

Blood Glucose Monitor

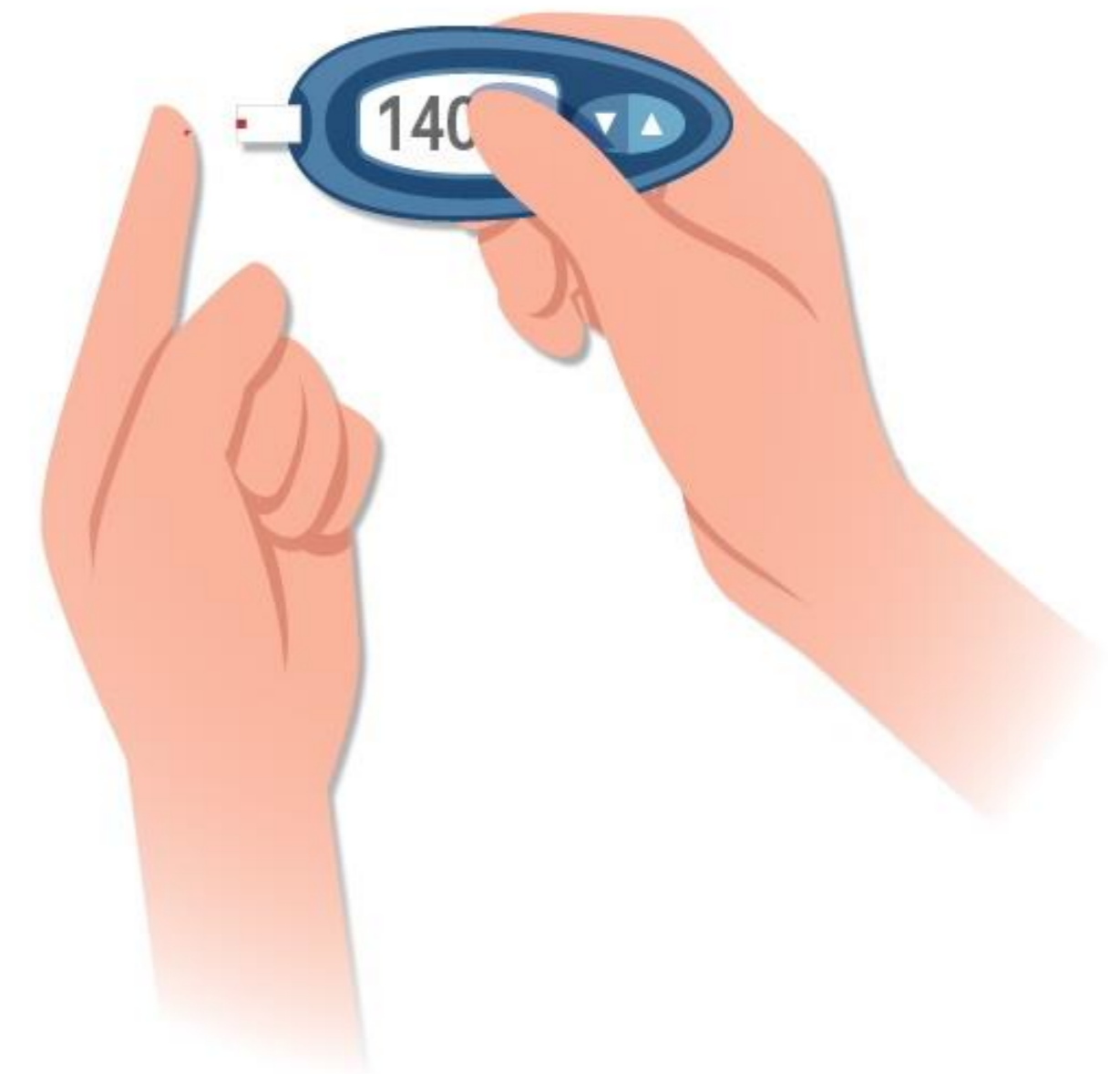
BH67F2472 (Conventional)

BH67F2476/BH67F2493 (High-Accuracy)





- Product Description
- Solution Description
- Competitive Advantage
- Technical Support





