

# CELLULAR CONNECTIVITY: FROM SENSOR TO CLOUD

Learn more about IoT technologies for cellular communications with cloud service providers.



## Engineer-to-Engineer Workshops

VANCOUVER, BC | APR. 9

### WHERE

Suite Genius Mt. Pleasant  
225 West 8th Avenue, #300  
Vancouver, BC V5Y 1N3

### WHEN

Tuesday, April 9  
8:30am to 4:15pm  
Breakfast & Lunch Provided

### REGISTER NOW

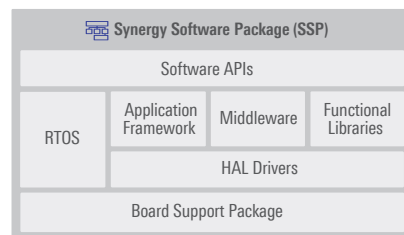
Seating is limited; register at:  
<https://info.renesas.com/workshops>

Join our team as they demonstrate, step-by-step, how easily you can connect your device with cellular mobility using the Renesas Synergy™ Platform and the Bell network.

You will learn about IoT technologies for communicating with cloud service providers and how you can utilize Synergy Software Package (SSP) stacks with cellular connectivity to seamlessly connect to a cloud provider and build a dashboard for you to gather and visualize your data. We will also show you how to add security to your project using the SSP NetX™ TLS stack and teach you how to generate and use certificates.

### 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 end-to-end IoT connectivity design
- How to connect and use the Bell Mobility LTE Cat-M1 network
- Setting up the Azure IoT Central Dashboard to visualize and gather your information



Free Renesas  
AE-CLOUD2 Kit

In partnership with:

# Renesas Engineer-to-Engineer Workshop Course Descriptions

8:30am - 9:00am		Registration / Breakfast
9:00am - 9:10am		Welcome / Opening Remarks
9:10am - 9:50am	LEC	<b>The Right Technology to go from Chip to Cloud</b> <ul style="list-style-type: none"> <li>Connecting your product to the Cloud requires an entirely new set of technologies and protocols to master. The Renesas Synergy product line reduces some of this complexity, allowing you to focus on what you do best, which is making your product! In this lecture, we'll discuss some of the basic technologies required to connect to the Cloud including MQTT, TLS, certificates, keys, and encryption.</li> </ul>
9:50am - 10:50am	LAB	<b>Sensing the World Around Me</b> <ul style="list-style-type: none"> <li>In preparation for sending sensor data to the Cloud, this first lab will focus on getting our development kits up and running. We will read sensors on the development kit and publish these values to a terminal window. Later, we will quickly transition this data so that it's sent to the internet and on to the Azure Cloud.</li> </ul>
10:50am - 11:00am		Break
11:00am - 11:30am	LEC	<b>Bell Mobility</b> <ul style="list-style-type: none"> <li>The next wave of IoT devices will usher in a new era of always-on, connected devices. At the center of this will be the low-power wide-area network. Bell Mobility is well positioned to provide connectivity options for these devices by providing a robust LTE Cat-M1 network across Canada to connect all these devices together. Bell will also discuss their value-add reseller program and how this relates to the IoT market.</li> </ul>
11:30am - 12:15pm	LAB	<b>Going from Chip to Cloud Over Cellular (Part I)</b> <ul style="list-style-type: none"> <li>Continuing from the morning lab, we'll now set up our development kit to connect to the Bell cellular Cat-M1 network. We'll also take the sensor data and send this data over an IP network instead of to a serial terminal.</li> </ul>
12:15pm - 1:00pm		Lunch (Food Provided)
1:00pm - 3:00pm	LAB	<b>Going from Chip to Cloud Over Cellular (Part II)</b> <ul style="list-style-type: none"> <li>The previous two labs have gotten us to a solid foundation of reading sensor data and sending this up to the internet over the Bell Cat-M1 cellular network. For the last piece of the puzzle, we'll configure the Microsoft Azure Cloud and send our sensor data to Azure. From the Cloud, we'll be able to visualize sensor data on the development kit, as well as send commands down to it.</li> </ul>
3:00pm - 3:15pm		Break
3:15pm - 4:00pm	LEC	<b>Azure IoT Central Dashboard Creation Demo</b> <ul style="list-style-type: none"> <li>This lecture will walk through setting up the IoT Central Dashboard. IoT Central allows you to gather analytics, and visualize and perform complex decisions based on analyzed data.</li> </ul>
4:00pm - 4:15pm		Wrap-up

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