

Separate Sheet 1

**Main Product Specifications of the R-Car H3 and R-Car M3 Starter Kits**

<p><b>CPU</b></p>	<p><b>R-Car Starter Kit Premier (employing the R-Car H3):</b></p> <ul style="list-style-type: none"> <li>• ARM CA57 (ARMv8) 1.5 GHz quad core, with NEON/VFPv4, L1 cache I/D 48 K/32 K, L2 cache 2 MB</li> <li>• ARM CA53 (ARMv8) 1.2 GHz quad core, with NEON/VFPv4, L1 cache I/D 32 K/32 K, L2 cache 512 K</li> <li>• memory controller for LPDDR4-3200 4 GB in 2 channels, each 64-bit wide</li> </ul> <p><b>R-Car Starter Kit Pro (employing the R-Car M3):</b></p> <ul style="list-style-type: none"> <li>• ARM CA57 (ARMv8) 1.5 GHz dual core, with NEON/VFPv4, L1 cache I/D 48 K/32 K, L2 cache 2 MB</li> <li>• ARM CA53 (ARMv8) 1.2 GHz quad core, with NEON/VFPv4, L1 cache I/D 32 K/32 K, L2 cache 512 K</li> <li>• memory controller for LPDDR4-3200 2 GB in 2 channels, each 32-bit wide</li> </ul> <ul style="list-style-type: none"> <li>• three-dimensional graphics engines</li> <li>• video processing units</li> <li>• 3 channels display output</li> <li>• 6 channels video input</li> <li>• SD card host interface</li> <li>• USB 3.0 and USB 2.0 interfaces</li> <li>• CAN interfaces</li> <li>• Ethernet AVB</li> <li>• PCI Express Interfaces</li> </ul>
<p><b>Memory</b></p>	<ul style="list-style-type: none"> <li>• internal 384 KBytes system RAM</li> <li>• 64 MBytes HyperFlash™ (512 Mbits, 160 MHz, 320 MBytes/sec)</li> <li>• 16MBytes QSPI flash(128 Mbits,80 MHz,80 MBytes/sec)1 header QSPI module</li> <li>• 8 GBytes eMMC (HS400 240 MBytes/sec)</li> <li>• microSD card slot (SDR104 100 MBytes/sec)</li> </ul>

<b>Connectors</b>	<ul style="list-style-type: none"> <li>• CN1 expansion connector 440-pin</li> <li>• CN2 QSPI flash module</li> <li>• CN3 debug JTAG</li> <li>• CN4 HDMI</li> <li>• CN5 USB 2.0</li> <li>• CN6 push-pull microSD card socket</li> <li>• CN7 Ethernet connector RJ45</li> <li>• CN8 LINE out</li> <li>• CN9 MIC input</li> <li>• CN10 debug serial</li> <li>• CN11 CPLD programming JTAG</li> <li>• CN12 debug serial</li> <li>• CN13 main power supply input (5 V DC)</li> <li>• CN14 CPU fan</li> </ul>
<b>Board specifications</b>	<ul style="list-style-type: none"> <li>• Dimensions: 100mm × 100mm</li> <li>• Height: 57mm (with FAN)</li> <li>• External power supply 5V / 4A-8A, ripple &amp; noise (Vp-p) full load 200 mV</li> </ul>

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