

# ENABLING SECURE SMART ENERGY

Semiconductor Solutions for Tomorrow's Grid



## Microcontrollers and Analog & Power Devices for Energy Meters, Flow Meters, & Secure Utility IoT Connectivity

Effective security, accurate metering, and reliable connectivity are essential for the Smart Grid and utility IoT. Renesas takes you from embedded design concepts to innovative smart energy solutions with the tools you'll need including:

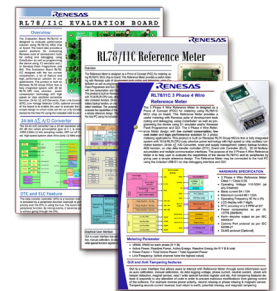
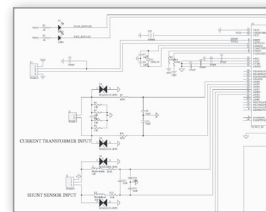
- Embedded development systems
- Smart energy reference platforms
- Complete prototype examples

Go from the distribution automation network to the grid edge with a vast microcontroller portfolio to support your smart energy innovations:

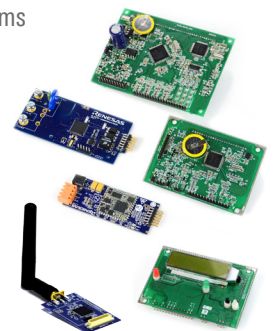
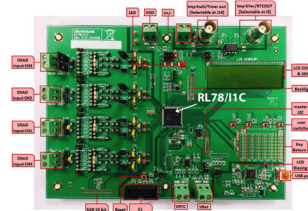
- High-performance control processing
- Accurate metering
- Multiple standards-compliant connectivity options
- Reliable security

As the world's #1 manufacturer of microcontrollers, Renesas offers the components, devices, and support enabling you to transform your Big Ideas into successful smart energy solutions.

- High-performance embedded designs
- Comprehensive design resources



- Power Measurement development systems
- Wi-SUN and LoRa Sub GHz
- Power Line Carrier modules



## Visit Renesas at Booth 73 at SENDI 2018



See a demonstration of Wi-SUN and DLMS/COSEM running on the Renesas RL78/11C revenue metering platform



- High-performance prototype designs
- Customer-ready for evaluation





Renesas provides embedded designs and complex processing functionality to the industrial, consumer, automotive, medical, and building automation segments, with a rich portfolio of:

- Programmable cores
- Peripheral interface functions
- Chip package types
- Communications protocols
- Accelerated software development platforms

With Renesas, you'll always have the edge to solve your toughest design challenges.

## RENESAS DEVICE PORTFOLIO OVERVIEW

### Components



#### Power

- Industrial & Automotive
- IGBT, Diodes, and Intelligent Power Modules



#### Analog

- Industrial & Automotive
- DC to DC, Fuel gauge and charging ICs, CMOS Image Sensors



#### SOC/ASIC

- Powertrain Control
- ASSP for USB, USB PD and PLC
- Custom ASICs
- ASIC with broad IP portfolio in 40 nm, 28 nm, 16 nm

### Microcontrollers and Microprocessors



#### 10500 DMIPS, Linux, Android

- Industrial & Automotive, 45 and 28 nm
- 10 MB SRAM/XIP or DDR interface



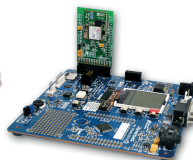
#### 480 DMIPS, FPU, DSC

- Industrial, 40 nm
- 100  $\mu$ A/MHz, 350 nA standby



#### 44 DMIPS, True Low Power

- Industrial & Automotive, 130 nm, 16-bit
- 66  $\mu$ A/MHz, 220 nA standby



### Platforms



- Industrial & Consumer, 130 nm and 40 nm
- Integrated Software, Tools and Kits, Microcontrollers, Solutions and Gallery



## RENESAS PARTNERS AND ALLIANCE MEMBERSHIPS SUPPORTING UTILITY IoT



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