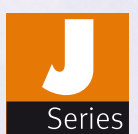


The Complete Microcontroller Platform.
V850 J Series.



V850 is the world's number one selling 32-bit microcontroller from the world's number one microcontroller supplier.

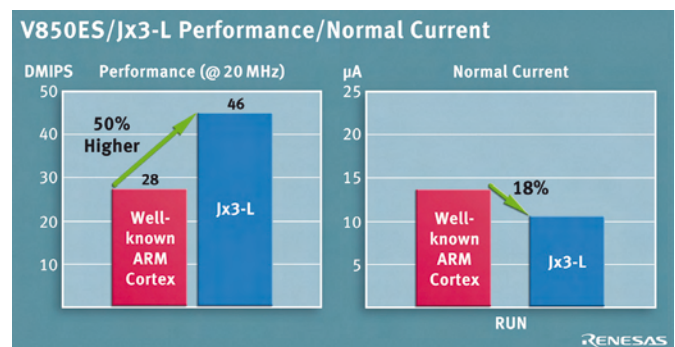
V850 J Series

With a range spanning 40-pins up to 144-pins, V850 J Series offers a complete platform line-up with total flexibility of choice in terms of performance, memory, features such as ultra low power consumption, up to 1MB of highly secure Flash, and wide-ranging connectivity options from USB2.0 Host & Function or Ethernet to a huge number of other serial interfaces on-chip. And it's all supported by a rich eco system offering development tools, middleware, 3rd party alliances and vibrant online engineering communities.



Compelling Features

- 3V V850ES core with up to 1.87 DMIPS / MHz performance
- Zero wait-state Flash
- Ultra low power modes enabling RTC to run from a 0.47F super capacitor for more than 8 days
- Preserves RAM & register content in power save modes
- Comprehensive Flash access protection & safety features including boot swap & read / write bit ECC
- Real up / down compatibility across J Series
- Small package availability in WFQN & FBGA down to 5x5mm
- Quality & lifetime record second to none



Special Flavours

As well as the general-purpose V850ES/Jx3 family, running at 32MHz and offering up to 1MB embedded Flash with an abundance of timers, up to 16 ADC channels and many serial interfaces, the V850 J Series includes three families with added low power and connectivity features.

V850ES/Jx3-L Low Power



V850ES/Jx3-H / -U USB2.0



V850ES/Jx3-E Ethernet



- Just 12mA in Run, 7mA in Sleep with peripherals on, 1.2uA in Stop & 1uA in RTC backup
- Supply voltage down to 2.0V
- Accurate hard RTC with independent power pins
- Versions with USB2.0 function available
- USB2.0 Full-speed (12Mbps) host / function built-in
- 98DMIPS at 48MHz 3V operation
- Use Host & Function simultaneously
- PPON (VBUS power supply output), OCI (over current detection) pin input
- Free of charge software drivers & protocol stacks
- IEEE802.3-compliant 10/100 Ethernet MAC built-in
- USB2.0 Full-speed (12Mbps) function built-in
- 1Mbps ISO 11898 CAN interface with 32 message buffers / channel
- Up to 50MHz 3V operation
- Free of charge software drivers & protocol stacks

V850 J Series Platform Portfolio

V850 J Series Line-up						
Flash (KB)						
1024				Jx3-L		Jx3
768				Jx3-L		Jx3
512	Jx3-H	Jx3-H	Jx3-E	Jx3-E	Jx3-E	Jx3-E
384	Jx3-H	Jx3-H	Jx3-E	Jx3-E	Jx3-E	Jx3-E
256	Jx3-H	Jx3-H	Jx3-E	Jx3-E	Jx3-E	Jx3-E
128	Jx3-H	Jx3-H	Jx3-E	Jx3-E	Jx3-E	Jx3-E
64	Jx3-H	Jx3-H	Jx3-E	Jx3-E	Jx3-E	Jx3-E
32	Jx3-H	Jx3-H	Jx3-E	Jx3-E	Jx3-E	Jx3-E
16	Jx3-H	Jx3-H	Jx3-E	Jx3-E	Jx3-E	Jx3-E
Pins	40	48	64	80	100	128

Package Line-up

LQFP				
	48 pin	64 pin	80 pin	100 pin
WQFN				
	40 pin	48 pin	64 pin	
FBGA				
	64 pin	64 pin	113 pin	

Small Package Options

WQFN			
	64pin	48pin	40pin
	9x9	7x7	6x6
FBGA			
	113pin	64pin	64pin
	8x8	6x6	5x5

Complete Development Environment

V850 tools come with IDE trials, drivers, example programs, middleware and all the hardware you need out of the box, and are further supported by a large 3rd party network including the selected examples below.



IAR Embedded Workbench



Green Hills Multi



Applilet Graphical Code Development & Driver Configuration

embOS

Segger Embos RTOS



Free of charge RTOS at www.freertos.org

Micrium

uC/OS RTOS for Safety-Critical Apps



Renesas & Segger USB2.0 Driver Support



Supported by Renesas IECUBE emulator, MINICUBE2 + target boards for On-Chip Debug & development programming and PG-FP5 for full programming



Supported demonstration kits, Low Power, Ethernet & USB2.0 Host + Function and USB2.0 Function Demonstration Kits



A V850ES/Jx3-L USB stick Starter Kit is also available complete with GUI-based control & evaluation software

The Renesas Eco System

V850 Website



www.renesas.eu/V850

Personalised Content



www.renesas.eu/myrenesas

Engineering Community



www.renesasrulz.com

3rd Party Network



www.renesas.eu/alliance

Online Training



www.renesasinteractive.com

Latest News



www.twitter.com/renesas_europe

Facebook Group



www.facebook.com/renesaseurope

Video Channel



www.youtube.com/renesaspresents

Before purchasing or using any Renesas Electronics products listed herein, please refer to the latest product manual and/or data sheet in advance.

