Genuino* 101 with Intel® Curie™ Module

Expanding education curriculum toward smart devices.

Introduction

The Genuino* 101 development board (branded Arduino* 101 in the US only) is designed to provide support for educational institutions that want to broaden their physical computing curricula.

Designed with Arduino* Uno R3 compatibility in mind, the Genuino* 101 with Intel® Curie™ Module board gives students added performance from the 32-bit Intel® Quark™ SE core and features such as Bluetooth* Smart and integrated motion sensors in a familiar form factor.

The Genuino* 101 also features 5 V tolerant inputs, compatible with a vast array of available shields.

Intel® Curie™ module

The Intel® Curie™ module packs accelerometer and gyro sensors and Bluetooth* Low Energy into an 8 × 11 mm footprint.

The Intel® Curie™ module features a dual-core architecture — a host processor and a sensor subsystem — with shared on-die SRAM and flash memory. The host processor is built around a low power 32 MHz Intel® Quark™ SE core, and its instruction set features Intel® architecture and Intel® Pentium® x86 compatibility, with the exception of FPU instructions.

Intel® Quark™ SE core benefits

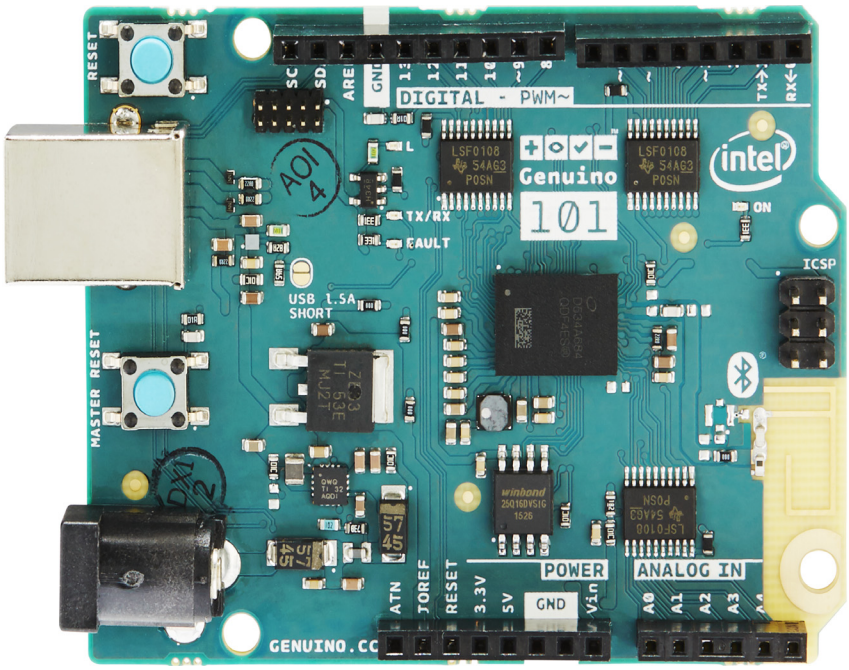
Intel® Pentium® x86 ISA-compatible CPU

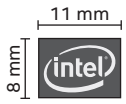
- 32 MHz clock, 32-bit address bus
- 8 KB 2-way L1 instruction cache
- 1.3 DMIPs/MHz

Sensor subsystem

- ARC EM4 DSP with FPU
- 8 KB L1 instruction cache, 8 KB data CCM
- Tightly coupled I/O to interface sensors/actuators
- 1.4 DMIPS/MHz

Intel® Curie™ compute module. The Intel® Curie™ compute module features a 32 MHz Intel® Quark™ SE SoC, accelerometer, gyro, wired charging module, and Bluetooth* Low Energy (BLE) on an ultrasmall board.





(Actual size)

FEATURE SUMMARY	
Microcontroller	32-bit Intel® Quark™ SE
Operation voltage	7 to 12 VDC
General purpose I/O pins	Twenty 3.3 V I/Os (with 5 V tolerance)
Serial I/Os	One UART, one SPI, one I^2C
Analog input pins	Six 10-bit ENOBs
DC current per I/O pin	7 mA
Flash memory	384 KB (192 KB available for Sketch)
Onboard flash	2 MB
SRAM	80 KB (24 KB available for Sketch)
Clock speed	32 MHz
Form factor	Arduino Uno R3 compatible