

# **Certified Capability List**

This Capability List is based on a certification session performed by the *TALQ Certification Tool (v2.6.3-online.1)* on 2025-10-09 16:48:52.153 +0200.

The Capability List is a consolidated list of TALQ features which are implemented in a product.

The tool has succesfully performed 45 tests.

# **Product details**

Product Name Al	veus City
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Company Lec

Type CMS

URL https://cms.test.lec.cactussoft.biz/talq

**Notes** 

Generated on 2025-10-09 16:48:52.153 +0200

Supported profiles • Lighting

**API version certified:** 2.6.2

Certification performed by app version: 2.6.3-online.1

# **Functional tests**

The Functional Tests help customers understand the capabilities of a TALQ-certified product. All functional test cases are presented to provide comprehensive context, and successful completion of each test is indicated with a tick mark. Each Functional Test is related to a set of required TALQ

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technical test cases.

# Configuring 7 of 11

#### Support light point control features

**~** 

The CMS properly handles the bootstrap process and creates the associated light point control functions and services.

CFG-1

#### Support cabinet control lighting features

The CMS properly handles the bootstrap process and creates the associated cabinet control lighting functions and services.

CFG-2

### Support sensor-based light point control features

The CMS properly handles the bootstrap process and creates the associated sensor-based **CFG-3** light point control functions and services.

# Discovery of the network of devices

**~** 

The CMS receives and handle all the devices that are sent by the Gateway and properly handles their device classes, asset and other properties.

CFG-4

#### Initialize light point electrical alarm thresholds

**~** 

The CMS is able to set light point electrical alarm thresholds in the Gateway, including CFG-5 Lamp Voltage Too High/Low, Lamp Current Too High/Low, Active Power Too High/Low and Power Factor Too Low

### Initialize and change the cabinet control alarm thresholds

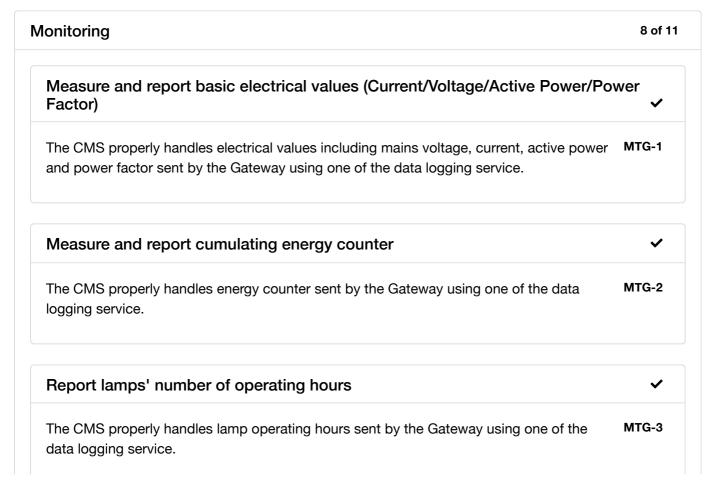
**~** 

The CMS is able to set cabinet control electrical alarm thresholds in the Gateway, including **CFG-6** < to be defined >

### Initialize and change the light point parameters

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change a group of luminaires	<b>~</b>
le to manage a group of light points and send it to the Gateway.	CFG-8
sampling frequency for measurements	~
configure the sampling rate of values .	CFG-9
reporting frequency for measurements	<b>~</b>
configure the reporting frequency of values .	CFG-10
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send a data package to the Gateway to update the firmware on a phys	sical <b>CFG-11</b>
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### Report lamps' number of switch-on counter



The CMS properly handles lamp switch-on sent by the Gateway using one of the data logging service.

MTG-4

### Report lamps' number of supply loss counter



The CMS properly handles supply loss count sent by the Gateway using one of the data logging service.

MTG-5

## Monitor the lamp level feedback when a manual override command is sent



MTG-6 The CMS properly sends a manual override command and can use On-Demand read to check that the lamp level feedback is getting close to the command after a configurable delay.

#### Report temperature



MTG-8 The CMS properly handles temperature values sent by the Gateway using one of the data logging service.

