MCU with Firmware Capability for Lev Battery Pack (ST solution)

1. MCU spec

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| 廠牌 | **STMicroelectronics** |
| 型號 | STM8L151K6T6 |
| Data Bus | 8位元 |
| Package Pin Out | 32 Pin |
| Flash | 32K |
| Eeprom | 1K |
| RAM | 2K |
| ADC | 12Bit |
| ADC Max Ch | 18 ch |
| ADC Vref | same as VDD |
| UART | 1 ch |
| I2C | 1 ch |
| PWM Max Ch | 5 ch |
| Timer | 4 units |
| Max Freq. | 16MHz |
| Operating Voltage | 1.8V - 3.6V |
| IC Package | LQFP |
| Max Dimensions | 8.8mm \* 8.8 mm |
| Temperature range | - 40 °C to 85 °C |
| Shutdown Counting | N/A |
| special func. | 96-bit unique ID RTC window watchdog independent watchdog Bootloader using USART |

1. F/W Operation Modes
   1. Run mode
      * Consumption : 0.652mA (Mcu)
      * Protection active
      * Communication active
      * Recording data/logs active
   2. Stop/Shipping mode
      * Consumption : 0.03335mA (Mcu)
      * All protection and communication Stop
      * To enter this mode by pressing button for 5 sec from run mode.
      * To exist this mode and enter run mode by pressing button for 5 sec.
   3. Sleeping mode
      * Consumption : 0.03335mA (Mcu)
      * Same as shipping mode
      * In static current on run mode for 12 hours, it will enter sleeping mode automatically.
      * To exist this mode and to enter run mode by pressing button for about 2 sec.
2. F/W Functions
   1. Protection
      * CHG/DSG Mos-Fet failure detection
      * Dynamic UVP
      * UT
      * DOC
      * COC
      * Battery OV
      * Battery UV
      * CHG OT
      * DSG OT