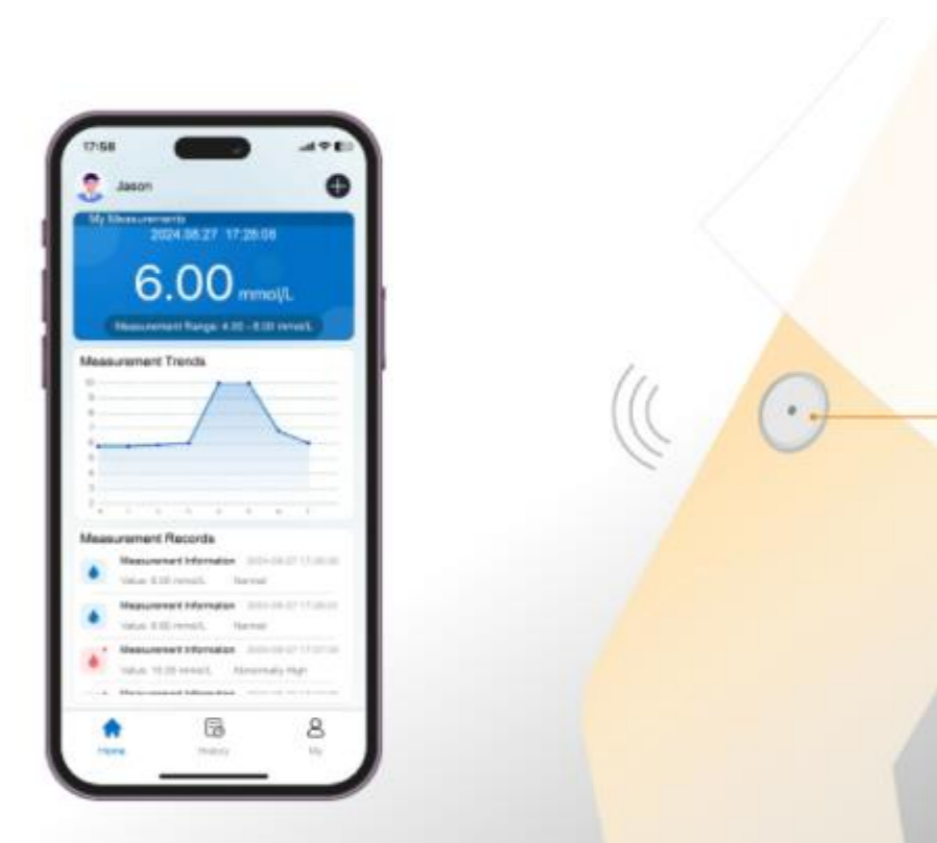
■ Self-monitoring of blood glucose (BGM)

- Key Characteristics: Single-point measurement per test, requires finger-stick blood sampling, lower overall cost
- Target Users: Price-sensitive patients, Type 2 diabetic patients with stable glucose control who do not require intensive monitoring



■ Continuous glucose monitoring (CGM)

- Key Characteristics: Continuous, real-time data via automatic transmission, high and low glucose alerts
- Target Users: Patients with frequent hypoglycemia, Type 1 diabetes, gestational diabetes patients requiring close monitoring

