RENESAS

The Complete Microcontroller Platform.

V850 J Series.

RENESAS V850

#1 MCU REACH FURTHER

J Series

Renesas Electronics
www.renesas.eu

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

V850 J Series

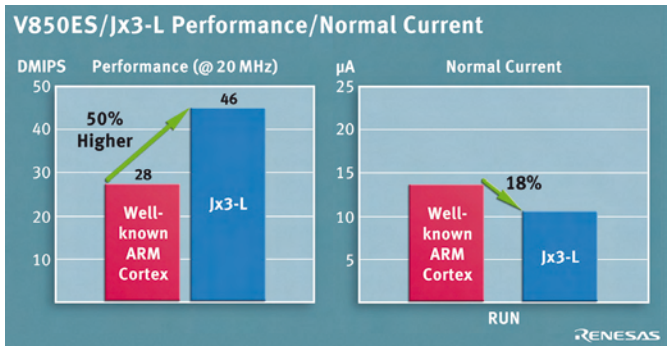
With a range spanning 40-pins up to 144-pins, V850 J Series offers a complete platform line-up with total flexibility of choice in terms of performance, memory, features such as ultra low power consumption, up to 1MB of highly secure Flash, and wide-ranging connectivity options from USB2.0 Host & Function 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.

NO. 1 WORLDWIDE* V850 32-BIT MCUS

J Series

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

- 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

V850ES/Jx3-H / -U
USB2.0

- 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

V850ES/Jx3-E
Ethernet

- IEEE802.3-compliant 10/100 Ethernet MAC built-in
- USB2.0 Full-speed (12Mbps) function built-in
- 1Mbs 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)	40	48	64	80	100	128	144
1024					80 Jx3-L, 60 Jx3		60 Jx3
768					80 Jx3-L, 60 Jx3		60 Jx3
512		48 Jx3-H	76 Jx3-E, 48 Jx3-H	76 Jx3-E	76 Jx3-E, 56 Jx3-H/U, 32 Jx3, 40 Jx3-L	124 Jx3-E, 56 Jx3-H/U	120 Jx3-E, 40 Jx3
384		40 Jx3-H	76 Jx3-E, 40 Jx3-H	76 Jx3-E	48 Jx3-H/U, 32 Jx3, 40 Jx3-L	124 Jx3-E, 40 Jx3-H/U	120 Jx3-E, 32 Jx3
256	24 Jx3-H	24 Jx3-H	64 Jx3-E, 24 Jx3-H	64 Jx3-E, 16 Jx3-L	64 Jx3-E, 40 Jx3-H/U, 40 Jx3-L, 16 Jx3-L	76 Jx3-E, 40 Jx3-H/U	
128	24 Jx3-H, 8 Jx3-L	24 Jx3-H, 8 Jx3-L	48 Jx3-E, 24 Jx3-H, 8 Jx3-L	48 Jx3-E, 8 Jx3-L	48 Jx3-E, 8 Jx3-L		
64	24 Jx3-H, 8 Jx3-L	24 Jx3-H, 8 Jx3-L	32 Jx3-E, 24 Jx3-H, 8 Jx3-L	32 Jx3-E, 8 Jx3-L	32 Jx3-E, 8 Jx3-L		
32	16 Jx3-H, 8 Jx3-L	16 Jx3-H, 8 Jx3-L	16 Jx3-H, 8 Jx3-L				
16	8 Jx3-H, 8 Jx3-L	8 Jx3-H, 8 Jx3-L	8 Jx3-H, 8 Jx3-L				

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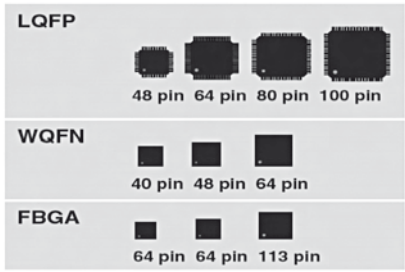
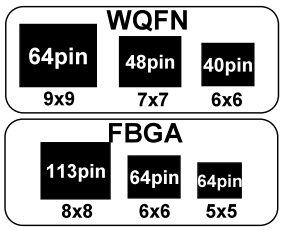
Package Line-up



Small Package Options



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

Segger Embos RTOS

Free of charge RTOS at www.freertos.org

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 isalso available complete with GUI-basedcontrol & evaluation software

The Renesas Eco System

V850 Website

www.renesas.eu /V850

Personalised Content

www.renesas.eu/myrenesas

Engineering Community

Think it. Build it. Post it.

www.renesasrulz.com

3rd Party Network

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Online Training

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