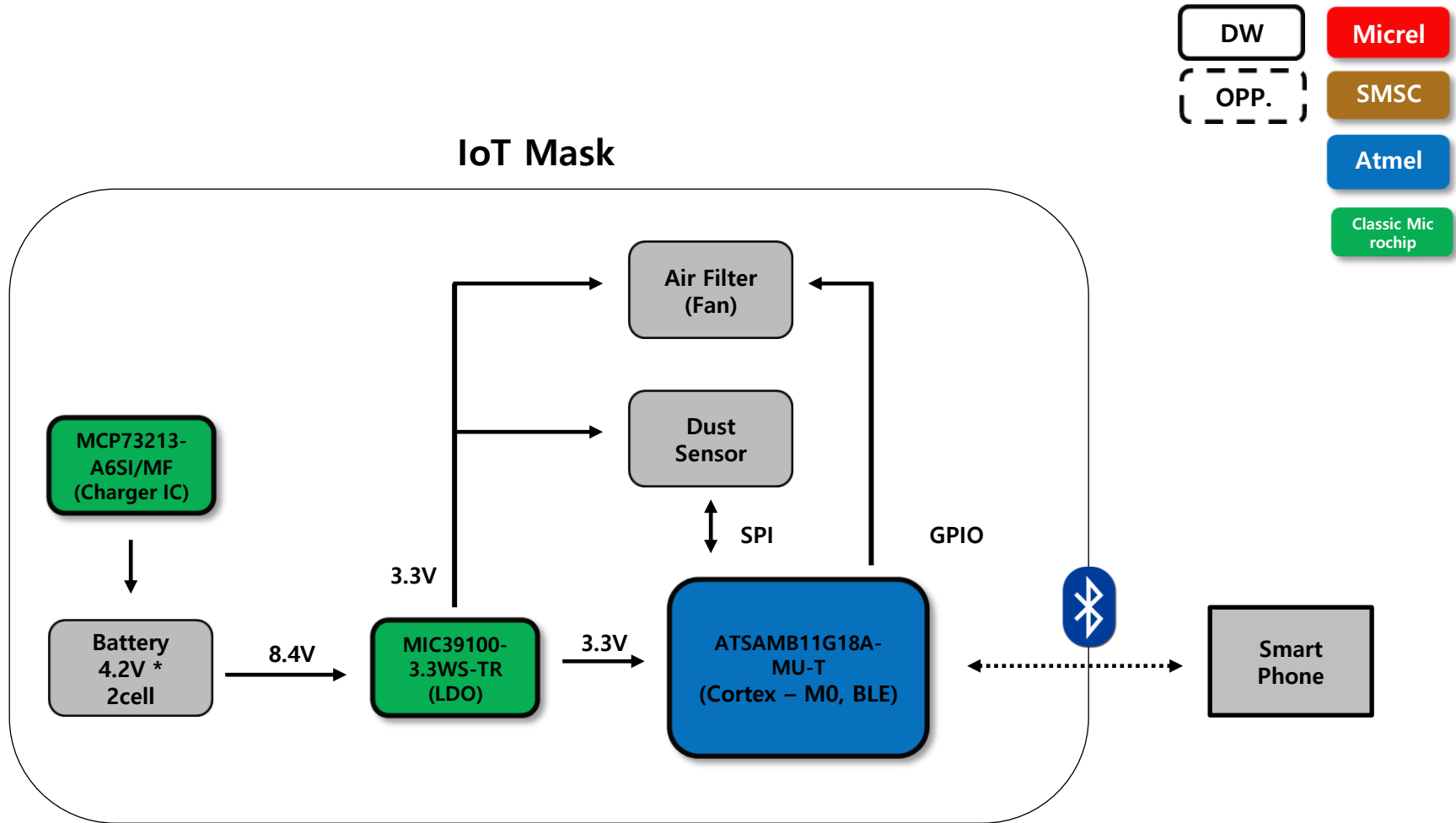
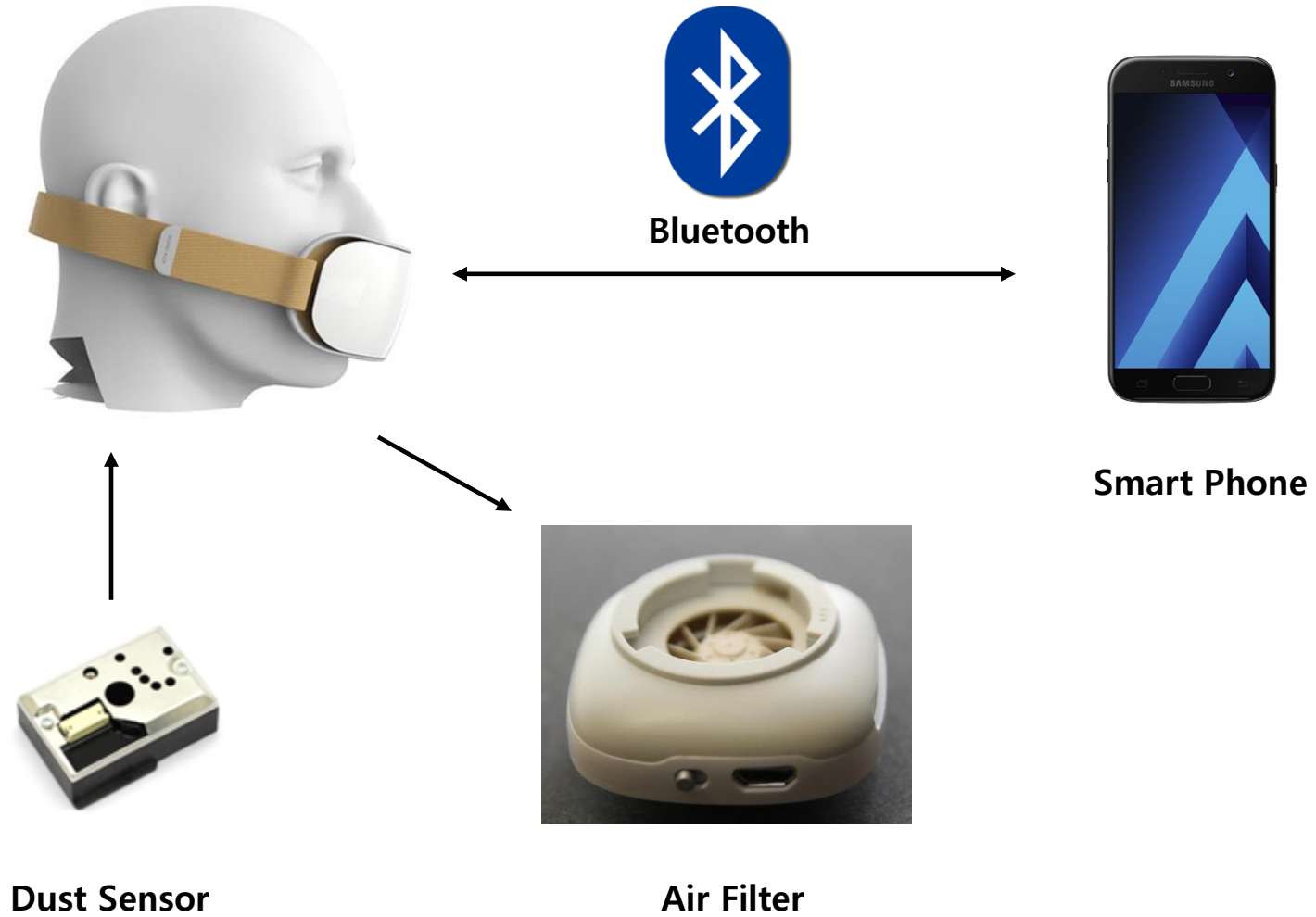