#### Report presence detection

The CMS properly handles presence detection values sent by the Gateway using one of the data logging service.

MTG-9

#### Report noise level

MTG-10 The CMS properly handles noise level values sent by the Gateway using one of the data logging service.

### Report light level



MTG-11 The CMS properly handles light level values sent by the Gateway using one of the data logging service.

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#### Report firmware updating process

Tha CMS properly handles events sent by the Gateway during the firmware update process.

MTG-12

## Controlling 5 of 7

#### Manual control over a light point

**~** 

The CMS can send a simple manual override command to one single light point.

CTR-1

## Manual control over a group of light points

**~** 

The CMS can send a simple manual override command to a group of light points.

CTR-2

### Manual control with a delay



The CMS can send a manual override command to one single light point with a delay in the CTR-3 command execution.

#### Manual control with a ramp



The CMS can send a manual override command to one single light point with a rampup in the command execution.

#### Automatic switch light on/off based on photocell value



The CMS can send a control program that configures the Gateway to switch the light ON and OFF on a single light point.

CTR-5

### Automatic change of light level when presence detected

The CMS can send a control program that configures the Gateway to change the light dimming level depending on a local presence sensor on a single light point.

CTR-6

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#### Automatic change of light level when noise detected

The CMS can send a control program that configures the Gateway to change the light dimming level depending on a local noise sensor on a single light point.

CTR-7

Alarming 4 of 5

## Report lighting alarms to the CMS

**~** 

The CMS can handle lighting alarms sent by a Gateway using one of the data logger services.

ALR-1

# Report electrical alarms to the CMS

**~** 

The CMS can handle electrical alarms sent by a Gateway using one of the data logger services.

ALR-2

### Report invalid program and calendar



The CMS can handle invalid calendar and control program alarms sent by a Gateway using ALR-3 one of the data logger services.

### Report activity for sensor based lighting

The CMS can handle activity detection events sent by a Gateway using one of the data logger services.

ALR-4

### Request the status of the alarm



The CMS can ask the Gateway for the status of the alarm and handdle the response.

ALR-5

# Programming 8 of 9

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## Fix time switching+dimming control program that applies to all days in the year

The CMS can generate and send to a Gateway a control program that switches and dims a PRG-1 light point at fix time all days in the year.

# Astro-clock switching + fix time dimming control program that applies to all days in the year

The CMS can generate and send to a Gateway a control program that switches a light point at sunrise/sunset +/- few minutes and dim it during an astro-clock active period, all days in the year.

# Photocell switching + fix time dimming control program that applies to all days in the year

The CMS can generate and send to a Gateway a control program that switches a light point when photocell indicates darkness and dim it during the photocell active period, all days in the year.

# Photocell and astro-clock switching + fix time dimming control program that applies to all days in the year

The Gateway ccan generate and send to a Gateway a control program that switches a light **PRG-4** point when photocell indicates darkness or at sunrise/sunset +:- few minutes (the earlier for switch ON/OFF) and dim it during the photocell active period, all days in the year.

#### Part night switching program

The CMS can generate and send to a Gateway a control program that switches a light point OFF at fixed time in the middle of the night.

#### Support exceptional periods (e.g., Sept 10th to Oct 16th)

The CMS can generate and send a calendar that has a default rule for all days in the year and another higher priority calendar that applies from DAY 1 to DAY 2.

#### Support exceptional week days (e.g., every Saturday and Sunday)

PRG-7

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The CMS can generate and send to a Gateway a calendar that has a default rule for all days in the year and another higher priority calendar that applies every Saturday night and Sunday night, every day in the year.

Support exceptional week days (e.g., every Saturday and Sunday) and exceptional periods (e.g., Sept 10th to Oct 16th)

The CMS can generate and send to a Gateway a calendar that has a default rule for all days in the year, another higher priority calendar that applies every Saturday night and Sunday night, every day in the year and another higher priority calendar that applies to every saturday between DAY 1 and DAY 2.

#### Support dynamic lighting program based on sensor detection

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The CMS can generate and send to a Gateway a control program that has rule based on presence sensor.

PRG-9

# Capability list

# **Security**

Enabled <

# **Functions**

#### **Basic**

The Basic function describes the properties related to the physical asset to which the logical device is associated, such as identification (assetId) and location information.

