Battery Fuel Gauge IC
Filefish

Easy-to-Start Solution for Li-ion Battery Management Systems

The Filefish is a FIXED firmware solution for Renesas Battery Fuel Gauging IC (FGIC), which requires no additional firmware development. Using this solution, the battery management system (BMS) can be easily and quickly designed, and the time to market can be significantly reduced.

Easy-to-Use
- No programming knowledge required
- GUI base PC software (RSB_TOOL2)

Quick Design
- **No need for F/W design** (Pre-programmed to the EVM)
- **Adjustable parameters** (Using a dedicated tool)

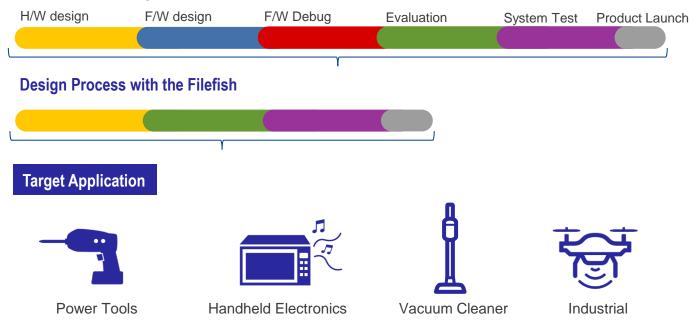### Safe System
- Pre-programmed safety functions
- Fuse Blow & software shutdown options

Accelerate time to market

Since the Filefish is a fixed firmware (integrated in the FGIC); it eliminates the need for F/W development and hence shortens the time to market.
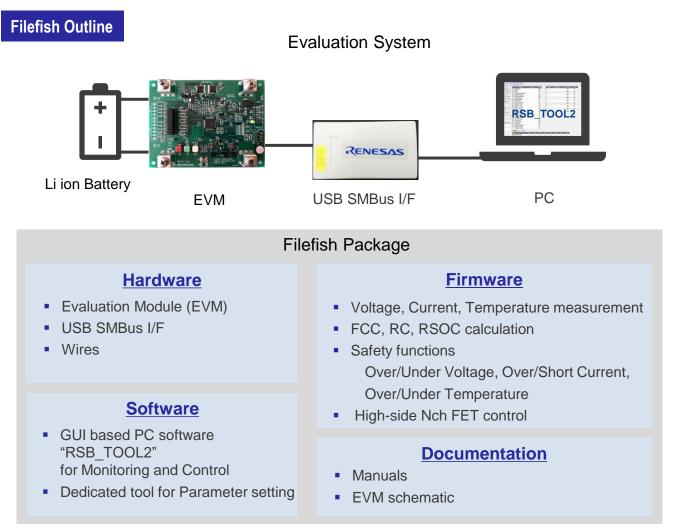
Conventional Design Process

H/W design | F/W design | F/W Debug | Evaluation | System Test | Product Launch

Design Process with the Filefish

Target Application

Power Tools | Handheld Electronics | Vacuum Cleaner | Industrial

Filefish Outline

Evaluation System

Li ion Battery   EVM   USB SMBus I/F   PC

Filefish Package

Hardware
- Evaluation Module (EVM)
- USB SMBus I/F
- Wires

Software
- GUI based PC software "RSB_TOOL2" for Monitoring and Control
- Dedicated tool for Parameter setting

Firmware
- Voltage, Current, Temperature measurement
- FCC, RC, RSOC calculation
- Safety functions
  Over/Under Voltage, Over/Short Current, Over/Under Temperature
- High-side Nch FET control

Documentation
- Manuals
- EVM schematic

FCC : Full Charge Capacity   RC : Remaining Capacity   RSOC : Relative State Of Charge

Comparison : Current solution vs Filefish

	Current Solution	Filefish
F/W Development	Necessary	Not necessary
Required Battery Knowledge	High	Low
Flexibility	High	Low
Suitable Systems	Complex	Simple

Filefish F/W can't be changed.

Filefish Line-up

FGIC	Series Cells	Supply Voltage	PKG
RAJ240100	3 to 10 Cells	4V - 50V	LQFP64 10mmx10mm

To request the Filefish, please contact your regional sales channel.
FGIC product information : https://www.renesas.com/us/en