Renesas Ready Ecosystem Partner Solution

PX5 FILE

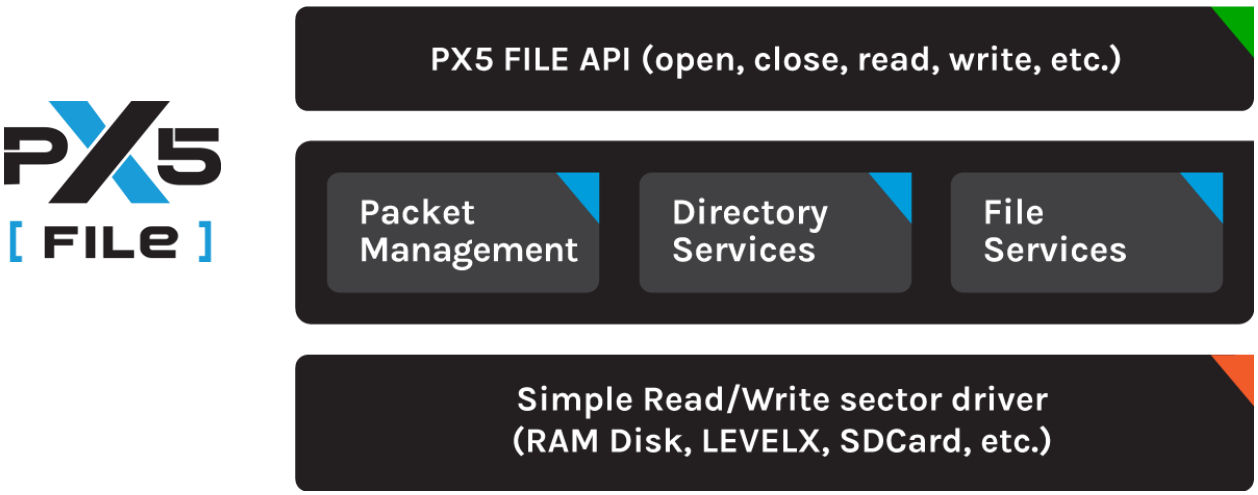
Solution Summary

PX5 FILE is an embedded FAT-format file system with a native implementation of the industry-standard Linux file API. It also provides high performance through user-specified sector, FAT entry, and sub-directory entry caches. For safety and security, it offers optional run-time fault tolerance and function pointer, file handle, and stack verification. PX5 FILE is available today on the full range of RA Family MCUs, RX Family of MCUs and RZ Family of MPUs, and RISC-V Family of MCUs and MPUs. The example code can be downloaded from here free of charge.

Features/Benefits

- FAT 12/16/32, 8.3 and Long File Name Support
- Ultra-small (less than 6KB Flash and 2KB RAM for minimal use)
- High performance via optional sector, FAT, and directory entry caches
- Implementation of the industry standard Linux file API
- Fault-tolerance (optional)
- Dynamic verification of function pointers, file handles, and stacks (optional)
- Tested for each release with 100% C statement and branch-decision testing
- Royalty-free

Diagrams/Graphics

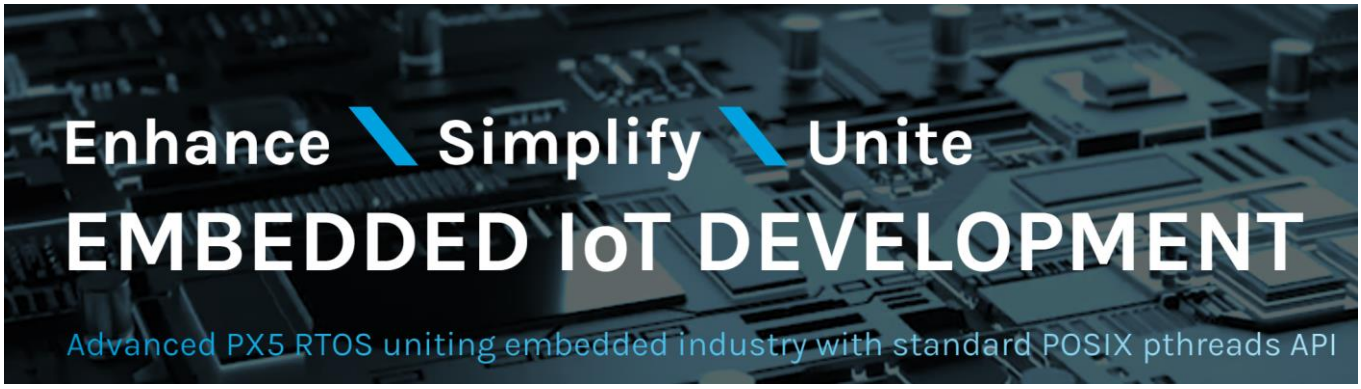


Target Markets and Applications

- Automotive
- Industrial IoT
- Smart cities
- Smart homes
- Smart sensors
- Consumer electronics

https://px5rtos.com/px5-file/

2024.07



Industrial Grade Embedded File System

Native Linux file API and real-time extensions

Protects firmware development investment by making firmware portable

Enables code sharing with embedded Linux
Reduces developer training via industry-standard API

Best-of-class File System

Small footprint (minimal 6KB Flash)
Fast execution through extensive caching

Fault tolerance support

Easy to install and use

OUR MISSION

Our "why" at PX5 is to make embedded development easier and faster than ever before. Developers using PX5 FILE have fewer file system problems and can deliver better-quality products to market in record time.

UNITING EMBEDDED

The PX5 FILE features a native implementation of the industry-standard Linux file API, which instantly enables a vast number of developers who are already fluent with it. In addition to the native Linux file API support, PX5 FILE also offers extensions for creating and managing volumes.

ADVANCED TECHNOLOGY

The PX5 FILE also offers best-of-class size and performance and is designed for hard real-time environments. Its memory usage is minimal – taking as little as 6KB of FLASH and 2KB of RAM. Best of all, the PX5 FILE memory usage automatically scales based on what the developer uses. No more dead code or complicated configuration options that might result in wasted memory.

For safety and security, the PX5 FILE provides run-time fault tolerance through journalling. It also leverages unique Pointer/Data Verification (PDV) technology to verify function pointers, file handles, and thread stacks.

SIMPLE TO USE

The PX5 FILE is simple to use. It consists of a single C source file, so adding it to any application build environment is easy. It is also fully integrated with PX5 RTOS and all the most popular development tools.

DOWNLOAD TO EVALUATE

Check out the free PX5 FILE evaluation demonstrations to see for yourself what the PX5 NET can do for you. Please download and try one today here!

CONTACT

PX5 Real-Time Operating System (RTOS) Support (px5rtos.com)

[FILE]