#### **Attributes**

# Attribute Description

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✓ assetId	Customer identifier of the asset. If multiple devices have the same assetId it means they belong to the same asset.
✓ serial	Serial number of the device.
<b>✓</b> hwType	Hardware type of the device.
✓ hwVersion	Hardware revision of the device.
✓ swVersion	Software version installed on the device.
✓ location	Latitude, Longitude and Altitude. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new LocationSensorFunction.location instead.]
<b>✓</b> timeZone	Time zone of the device. Time zone may be expressed in two formats. <timezone> where <timezone> is a time zone as defined in the zone.tab of the IANA timezone database [IANA]; and stdoffset[dst[offset][,start[/time],en d[/time]]] as defined by the Open Group for posix systems [POSIX]. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new TimeFunction.timeZone instead.]</timezone></timezone>
✓ currentTime	Current time of the device defined as local time with time zone designator. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new TimeFunction.currentTime instead.]

#	Event type	Description
<b>~</b>	deviceReset	The physical device containing the logical device was reset
<b>~</b>	batteryMode	Device operating in battery mode
<b>~</b>	installationMode	Device is being installed
<b>~</b>	maintenanceMode	Device is undergoing maintenance
<b>~</b>	cabinetDoorOpen	Cabinet door is open. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new SegmentMonitor.cabinetDoorOpen instead.]
<b>~</b>	batteryShutdown	Indicates the device has shut down due to battery discharge
<b>~</b>	locationUpdated	Indicates the location of a device has changed.

# Communication

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The Communication Function contains attributes related to the communication within the ODN, and between ODN devices and Gateways. Although communication within the ODN is outside the scope of the TALQ Smart City Protocol, this Function enables access to a minimum set of configuration and state information of the ODN communication interface in order to facilitate system management from the CMS.

### **Attributes**

#	Attribute	Description
<b>~</b>	communicationType	Type of communication technology implemented by the ODN (e.g. power line, wireless).
<b>~</b>	logicalAddress	Logical address for communication within the ODN scope (IP address, Short Address,).
<b>~</b>	altLogicalAddress	Additional logical address used for communication within the ODN, for instance, group communication address (not a TALQ group address).
<b>✓</b>	physicalAddress	Physical address of the device. For example, IEEE MAC address. This attribute can be used to map between logical and physical devices. The format is specific to the ODN implementation.
<b>~</b>	parentAddress	TALQ Address of the parent device, e.g. gateway. It shall point to a specific communication function.
<b>~</b>	communicationFailure	This attribute is updated by the ODN when the communication function is not operating as expected.

# **Events**

#	Event type	Description
<b>~</b>	communicationFailure	This event is generated by the ODN when the communication function is not operating as expected

### Gateway

The Gateway function includes the necessary attributes to enable the communication between the CMS and the Gateway according to the TALQ Specification.

#### **Attributes**

# Attribute	Description
<b>✓</b> cmsUri	Base URI for TALQ communication that allows the Gateway to access the CMS. Must be an absolute URI. Other URI's for accessing CMS can be relative to this base.
✓ cmsAddr	ess CMS UUID address

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<b>✓</b>	gatewayUri	Base URI for TALQ communication that allows the CMS to access the Gateway. Must be an absolute URI. Other URI's for accessing Gateway can be relative to this base.
<b>~</b>	gatewayAddress	Gateway UUID address
<b>~</b>	crlUrn	URI where the Gateway can obtain the Certification Revocation List (CRL).
<b>~</b>	vendor	Vendor identification.

# **Lamp Actuator**

The Lamp Actuator function includes attributes related to lighting control and it represents the smallest unit for control purposes. In practice, however, a Lamp Actuator function can control combinations of several lamps and control gear but all in the same way, as if they are all one individual unit.