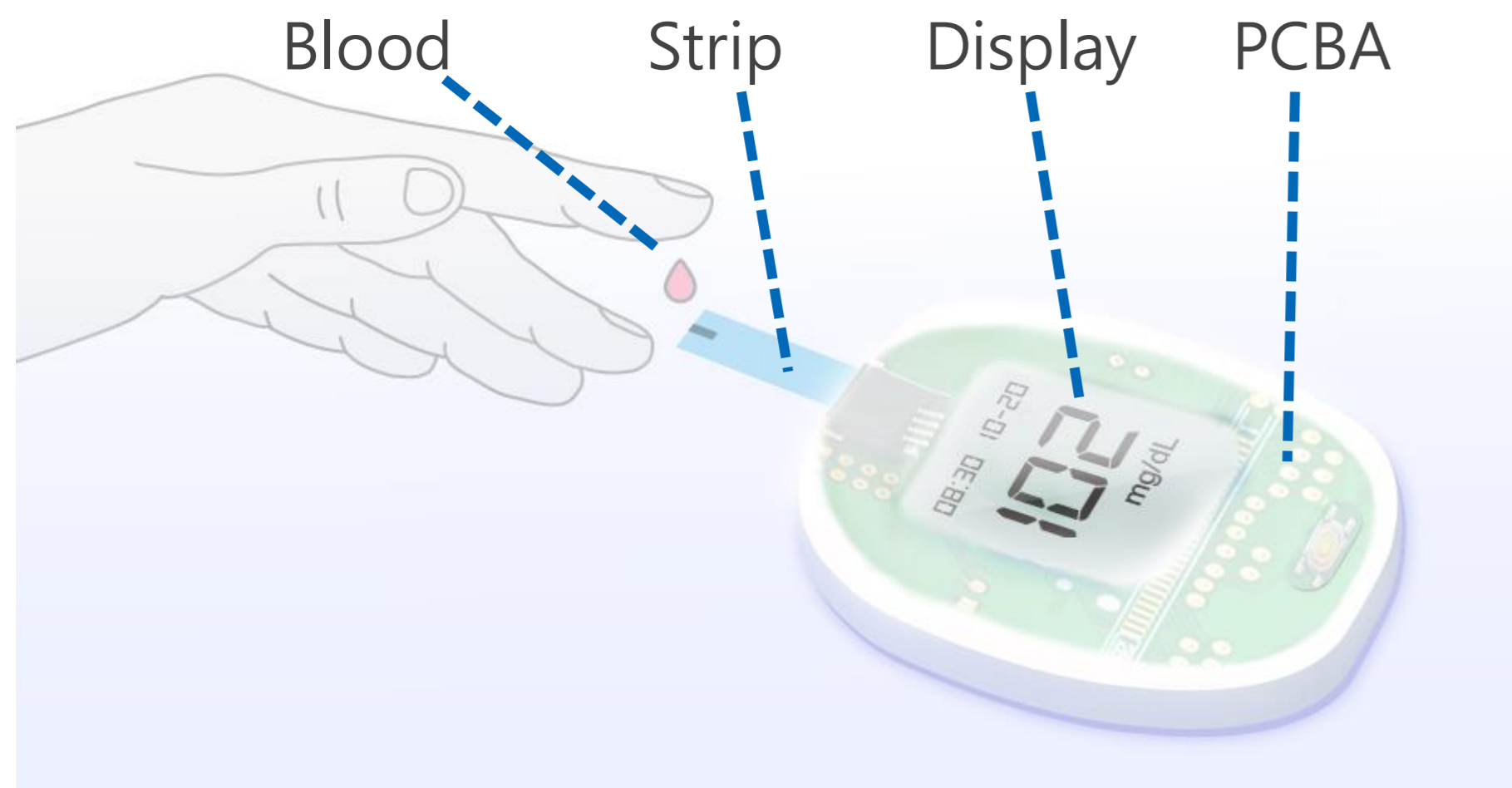




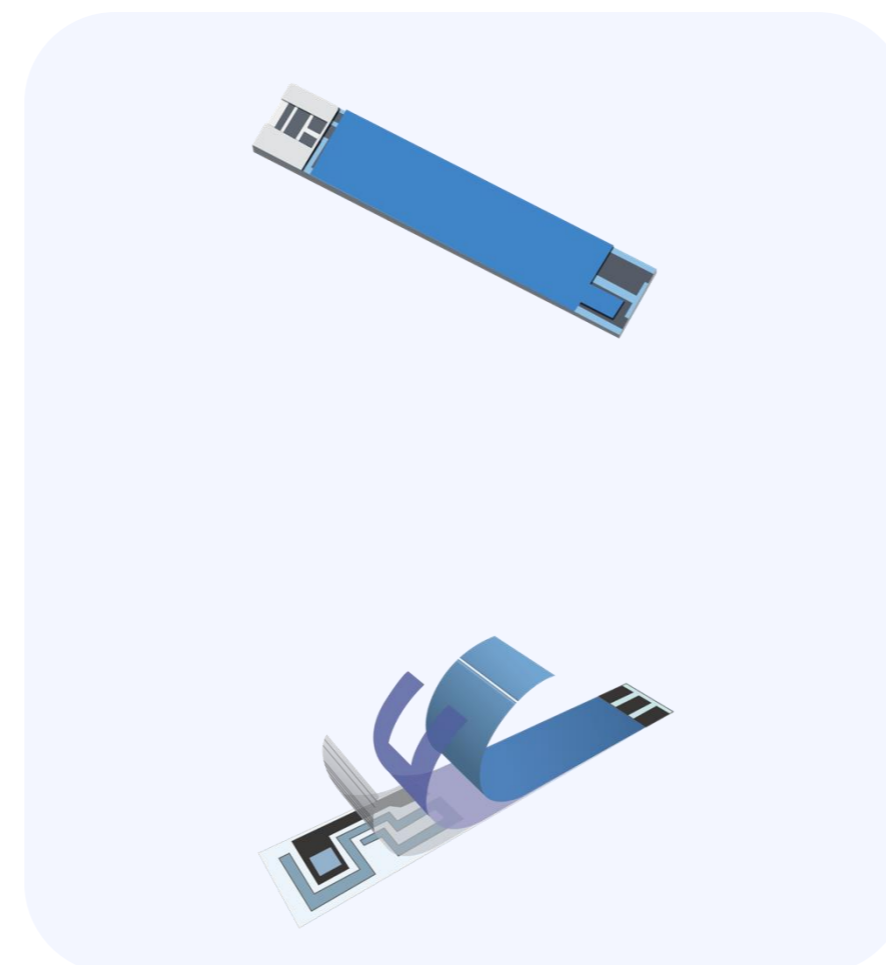
Product Description

■ Conventional / high-accuracy glucometer composition

