⟪⟫ TALQ

Certified Capability List

This Capability List is based on a certification session performed by the *TALQ Certification Tool (v2.5.0-update.4) on 2023-04-25 10:20:07.521 +0300.*

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

The tool has succesfully performed *32 tests*.

Product details

Product Name	Urbio GTW
Company	Urbio
Type	GATEWAY
Notes	
Generated on	2023-04-25 10:20:07.521 +0300
Supported profiles	• Lighting
API version certified:	2.5.0
Certification performed by app version:	2.5.0-update.4

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
✔	swVersion	Software version installed on the device.
✔	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.]

Events

#	Event type	Description
✔	deviceReset	The physical device containing the logical device was reset

Communication

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
✔	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.

Events

#	Event type	Description
✔	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
✔	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.
✔	cmsAddress	CMS UUID address
✔	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.
✔	gatewayAddress	Gateway UUID address
✔	retryPeriod	Time duration before the Gateway retransmits a message for which expected response has not been received. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new GatewayFunction.gatewayRetryPeriod instead.]
✔	crlUrn	URI where the Gateway can obtain the Certification Revocation List (CRL).
✔	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
✔	lampTypeId	TALQ Address of an existing lampType.
✔	outputPort	Identifier of the output port that is controlled by the lamp actuator.

✔	standbyMode	Defines the behavior of the lamp actuator when output level is set to zero. If OFF, light output level is zero with no power to the lamp control gear. If ON, light output level is zero but power is delivered to the lamp control gear (standby mode).
✔	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.
✔	targetLightCommand	Latest command for the lamp actuator.
✔	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.
✔	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.
✔	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.

Events

#	Event type	Description
✔	lightStateChange	Light state has changed
✔	invalidCalendar	The lamp actuator function has been allocated a calendar that it cannot implement
✔	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

✔	supplyType	Supply type of the lamp. Accepted values are: AC, DC.
✔	lampTypeId	TALQ Address of an existing lamp type. If not set to a valid value, this shall be the lamp type used in the lamp actuator. If this attribute is not supported in the implementation, the lamp monitor shall use the lamp type specified in the corresponding lamp actuator.
✔	monitoringReference	Name of the entity (or physical device) being monitored by this function.
✔	numberOfLamps	Number of lamps being monitored by the lamp monitor function.
✔	switchOnCounter	Cumulative number of ON/OFF cycles since installation of the lamp. The wrap around value is 2e32 - 1.
✔	operatingHours	Number of hours the lamp is on. This is the value used in CLO and may be set by the CMS.
✔	supplyVoltage	RMS supply volts when supplyType is AC, supply voltage (V) when supplyType is DC.

Events

#	Event type	Description
✔	lampPowerTooHigh	Lamp power is greater than expected lamp power + lampPowerTolerance
✔	lampPowerTooLow	Lamp power is smaller than expected lamp power - lampPowerTolerance
✔	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.
✔	leakageDetected	Indicates that an earth leakage fault has been detected

Services

Configuration Service

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

Options

#	Option	Value	Description
✔	commissioningSupported*		This ODN can support commissioning from the CMS side.
✔	devicesPaginationSupported*		This ODN can support pagination of devices.

Control Service

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

Options

#	Option	Value	Description
✔	supportedTypes	• AbsoluteActivePeriod • AstroClockActivePeriod	Control Program and calendar options supported are defined by announcing support for the given modes
✔	maximumCalendars		Maximum number of calendars supported
✔	maximumPrograms		Maximum number of control programs supported

Events

#	Event Type	Description
✔	invalidCalendar	An invalid calendar has been provided by the CMS to the ODN
✔	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

✔ supportedModes	• VendorRecordingMode • EventRecordingMode • ImmediateReportingMode	Recording and Reporting modes supported

Events

#	Event Type	Description
✔	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

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

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

✔ cmsRefId CMS reference, which can be used for data logging. The cmsRefId 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.

✳: 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 (*).

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