# **Attributes**

#	Attribute	Description
<b>✓</b>	defaultLightState	Sets the default light output for the lamp actuator. This shall be applicable if no other command is active. This attribute shall be set to 100% as default value.
<b>~</b>	targetLightCommand	Latest command for the lamp actuator.
<b>~</b>	feedbackLightCommand	This attribute reflects the command in effect and it might deviate from the actualLightState due to propagation time or due to internal ODN specific mechanisms to handle the priority of the requests.
<b>✓</b>	actualLightState	This attribute should reflect the physical state of the light source as much as possible, including factors such as CLO. It may be calculated or measured, depending on the specific ODN implementation, which is outside the scope of this specification.
<b>✓</b>	calendarID	TALQ Address of the calendar controlling this lamp actuator. If this attribute is empty, the behavior shall be determined by the ODN. If the attribute is invalid, the ODN shall trigger a generic invalid address event and the behavior shall be determined by the ODN.
<b>~</b>	invalidCalendar	The lamp actuator function has been allocated a calendar that it cannot implement.

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✓ invalidProgram	The lamp actuator function has been allocated a control program that it cannot implement.
✓ lightStateChange	Light state has changed.
✓ targetLightCommandChange	The targetLightCommand operational attribute has changed.
✓ programChange	The control program applicable to the lamp actuator has changed (these are the points at which the calendar changes the program).
✓ calendarChange	The calendar applicable to the lamp actuator has changed.

#	Event type	Description
<b>~</b>	lightStateChange	Light state has changed
<b>~</b>	invalidCalendar	The lamp actuator function has been allocated a calendar that it cannot implement
<b>~</b>	invalidProgram	The lamp actuator function has been allocated a control program that it cannot implement

# **Lamp Monitor**

The Lamp Monitor function enables monitoring of lamp parameters. A Lamp Monitor function should be associated with a specific lamp/control gear combination. Multiple lamp monitor functions may be implemented by a single device.

# **Attributes**

# Attribute	Description
✓ numberOfLamps	Number of lamps being monitored by the lamp monitor function.
✓ operatingHours	Number of hours the lamp is on. This is the value used in CLO and may be set by the CMS.
✓ temperature	Temperature of the device implementing this function. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new TemperatureSensorFunction.temperature instead.]
✓ supplyVoltage	RMS supply volts when supplyType is AC, supply voltage (V) when supplyType is DC.

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<b>~</b>	supplyCurrent	RMS supply current (A) when supplyType is AC, supply current (A) when supplyType is DC.
<b>~</b>	activePower	Active power.
<b>~</b>	powerFactor	Active power/Apparent power.
<b>~</b>	powerFactorSense	Phase sense of power factor.
<b>~</b>	activeEnergy	Cumulative active energy (since installation or counter reset).
<b>✓</b>	supplyLossCount	Incrementing count of supply losses. The wrap around value is 2e32 - 1.
<b>~</b>	lampPowerTooLow	Lamp power is smaller than expected lamp power - lampPowerTolerance
<b>✓</b>	lampFailure	The lamp is not operating as it is supposed to (e.g. the lamp is broken). This event shall be used to detect a situation where the lamp (or LED module(s)) should be lit, but produce no light. This could be detected by the current flowing or power consumed.
<b>~</b>	currentTooHigh	Supply current is above the highCurrentThreshold defined in the lamp type.
<b>~</b>	leakageDetected	Indicates that an earth leakage fault has been detected.
<b>~</b>	supplyVoltageTooHigh	Level of supply voltage is above the highLampVoltageThreshold.
<b>~</b>	supplyVoltageTooLow	Level of supply voltage is below the lowSupplyVoltageThreshold.
<b>~</b>	highSupplyVoltageThreshold	Supply voltage above which the supplyVoltageTooHigh event is triggered.
<b>~</b>	lowSupplyVoltageThreshold	Supply voltage below which the supplyVoltageTooLow event is triggered.

