

# i.MX RT1050 FEATURES AND BENEFITS

## CROSSOVER PROCESSING

- Highest performing ARM® Cortex®-M7 core with real-time operation delivering 3015 CoreMark®/1284 DMIPS @ 600 MHz
  - More than 250% faster than existing Cortex-M4 products
- Real-time, low latency response with the largest tightly coupled memory (TCM) at 512KB
  - 20 nanosecond interrupt latency—shortest among all ARM Cortex products
- Low dynamic power consumption enabled by DC-DC converter and efficient power gating
  - Half the run mode power of other Cortex-M7 products—as low as 110 µA/MHz

## HIGH LEVEL OF INTEGRATION

- High security enabled by AES-128 cryptography, high assurance boot (HAB), TRNG and on-the-fly QSPI flash decryption
- Most comprehensive multimedia platform integrated with a Cortex-M core
  - 2-D graphics acceleration, parallel camera sensor I/F, LCD display controller up to WVGA, multichannel high-performance audio
- Connectivity peripherals enable wireless connectivity
  - Wi-Fi®, Bluetooth®, BLE, ZigBee®, Thread™ and other options

## EASY TO USE

- Fast development with popular tools
  - MCUXpresso, IAR, ARM Keil®, FreeRTOS™, SDK, ARM mbed™ and low cost EVK compatible with Arduino™ hardware shields
- Single voltage input simplifies power circuit design
- Exceptional scalability and compatibility to thousands of Kinetis, LPC and i.MX products

## LOW BOM COST

- Highest performing ARM® Lowest-priced Cortex-M7 solution in the market at <\$3 for 10K quantity
- Fully integrated PMIC with a DC-DC converter, eliminating need for external power supply
- Low cost 10x10 BGA package with .65mm pitch enabling 4 layer PCB design