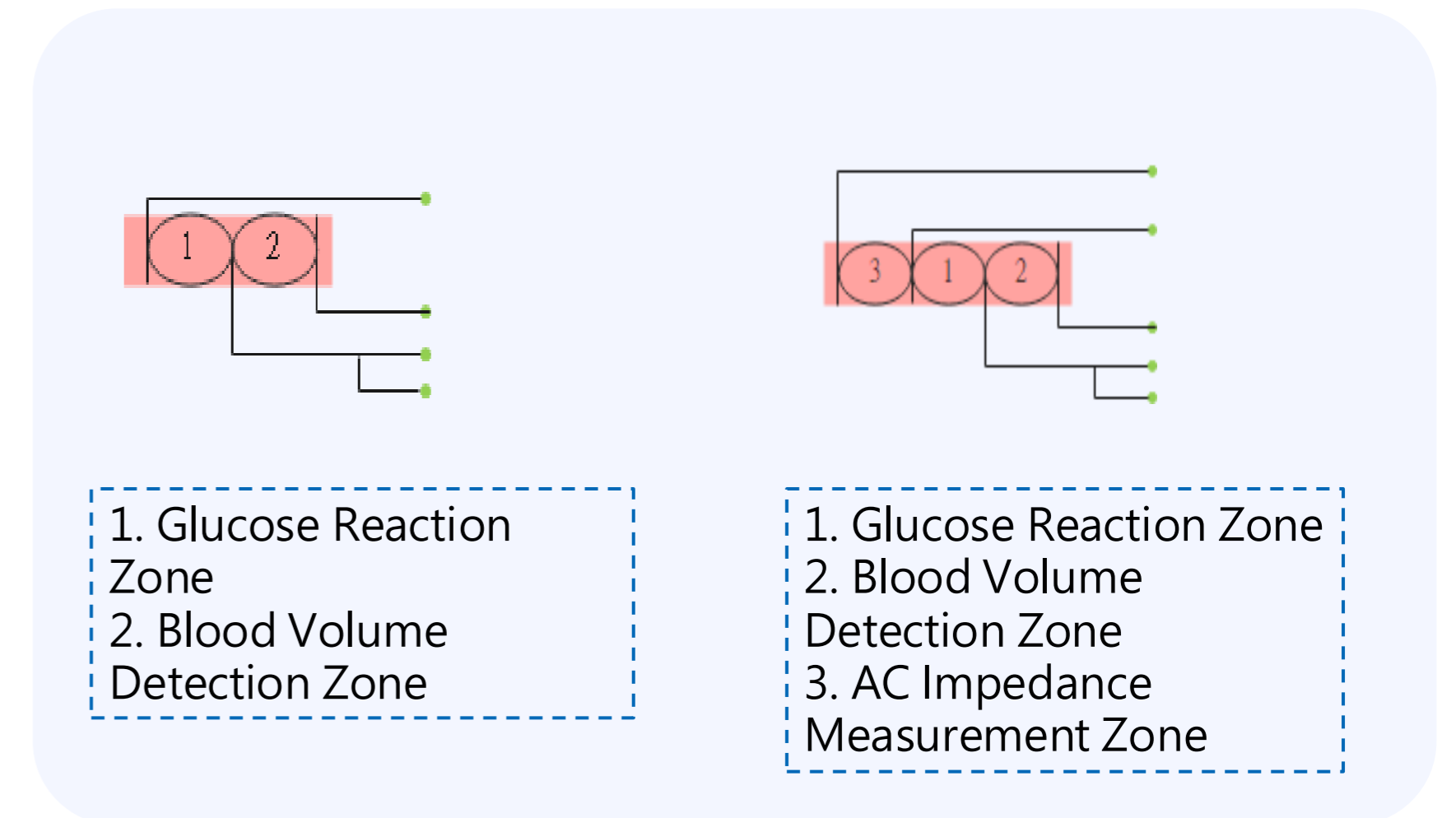
- Conventional / high-accuracy glucometers mainly consist of test strips, display, and PCBA



