

# LinkSmart Device Connector

## Overview

A Device Connector provides integration of heterogenous devices in the LinkSmart® middleware, implementing the functionality of the Device Integration Layer.

Due to the diversity of available IoT devices and possible integration scenarios, it is a concept rather than a single component. It is expected to have different implementations of the Device Connector fulfilling the described here functional specification.

## Specification

A Device Connector must implement the following functionality:

- Provide communication with devices over the network via standardized protocols
  - Expose APIs of devices/resources via standardized APIs and protocols (HTTP/REST, MQTT, etc)
  - Implement native APIs/protocols of devices internally (if needed)
- *Publish* registrations to (the) remote Resource Catalog(s)
  - Continuously *update* these registrations (keepalive)
  - *Remove* the registrations on devices failures and graceful shutdown of the Device Connector

## Implementations

- [Device Gateway](#): a lightweight, natively-compiled Device Connector for integration of various devices through stdin/stdout communication with device-specific agents for rapid prototyping of IoT applications.
- [Thing Publisher](#): a service for exposing proprietary sensor data in the OGC SensorThings format over MQTT.