# Event type	Description
✓ lampPowerTooHigh	Lamp power is greater than expected lamp power + lampPowerTolerance
✓ lampPowerTooLow	Lamp power is smaller than expected lamp power - lampPowerTolerance

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✓ lampVoltageTooHigh	Level of lamp voltage (not supply voltage) is greater than highLampVoltageThreshold.
✓ lampVoltageTooLow	Level of lamp voltage (not supply voltage) is smaller than lowLampVoltageThreshold.
✓ currentTooHigh	Supply current is above the highCurrentThreshold defined in the lamp type
✓ currentTooLow	Supply current is below the lowCurrentThreshold defined in the lamp type
✓ powerFactorTooLow	The power factor is below powerFactorThreshold
✓ lampFailure	The lamp is not operating as it is supposed to (e.g. the lamp is broken). This event shall be used to detect a situation where the lamp (or LED module(s)) should be lit, but produce no light. This could be detected by the current flowing or power consumed.
✓ highTemperature	Indicates temperature is above the high threshold
✓ relayFailure	Set in case of internal relay is failing
✓ absoluteLampPowerTooHigh	Indicates the power is above the lampPowerHighThreshold in the lamp type
✓ absoluteLampPowerTooLow	Indicates the power is below the lampPowerLowThreshold in the lamp type
✓ controlGearCommFailure	Indicates failure of the control gear
✓ cyclingFailure	Indicates the lamp is constantly switching ON and OFF in an unexpected manner
✓ supplyLoss	Indicates loss of mains power
✓ contactorError	Indicates error in contactor
✓ lampUnexpectedOn	Indicates lamp is unexpectedly on
✓ leakageDetected	Indicates that an earth leakage fault has been detected

### **Electrical Meter**

The electrical meter function supports electrical metering capabilities including measurements of voltage, current, power, energy, and power factor. This function may be associated with Luminaire Controllers, Cabinet Controllers or electrical meters installed in switch boxes. ODNs may implement both single phase and three phase meters. Typically meters within a control device will be single phase and stand-alone meters. A street side cabinet may have single phase or three phase meters.

# **Attributes**

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#	Attribute	Description
<b>~</b>	totalPowerLowThreshold	Power below which the totalPowerTooLow event is triggered.
<b>~</b>	totalCurrentHighThreshold	RMS current above which the currentTooHigh event is triggered.
<b>~</b>	totalCurrentLowThreshold	RMS current below which the currentTooLow event is triggered.
<b>~</b>	totalPower	Sum of the active power consumed on phase 1, 2 and 3, or just the power for a single phase meter.
<b>~</b>	totalActiveEnergy	Total cumulative kWh measured by the meter since installation date (or counter reset).
<b>~</b>	totalPowerFactor	Total active power divided by total apparent power.
<b>~</b>	supplyVoltage	Average between Phase1 RMS Voltage, Phase2 RMS Voltage and Phase3 RMS Voltage, or in the case of a single phase meter just the RMS supply voltage.
<b>~</b>	totalCurrent	Sum of the RMS currents on phase 1, 2 and 3.
<b>~</b>	averageCurrent	Average RMS current on phase 1, 2 and 3.
Eve	ents	
#	Event type	Description

# **Photocell**

A Photocell function models the capabilities of a photocell that can be used for lighting control. This function shall be supported by the CMS and optionally by the ODNs (Gateway).

# **Attributes**

# Attribute	Description
✓ onLevel	Illuminance level at which the photocell switches to on state.
✓ offLevel	Illuminance level at which the photocell switches to off state.
✓ photocellOut	put Output state of the photocell. Possible values are ON (means the illuminance level has fallen below the onLevel) and OFF (means the illuminance level has risen above the offLevel).

# **Events**

#	Event type	Description
<b>~</b>	photocellOutputOn	The photocell output has changed to ON

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# **Light Sensor**

A Light Sensor function models the output of light sensor. This function is optional for both CMS and Gateway, but when supported the requirements in this section shall apply.

### **Attributes**

#	Attribute	Description
<b>~</b>	levelHighThreshold	Light level above which a levelTooHigh event is triggered.
<b>~</b>	levelLowThreshold	Light level below which a levelTooLow event is triggered.
<b>~</b>	lightLevel	Illuminance level.

# **Events**

#	Event type	Description
<b>~</b>	levelTooHigh	Indicates the light level is above the levelHighThreshold
<b>~</b>	levelTooLow	Indicates the light level is below the levelLowThreshold

# **Temperature Sensor**

The Temperature Sensor function allows a CMS to monitor the temperature in a device and send events in case the value is above/below configurable thresholds.

