

IoT Operating System

Basics of IoT Operating Systems

Types of IoT Operating Systems

Comparison of IoT Operating Systems

Engineering Funda

Basics of IoT Operating Systems

- IoT OS runs on IoT devices.
- IoT OS connects IoT devices to a Network or Application.
- IoT OS does the management of the software in IoT devices.

Engineering Funda

Types of IoT Operating Systems

- There are many IoT Operating Systems few of them are listed below:
 - Lite OS
 - Tiny OS
 - RIOT OS
 - Free RTOS
 - Contiki OS
 - Ubuntu Core
 - Windows 10 IoT
 - and many more

Comparison of IoT Operating Systems

Parameters	Contiki OS	RIOT OS	Free RTOS	Tiny OS
Architecture in Kernel	Monolithic	Micro Kernel RTOS	Micro Kernel RTOS	Monolithic
Scheduler	Cooperative	Preemptive, Tickless	Preemptive, Optional Tickless	Cooperative
Programming Model	Event-Driven, Protothreads	Multi-threading	Multi-threading	Event-Driven
Targeted Devices	Class 0, 1	Class 1, 2	Class 1, 2	Class 0
Supported MCU Families	AVR, MSP430, ARM, PIC32, 6502.	AVR, MSP430, ARM, x86.	AVR, MSP430, ARM, 8052, Renesas.	AVR, MSP430, px27ax.
Programming Languages	C	C, C++	C	nesC
License	Open Source	Open Source	Open Source	Open Source
RAM/ROM	< 2KB/ <30KB	< 2KB/ <5KB	< 2KB/ <5KB	< 1KB/ <4KB