Glucometer Composition



Strip



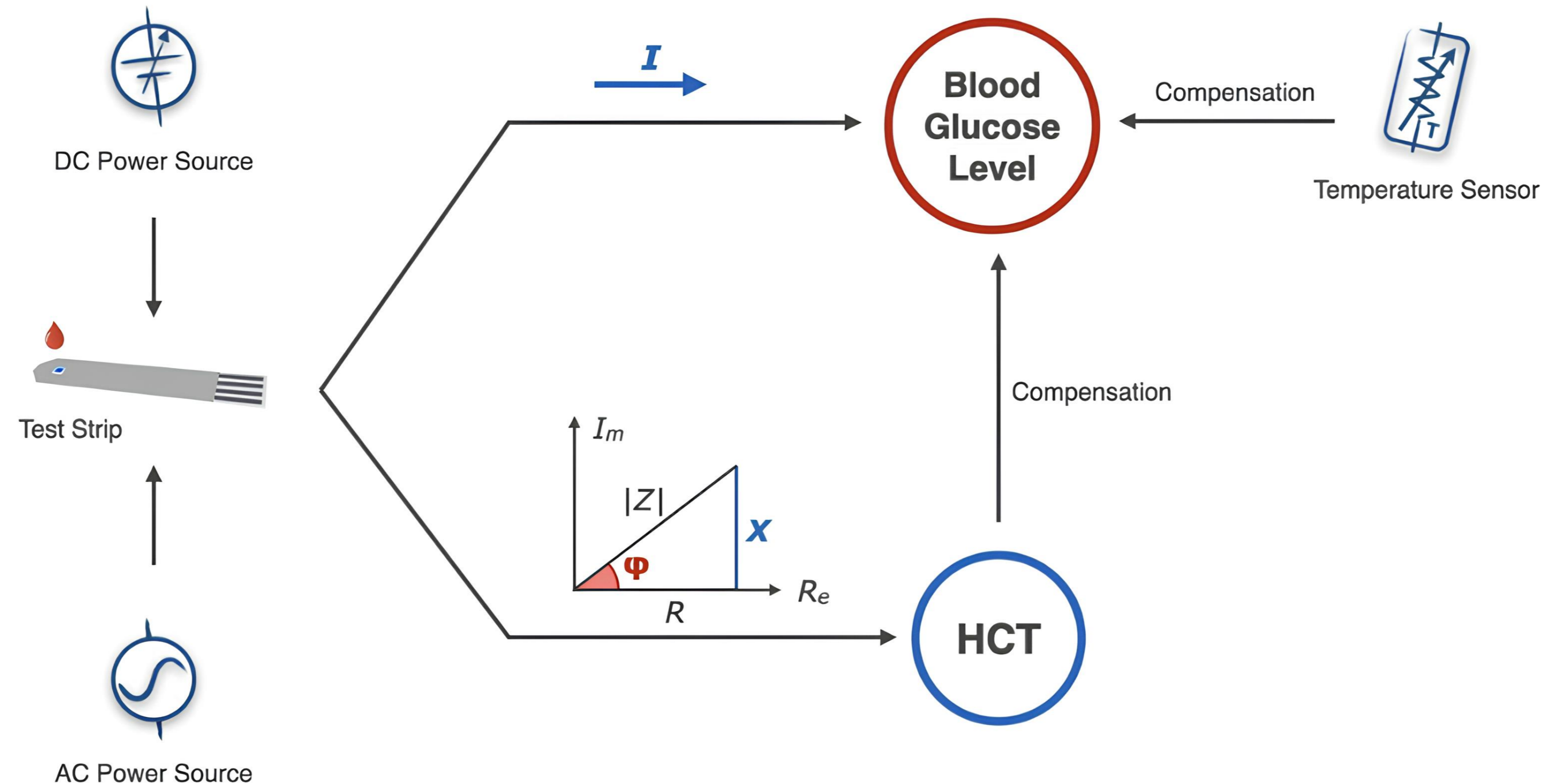
Conventional Strip Structure

High-Accuracy Strip Structure

Note: Each manufacturer's strip structure differs; the above diagrams only intends to illustrate the difference between high-accuracy and Conventional glucometer strips