# **Attributes**

#	Attribute	Description
<b>~</b>	temperatureHighThreshold	Threshold above which a temperatureTooHigh event is triggered.
<b>~</b>	temperatureLowThreshold	Threshold below which a temperatureTooLow event is triggered.
<b>~</b>	fireDetectionThreshold	Threshold above which a fireDetected event is triggered.
<b>~</b>	temperature	Output temperature.
<b>~</b>	temperatureTooHigh	Indicates the output temperature is above the temperatureHighThreshold.

# **Events**

ŧ	Event type Descri	ption

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✓ temperatureTooHigh	Indicates the output temperature is above the temperatureHighThreshold.
✓ temperatureTooLow	Indicates the output temperature is below the temperatureLowThreshold.
✓ fireDetected	Indicates the output temperature is above the fireDetectionThreshold.

# Location Sensor\*

The Location Sensor Function is used to indicate that an object has changed position attributes configurable by the CMS or based on internal setup of the vendor. For example, a specific location (latitude, longitude) of a device could be defined by the vendor. If the device is equipped with a GPS, it could send a specific event indicating that its position is different to the one defined by the CMS. We might also want to let the configuration to the vendor itself and simply define events notifying the CMS that the default configuration has changed. For example, a garbage bin could have its location defined based on a sensor placed on the floor. If the bin is not above this sensor, the vendor will trigger an event. In this last case, the CMS does not need to configure anything.

#### **Attributes**

#	Attribute	Description
<b>~</b>	expectedLocation	Nominal location of the device
<b>~</b>	locationChangedThreshold	Distance (meters)
<b>~</b>	location	Location of the device

#### **Events**

#	Event type	Description
<b>~</b>	locationChanged	Triggered when the difference between location and expectedLocation is above locationChangedThreshold

## Orientation\*

The Orientation function is used to indicate that an object has changed orientation based on attributes configurable by the CMS or based on internal setup of the vendor. The target orientation of the object could be configured by the CMS or could be handled by the vendor. In the latter case, the configuration is let to the vendor itself and events are triggered depending on internal configuration.

#### **Attributes**

# Attribute	Description
<ul><li>expectedOrientation</li></ul>	Nominal orientation of the device

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<b>~</b>	orientationChangedThreshold	Threshold above which orientationChanged is triggered
<b>~</b>	orientation	Orientation of the device
<b>✓</b>	orientationChanged	Triggered when orientation differs from expectedOrientation by more than orientationChangedThreshold on any angle, or when the device determines itself that its orientation has changed.

#	Event type	Description
~	orientationChanged	Triggered when orientation differs from expectedOrientation by more than orientationChangedThreshold on any angle, or when the device determines itself that its orientation has changed.

# Time\*

The Time function includes attributes related to generic control and it represents the smallest unit for control purposes.

# **Attributes**

# Attribute	Description
✓ timeZone	Time zone of the device. Time zone may be expressed in two formats. where is a time zone as defined in the zone.tab of the IANA timezone database [IANA]; and stdoffset[dst[offset][,start[/time],en d[/time]]] as defined by the Open Group for posix systems [POSIX].
✓ currentTime	Current time of the device defined as local time with time zone designator.

# **Events**

#	Event type	Description
<b>✓</b>	lastSyncError	This event is generated when the latest time synchronization operation failed.

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# **Services**

# **Configuration Service**

The TALQ Configuration Service enables discovery and configuration of devices and services

# **Options**

# Option Value Description

#### **Control Service**

The Control service describes the mechanisms to operate the actuator functions in order to enable schedule based and override control

# **Options**

#	Option	<b>V</b> alue	Description
<b>~</b>	supportedTypes	<ul> <li>AbsoluteActivePeriod</li> <li>ccDay*</li> </ul>	Control Program and calendar options supported are defined by announcing support for the given modes
<b>~</b>	dayOffset	• 0	Offset of start of day
<b>~</b>	ccDaySupport	• n	Indicates the ccDay
		• 0	options supported
		• O	
		• C	
		• c	
		• u	
		• r	
		• r	
		• e	
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<b>~</b>	programSecondsSupported*	Indicates whether the
		field of seconds is
		supported in
		programs.

