasers": [
    {
      "laserNumber": 1,
      "laserStatus": true,
    },
    {
      "laserNumber ": 2,
      "laserStatus ": true,
    }
  ],
  "frontCameraModules": [
    {
      "frontCameraModuleNumber": 1,
      "frontCameraModuleStatus": true,
    },
    {
      "frontCameraModuleNumber ": 2,
      "frontCameraModuleStatus ": true,
    }
  ],
  "IRModuleFrontCameras": [
    {
      "IRModuleFrontCameraNumber": 1,
      "IRModuleFrontCameraStatus": true,
    },
    {
      "IRModuleFrontCameraNumber ": 2,
      "IRModuleFrontCameraStatus ": true,
    }
  ],
  "rearCameraModules": [
    {
      "rearCameraModuleNumber": 1,
      "rearCameraModuleStatus": true,
    },
    {
      "rearCameraModuleNumber ": 2,
      "rearCameraModuleStatus ": true,
    }
  ],
  "IRModuleRearCameras": [
    {
      "IRModuleRearCameraNumber": 1,
      "IRModuleRearCameraStatus": true,
    },
    {
      "IRModuleRearCameraNumber ": 2,
      "IRModuleRearCameraStatus ": true,
    }
  ],
  "laneControllers": [
    {
      "laneControllerNumber": 1,
      "laneControllerStatus": true,
    },
  ],
```



```

    {
      "laneControllerNumber": 2,
      "laneControllerStatus": true,
    }
  ],
  "tollPlazaComputer": true,
  "videoServer": true
}
}

```

Api/{id}/system-status

```

{
  "systemStatus" {
    "clockOffset": -15,
    "UPSActive": false,
    "temperatureAlarm ": 0,
    "statusFileName": "obustatusfile_999999_20210223_01.dat",
    "tariffFileName": "A_tariffile_999999_20210223_01.dat",
    "AITFileName": "AIT9999992021022301_999999_999999",
    "cabinetClosed": true,
    "OBUShareLast100Passages": [
      {
        "laneNumber": 1,
        "OBUSharePercentage": 80
      },
      {
        "laneNumber": 2,
        "OBUSharePercentage": 82
      }
    ],
    "pictureShareLast100Passages": [
      {
        "laneNumber": 1,
        "pictureSharePercentage": 20
      },
      {
        "laneNumber": 2,
        "pictureSharePercentage": 18
      }
    ],
    "frontOCRAverageLast100Passages": [
      {
        "laneNumber": 1,
        "frontOCRAveragePercentage": 15
      },
      {
        "laneNumber": 2,
        "frontOCRAveragePercentage": 15
      }
    ],
    "rearOCRAverageLast100Passages": [
      {

```

```
        "laneNumber": 1,
        "rearOCRAveragePercentage": 15
    },
    {
        "laneNumber": 2,
        "rearOCRAveragePercentage": 15
    }
],
"passagesWithFrontImages": [
    {
        "laneNumber": 1,
        "passagesWithFrontImage": 100
    },
    {
        "laneNumber": 2,
        "passagesWithFrontImage": 100
    }
],
"passagesWithRearImages": [
    {
        "laneNumber": 1,
        "passagesWithRearImage": 95
    },
    {
        "laneNumber": 2,
        "passagesWithRearImage": 100
    }
],
"passagesPerSignalCode": [
    {
        "laneNumber": 1,
        "signalCode": 02,
        "sum": 526
    },
    {
        "laneNumber": 1,
        "signalCode": 08,
        "sum": 3
    },
    {
        "laneNumber": 1,
        "signalCode": 22,
        "sum": 86
    },
    {
        "laneNumber": 2,
        "signalCode": 02,
        "sum": 526
    },
    {
        "laneNumber": 2,
        "signalCode": 08,
        "sum": 3
    },
    {
        "laneNumber": 2,
        "signalCode": 22,
        "sum": 86
    }
],
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"componentRestart": [
  {
    "componentName": "Front camera module 1",
    "timeOfRestart": "2020-06-18T08:45:26.000Z"
  }
],
"systemRestarts": 0,
"imageDriveSpaceUsed": 32,
"transactionDriveSpaceUsed": 48,
"lastTransactionfileTransfer": "2020-06-18T08:46:03.000Z",
"lastPicturefileTransfer": "2020-06-18T08:46:03.000Z",
"lastOBUTransactions": [
  {
    "laneNumber": 1,
    "lastOBUTransaction": "2020-06-18T08:46:03.000Z"
  },
  {
    "laneNumber": 2,
    "lastOBUTransaction": "2020-06-18T08:46:03.000Z"
  }
],
"lastPictureTransactions": [
  {
    "laneNumber": 1,
    "lastPictureTransaction": "2020-06-18T08:46:03.000Z"
  },
  {
    "laneNumber": 2,
    "lastPictureTransaction": "2020-06-18T08:46:03.000Z"
  }
],
"lastDetectionsReverse": [
  {
    "laneNumber": 1,
    "lastDetectionReverse": "2020-06-18T08:46:03.000Z"
  },
  {
    "laneNumber": 2,
    "lastDetectionReverse": "2020-06-18T08:46:03.000Z"
  }
],
"pictureTransactionMissingPicture": 0,
"rejectedDetections": [
  {
    "laneNumber": 1,
    "rejectedDetectionCount": 25
  },
  {
    "laneNumber": 2,
    "rejectedDetectionCount": 16
  }
]
}
}
```