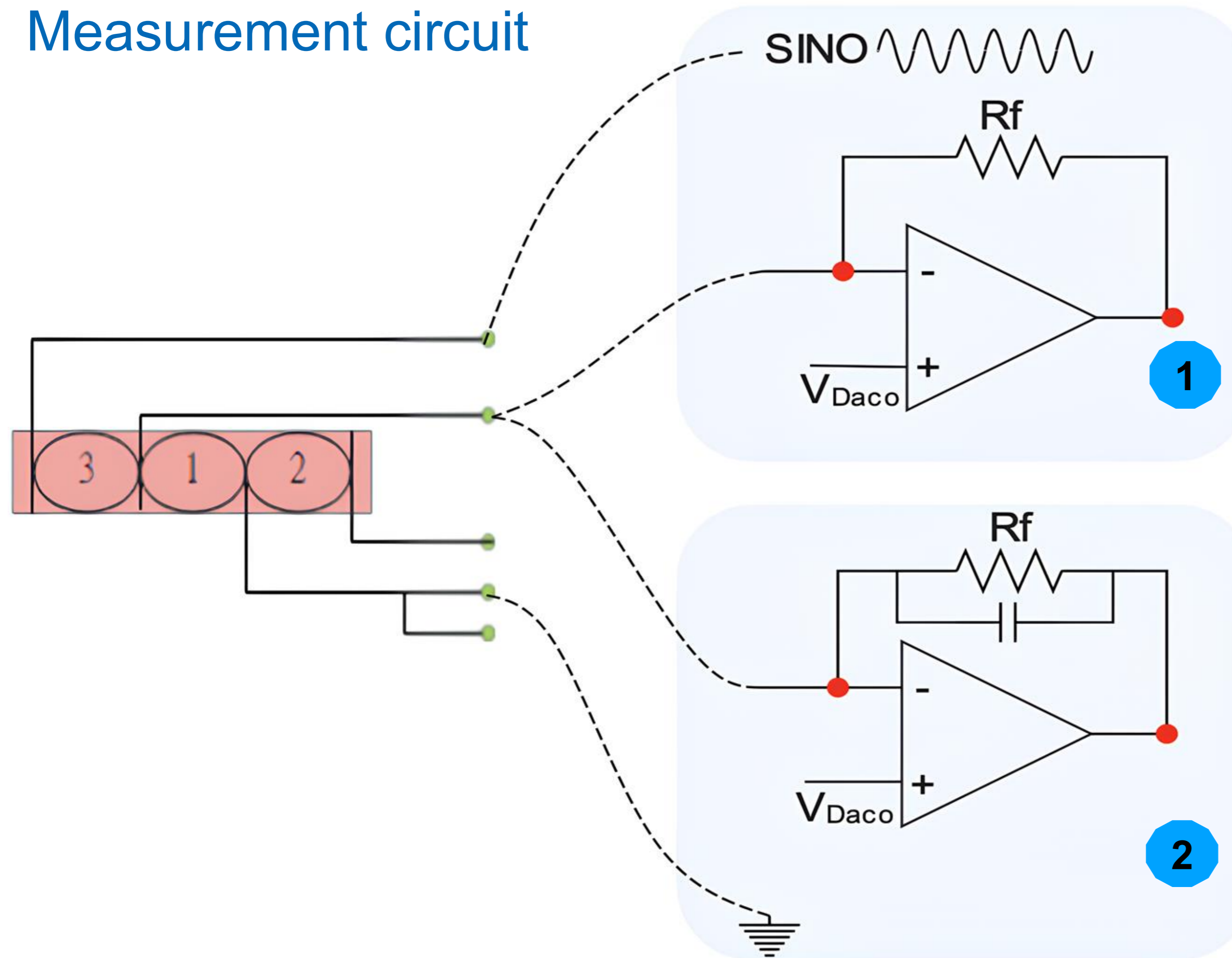


■ Measurement principle



- Utilizes the electrochemical method measurement principle, measuring the **current** generated by blood and the reaction enzyme
- Utilizes bio-impedance analysis method to measure **AC impedance (Z)** and **phase (ϕ)** in the blood