#	<b>Event Type</b>	Description
<b>~</b>	invalidCalendar	An invalid calendar has been provided by the CMS to the ODN
<b>~</b>	invalidProgram	A control program has been provided by the CMS, which cannot be implemented by the ODN

#### **Data Collection Service**

The TALQ Data Collection Service is a provision to configure how ODN measurements, status information and events are logged, and when or under what conditions the logged data is transferred to the CMS

# **Options**

#	Option	Value	Description
<b>~</b>	supportedModes	<ul><li>VendorRecordingMode</li><li>EventRecordingMode</li><li>ImmediateReportingMode</li></ul>	Recording and Reporting modes supported

### **Events**

#	<b>Event Type</b>	Description
<b>~</b>	invalidLoggerConfig	The CMS has provided a data logger configuration that cannot be implemented by the ODN

# On Demand Data Request Service

This service provides the mechanism to access attributes in the logical devices by requesting attribute values from the ODN

# **Group Management Service**

This service provides the mechanisms to define and manage groups

# **Options**

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# Option Value Description
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#### **Test Service**

This service provides a mechanism to reduce the human intervention during the certification tests, enabling the certification tests to maximise automation

# **Objects**

# Event log data

Event log data contains a single event, with eventType and value, in each single log entry. It also includes information about whether the log denotes the start or end of the event. Furthermore additional information can be added with the info attribute.

# **Properties**

# Property	Description
✓ eventType	Identifier of event reported
✓ srcAddress	Address of Logical device or function within a logical device which is the source of the event or to which this event applies
✓ startEndFlag	If the event denotes either the start or end of a 'special' period, this flag shall be included

#### Command

A command defines a type of control action that can be applied to a function. Commands can be generated by a manual override action or by a control program.

# **Properties**

# Property	Description
✓ state	Light state to be applied to the lamp actuator
✓ reason	Indicates the command was triggered by override, sensor or control program

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<b>✓</b> cmsRefld	CMS reference, which can be used for data logging. The cmsRefld in a Command is a free text to be used by the CMS for any purpose, e.g. to differentiate contexts. It is a token that allows the CMS to match client requests to the original notification.
✓ refAddress	Reference to the source of the command, e.g. sensor or control program
✓ start	Time when the control action resulting from command shall start. This attribute is used only with override commands to set a time to start an override action. If not specified, the override command starts immediately.
✓ expiration	Time when the control action resulting from command shall be terminated. This attribute is used only with override commands to set a time to stop an override action. After the expiration of an override command, the system should go back to the state defined by the active control program. If not specified, there is no expiration for the override command.
<b>✓</b> rampToLevelTime <b>*</b>	The time (in seconds) taken for the value to ramp to the specified level. The change will be finished rampToLevelTime seconds after: the scheduled time if the change comes from a control program; the reception of the request, or the command.start time attribute, if the change comes from an override command, or; the sensor event is raised if the control is sensor-based. If actions related to one command remain to be completed when a subsequent command is received, the subsequent command shall take precedence.
✓ rampFromLevelTime*	The time (in seconds) taken for the value to ramp to the specified level. The change will be finished rampFromLevelTime seconds after: the scheduled time if the change comes from a control program; the reception of the request if the change comes from an override command; expiry of the related command, or; the sensor event is lowered and the hold time subsequently expires if the control is sensor-based. If actions related to one command remain to be completed when a subsequent command is received, the subsequent command shall take precedence.

# Group

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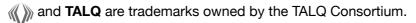
A group is set of entities that can be addressed by the same group address. Devices and functions within devices can be assigned to a group. A group may also include other groups as members.

## **Properties**

#	Property	Description
<b>~</b>	address	Group address
<b>~</b>	members	TALQ Addresses of members of the group

\*: The Certification Test Tool is designed to provide a high level of confidence that complementary systems can communicate successfully. As both the protocol and the test tool evolve, all mandatory and other core tests are confirmed by comparison with real-life scenarios (plug-fest or similar). Some tests of optional and more peripheral features may not yet have been confirmed in this way; such features are identified with an asterisk (\*).

This Capability List is based on a certification session performed by the TALQ Certification Tool (v2.6.3-online.1) on 2025-10-09 16:48:52.153 +0200.



**G** TALQ Consortium



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