# IoT Mask – Block Diagram



# IoT Mask – System



- Microchip BLE SoC, ATSAMB11
  - Ultra-low Power BLE 4.1 SoC
  - Cortex®-M0 applications processor
  - Bluetooth Smart protocol stack
    - L2CAP service layer protocols
    - Security Manager
    - Attribute protocol (ATT), Generic Attribute Profile (GATT), Generic Access Profile (GAP)
  - application profiles : Proximity, Thermometer, Heart Rate, Blood Pressure
  - 4x Pulse Width Modulation (PWM)
  - 4-channel 11-bit ADC
  
- Microchip LDO, MIC39100-3.3WS-T
  - Fixed and Adjustable Output Voltages to 1.24V
  - 410 mV Typical Dropout at 1A Load
  - - Best Recommended for 3.0V to 2.5V Conversion
  - - Best Recommended for 2.5V to 1.8V Conversion
  - 1A Minimum Guaranteed Output Current
  - 1% Initial Accuracy
  
- Microchip Battery Controller, MCP73213-A6SI/MF
  - Dual Cell Li-Ion/Li-Polymer Battery Charge Management Controller
  - Complete Linear Charge Management Controller:- Integrated Input Overvoltage Protection- Integrated Pass Transistor- Integrated Current Sense- Integrated Reverse Discharge Protection
  - Constant Current / Constant Voltage Operation with Thermal Regulation
  - Resistor Programmable Fast Charge Current: 130 mA - 1100 mA
  - 4.15V Undervoltage Lockout (UVLO)
  - 18V Absolute Maximum Input
  - Overvoltage Protection (OVP): 13V