■ Measurement circuit

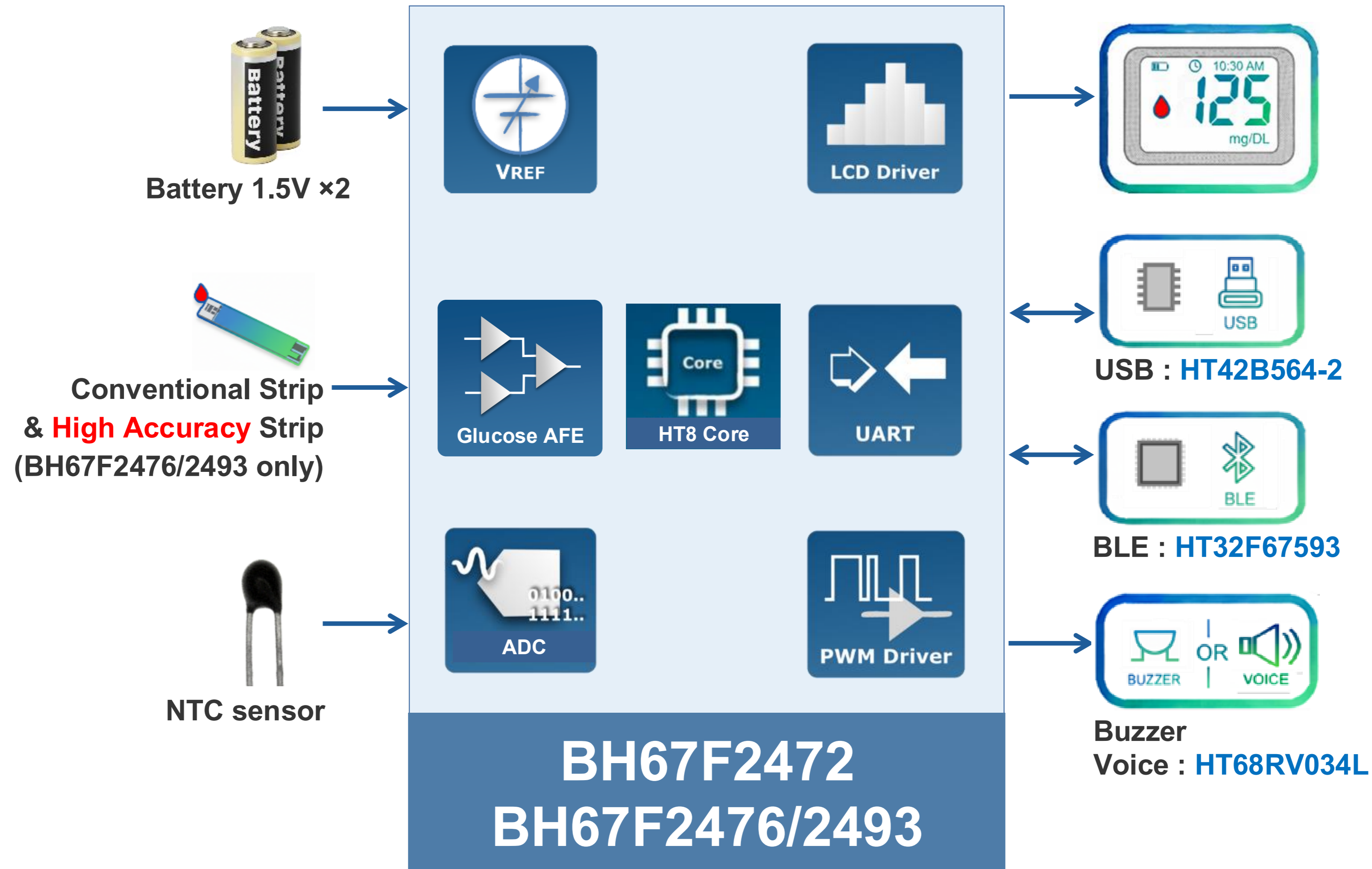


① Impedance & Phase Measurement Circuit

② TIA Current-to-Voltage Conversion Circuit
(TIA: Transimpedance Amplifier)



Solution Description – Block Diagram





■ BH67F2472

- VDD: 2.2V~5.5V
- ROM: 32K×16
- RAM: 2048×8
- **EEPROM: 2048×8**
- Interface: UART/SPI/I²C、SPI
- LVD, LVR
- LCD Driver(36×4, 34×6, 32×8)
- **Glucose AFE**
- **12-bit ADC**
- Package: 64LQFP

■ BH67F2476

- VDD: 2.2V~5.5V
- ROM: 32K×16
- RAM: 2048×8
- **EEPROM: 2048×8**
- Interface: UART x 2、SPI/I²C
- LVD, LVR
- LCD Driver(36×4, 34×6, 32×8)
- **Glucose AFE with Switch Matrix**
- **Multi-channel 24-bit Sigma-Delta ADC**
- **Bio-impedance Analysis Function**
- Package: 64LQFP

