Cypherbridge® Systems ADK Amazon Web Services IoT Device Kit



Overview

The Cypherbridge AWS IoT Device Kit is a go-to-project solution integrating all essential features needed to take your IoT project into the Amazon IoT cloud. Consumer, industrial and commercial vertical enterprises can jump-start existing and new project designs with the AWS IoT Device Kit.

AWS IoT Platform

Amazon, the cloud services leader, offers an advanced and highly scalable platform for device to cloud system integration.

The secure device connection enables you to safely connect devices to AWS services and other devices.

The AWS rules engine is used to define data driven actions, business logic, and notification events.

On and offline devices are managed with device shadows, including deferred events and device to cloud synchronization, making it well suited to intermittent device WAN networking over cellular, or power managed devices.

IoT Device	
Application	
AWSIoT Client	
Platform I/O	JSON
	мотт
	uSSL TLS
Sensors Actuators & Local Networks	TCP/IP
	WiFi Wired

Identity, Authentication, and Trust

The AWS IoT security model is based on mutual authentication. Devices are uniquely registered and identified. Device X.509 certificates are generated and signed by AWS using a Verisign Root CA common root of trust embedded in the device. The uSSL SDK executes a TLS handshake to mutually authenticate AWS and device, establishing a trusted and secure communication channel.

Data access policy is defined and managed in the AWS IoT console, enabling fine grained read and write control on a per-topic basis.

Using the ADK Device Kit

The application links with the ADK library, and starts the data topic subscriber, publisher or both. Multiple data topics can be defined by wildcard. I/O channel data can be interfaced to Platform I/O handler. Wired channels including ModBus, CAN, I2C, SPI, as well as low power wireless ZigBee, Enocean, NFC and BLE Smart, can transferred to the cloud as MQTT message topics to add cloud gateway capability to product designs.



Extensive Services Drives Lower Product Lifecycle TCO

Leverage your R&D investment today and into the future. Amazon Web Services offers myriad services including IoT device management and monitoring, database storage and analytics, event notification, and machine learning. Interface your IT systems and business logic with AWS services to integrate and operate IoT devices easier, at lower cost, with faster response.

Features and Options

- ✓ Add cloud based visualization, control and analytics
- ✓ Replicate and synchronize highly scalable big data
- ✓ TLS secure MQTT 3.1.1

 standards based connection
- Authenticated policy based access control and security
- ✓ MQTT publish & subscribe
- ✓ Low footprint JSON for structured payload data
- ✓ TCP/IP network abstraction layer enables wired ethernet and WiFi
- ✓ Enables local wired and wireless network and I/O channel data

MQTT, REST and WebSocket

- ✓ AWS supports REST, MQTT and WebSocket protocols, and Cypherbridge offers these options for project specific requirements.
- ✓ Relative to HTTP REST, MQTT is inherently lightweight and well suited to IoT devices using bandwidth or cost constrained communications channels.
- ✓ Flexible MQTT user defined payloads include simple named data values, & JSON structured object lists and data types.
- ✓ Back end IT systems can easily interface to AWS services with typical server class protocols.

For Pricing and Availability

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CSL-ADK-160726.1

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