

# CREATING SECURE IoT CONNECTIONS

Learn more about IoT technologies for securing your data, whether it's in your application, in the Cloud, or somewhere in between.



## Engineer-to-Engineer Workshops

ATLANTA | APRIL 18

### WHERE

**Crowne Plaza® Atlanta Perimeter at Ravinia**  
4355 Ashford Dunwoody Road  
Atlanta, GA 30346  
Tel: (770) 395-7700

### WHEN

Thursday, April 18  
8:30am to 4:00pm  
Breakfast & Lunch Provided

### REGISTER NOW

Seating is limited; register at:  
<https://info.renesas.com/workshops>

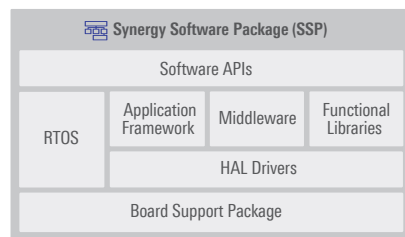
Please bring your own laptop; we will be sending out instructions to install required software! All Free!

Join our team as they demonstrate, step-by-step, how easily you can secure your product and data with Renesas Synergy™.

Connecting your product to the Cloud requires an entirely new set of technologies and protocols to master. We will show you the basic technologies required to secure your data and how to securely connect to the Cloud using MQTT, TLS, certificates, keys, and encryption. We will not only discuss these technologies, but show you practical hands-on techniques to implement some of these solutions.

### Attendees will receive:

Full access to the Synergy SSP



### Join us and learn how to simplify IoT development

- Basics required to connect to the Cloud including MQTT, TLS, certificates, keys, and encryption
- A complete and secure end-to-end IoT design
- Design a project with the SSP NetX™ MQTT stack
- Use cases and methods for securing your data, whether it's transient or permanent



Free Renesas AE-CLOUD2 Kit

In partnership with:



# Renesas Engineer-to-Engineer Workshop Course Descriptions

8:30am - 9:00am		Registration / Breakfast
9:00am - 9:05am		Welcome / Opening Remarks
9:05am - 10:30am	LEC	<b>Solutions for Embedded Security</b> <ul style="list-style-type: none"> <li>Security is important to products of all shapes and sizes, and reducing the threats from unwanted tampering should be the concern of all developers. In this lecture, we will discuss the basic building blocks of security, including symmetric and asymmetric encryption, hashing, digital signatures, certificates, and key storage. We'll also take a look at how these components are tied together to make secure connections to the Cloud via TLS. We'll wrap this up by showing how Synergy hardware and software work together to form a robust solution.</li> </ul>
10:30am - 12:00pm	LAB	<b>Securing Data in Transit</b> <ul style="list-style-type: none"> <li>In this lab, you will use Synergy Software Package (SSP) Wi-Fi and MQTT stacks to connect to public MQTT servers. You will publish ambient light level, temperature, humidity, and air pressure sensor data to the MQTT server and subscribe to a message addressed to your embedded device. You will also create certificates and add TLS to secure your data.</li> </ul>
12:00pm - 12:45pm		Lunch / Demo Stations (Food Provided)
12:45pm - 1:30pm	LAB	<b>Securing Data in Transit (continued)</b> <ul style="list-style-type: none"> <li>In this lab, you will use Synergy Software Package (SSP) Wi-Fi and MQTT stacks to connect to public MQTT servers. You will publish ambient light level, temperature, humidity, and air pressure sensor data to the MQTT server and subscribe to a message addressed to your embedded device. You will also create certificates and add TLS to secure your data.</li> </ul>
1:30pm - 1:45pm		Break
1:45pm - 3:45pm	LAB	<b>Securing Data at Rest</b> <ul style="list-style-type: none"> <li>The objective of this lab session is to familiarize the user with the Secure MPU and Flash Access Window. You will learn through different use cases and methods for securing your data. It may be transient data that resides in RAM or semi-permanent to permanent data like that stored in Flash. We will also expand this to cover external data such as external flash or external file systems.</li> </ul>
3:45pm - 4:00pm		Wrap-up

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