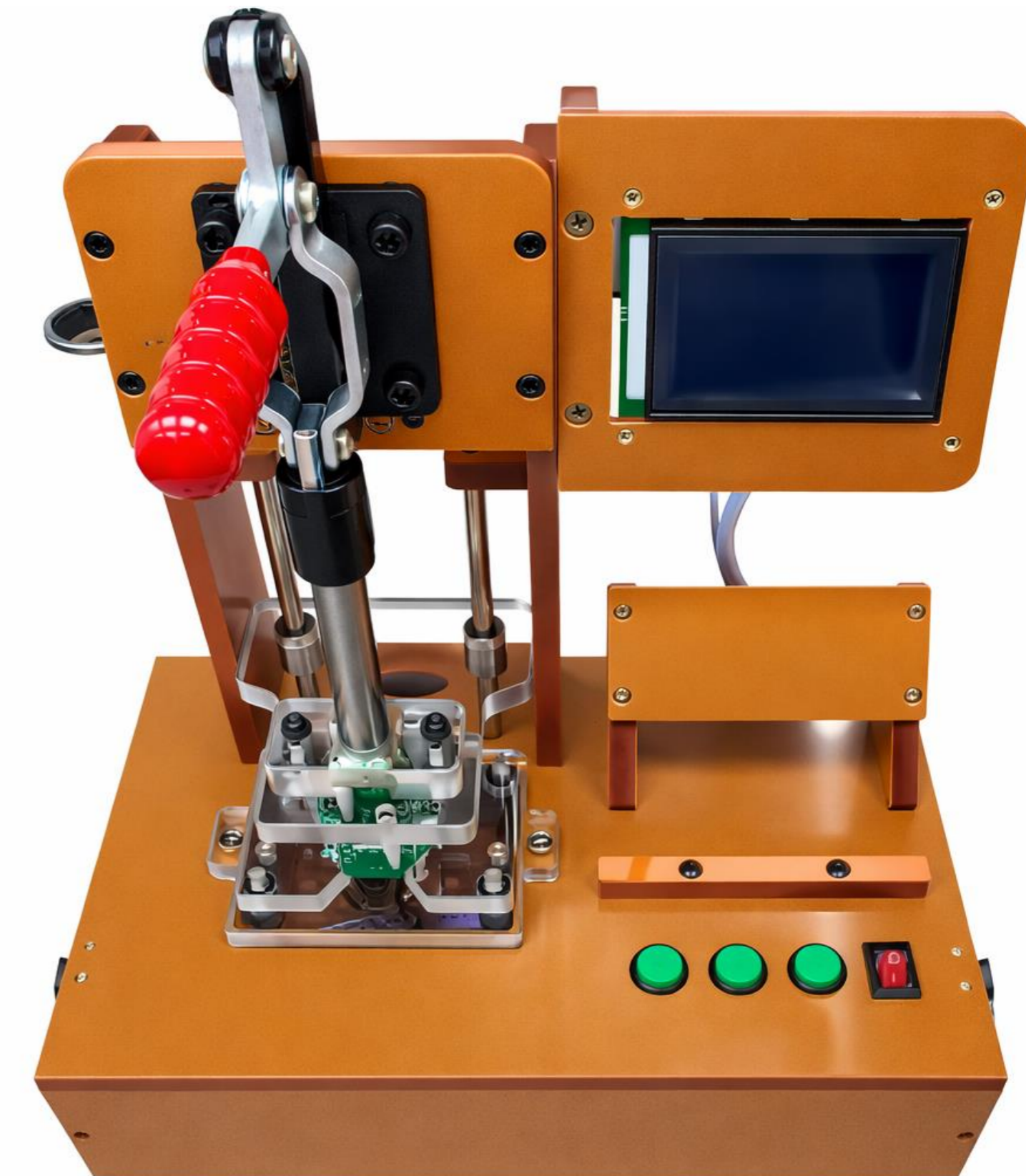
■ BH67F2493

- VDD: 1.8V~5.5V
- ROM: 64K×16
- RAM: 3072×8
- **EEPROM: 8192×8**
- Interface: UART x 2、SPI/I²C
- LVD, LVR
- LCD Driver(40×4, 38×6, 36×8)
- **Glucose AFE with Switch Matrix**
- **Multi-channel 24-bit Sigma-Delta ADC**
- **Bio-impedance Analysis Function**
- Package: 64LQFP

Note: 1. BH67F2493 is pin-compatible with BH67F2476
2. Integrated large capacity of EEPROM can be used for historical measurement data storage

■ Product calibration fixture

- Reference voltage calibration
- Excitation voltage calibration
- Feedback resistor and ADC calibration
- Standby current measurement
- Operating current measurement
- Battery voltage measurement
- Temperature performance verification





Competitive Advantage

- High level of integration, reducing overall component count and system cost
- Mature, production-ready solution with complete reference code and algorithm library
- Shortened development cycle, accelerating time-to-market
- High measurement accuracy for reliable performance

■ Demo & Services

- Product Demo Code
- Evaluation Board (EVB)
- Custom Development Services
- Engineering Support for Mass Production Ramp-up
- Technical Issue Resolution

■ Technical Contact

- Best Health: service@e-besthealth.com
- Holtek: sales@holtek.com



Conventional / High-Accuracy Blood Glucose Meter Solutions

BH67F2472

BH67F2476 / BH67F2493



