SMART GATEWAY
(Wi-Fi + BLE)

CODE: HK-SMGW-BLE

A high-performance communication hub designed to support intelligent restroom systems. It enables seamless connection between various restroom sensors and the central monitoring platform. It ensures reliable data transmission and secure operation in high-traffic public or commercial restroom environments.

MATERIAL

ABS
Industrial-grade
IP68 Water & Dust Resistance

BLE TOPOLOGY NETWORKING

Supported by HX-based Bluetooth Smart Firmware and Protocol Stack, compliant with Bluetooth v5.0 LE Standard

DUAL-CORE MICROPROCESSOR

Supporting 2.4 GHz Wi-Fi
(IEEE 802.11b/g/n)
and Bluetooth® 5 (Low Energy)

PROTOCOL STACK

TCP/UDP/PPP/NTP/NITZ/FTP/HTTP/
PING/HTTPS/FTPS/FILE/SSL/MQTT

SECURITY MECHANISMS

Secure Boot, Flash Encryption, 4-Kbit OTP Memory, User-accessible up to 1792 bits, Cryptographic Hardware Accelerators:
- AES-128/256 (FIPS PUB 197 compliant)

OPERATING CONDITIONS

Temperature:
-35 °C to +75 °C

Humidity:
10 - 80% RH (Non-condensing)

DIMENSIONS

L127 × W87 × H45 mm, Weight: 200g

COMMUNICATION METHOD

Wireless Mesh Networking

POWER SUPPLY

TYPE C Interface
5 V / 3A (TYPE C Form Factor)

FREQUENCY BANDS

LTE-FDD B1/3/5/7/8/20/28

MAX DATA RATE

10Mbps (DL) / 5Mbps (UL)

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)

Hand Soap Level Sensor

CODE: HK-HDSO

The Hand Soap Level Sensor is a smart hygiene monitoring device designed to detect liquid soap levels in dispensers with high-precision capacitive sensing. Using capacitive sensing technology, it supports adaptive segmented monitoring and automatically adjusts detection intervals based on usage patterns. This ensures timely refill alerts and helps maintain consistent hygiene standards.

DETECTION SPECIFICATIONS:

- Adaptive Segmented Liquid Level Monitoring
- Automatically Adjusts Detection Interval
- Default: 5 Minutes/Cycle (Default)
- Platform Allows Custom Monitoring Frequency
- Automatically Resets Settings After Refill
- Self-Learning Function

FEATURES:

- Split Design
- Low Battery Alert
- Universal Liquid Compatibility

LIQUID DEFICIENCY DETECTION

Supported,
Adaptive Liquid Level Monitoring

DIMENSIONS

56.5 × 56.5 × 19 mm

COMMUNICATION METHOD

Bluetooth BLE

POWER SUPPLY

3.7V 1350mAh Li-ion Battery
(For Transmission Module)

Dust Bin Sensor

CODE: HK-DUBI

A smart waste-level monitoring device designed to optimize cleanliness and maintenance in public and commercial restrooms. It provides real-time updates on bin fill levels, helping facility managers schedule timely waste collection and reduce overflow incidents.

DETECTION FREQUENCY

Configurable via cloud platform

PRODUCT FEATURES:

- Modular (detachable) design
- Low battery alert

COMMUNICATION METHOD

Bluetooth BLE

DIMENSIONS

56.5 × 56.5 × 19 mm

POWER SUPPLY

3.7V 1350mAh Lithium-Ion Battery

BLUETOOTH OPERATING FREQUENCY

2.402 GHz - 2.480 GHz

Toilet Paper Detector

CODE: HK-TOPD

A smart sensing device combines traditional manual-pull dispensing with advanced IoT sensing technology. It enables real-time monitoring of tissue levels, allowing facility managers to manage restocking and reduce maintenance downtime proactively. Featuring high-precision laser detection, remote alerts, and data visualisation, the dispenser ensures an uninterrupted user experience while maintaining operational efficiency.

PRODUCT FEATURES:

- Modular (detachable) design
- Low battery alert

DIMENSIONS

56.5 × 56.5 × 19 mm

COMMUNICATION METHOD

Bluetooth BLE
(Frequency: 2.402 GHz - 2.480 GHz)

POWER SUPPLY

3.7V 1350mAh Lithium-Ion Battery

DETECTION FREQUENCY

Every 5 minutes
(configurable via platform)

DETECTION RANGE

≤ 510 mm

DETECTION PRECISION (GRANULARITY)

10 mm

LASER SCAN RATE

35 ms

Occupancy Sensor

The Occupancy Sensor is a precision detection device designed to monitor toilet cubicle usage in real time. Using active laser scanning technology, it identifies occupancy status with high accuracy and responsiveness, helping facility managers optimize cleaning schedules and reduce wait times.

LASER SCAN RATE

35 ms

OCCUPANCY RESPONSE CYCLE

3 - 4 seconds

COMMUNICATION METHOD

Bluetooth BLE
(Frequency: 2.402 GHz - 2.480 GHz)

DETECTION DISTANCE

20 - 320cm (Default: 60cm)

POWER SUPPLY

3.7V 1350mAh Lithium-Ion Battery

DETECTION PRECISION (GRANULARITY)

100 - 130 mm

DIMENSIONS

56.5 × 56.5 × 19 mm

DETECTION ANGLE

5°

PEOPLE COUNTER SENSOR

CODE: HK-PPCO

The Intelligent Bi-Directional People Counting Sensor integrates advanced sensing technologies and backend monitoring capabilities to accurately track people entering and exiting designated areas. It is designed to address key requirements such as privacy protection, environmental adaptability, and robust data management, making it ideal for high-traffic environments like restrooms, building entrances, and public facilities.

FUNCTIONALITY

Tracks number of entries and exits, ideal for restroom usage monitoring

COUNTING DIRECTION

Bi-directional (entry/exit)

DEPTH MAP RESOLUTION

120 × 90 pixels

BLUETOOTH OPERATING FREQUENCY

2.402 GHz to 2.480 GHz

VCSEL WAVELENGTH

850 nm

DIMENSIONS

39 × 39 × 69 mm

DETECTION TECHNOLOGY

Video analytics with 3D machine vision and trajectory tracking algorithms

Detection Method: ITOF-based area array 3D camera module

Detection Range: 0.6 - 5 meters

Accuracy: ≤1.5% or ±1.5cm

FIELD OF VIEW

- Maximum:
  57.5° (Horizontal) × 44.7° (Vertical)
- Effective:
  52° (Horizontal) × 36° (Vertical)

FRAME RATE

Depth Map Output: 5fps / 10fps / 15fps (default: 15fps)

Optional:
Depth and Amplitude Data Output

www.yysmarttech.com
hello@yysmarttech.com

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)

Air Quality Sensor

CODE: HK-ARQL

The Air Quality Sensor is a compact and intelligent monitoring device designed to measure key indoor air pollutants in real time. It detects CO_2, TVOC, TVOC-AQI, and formaldehyde (CH_2O) levels with high precision, helping maintain a healthy and safe restroom environment.

MONITORING CAPABILITIES

- Temperature
- Humidity
- Oxygen (O_2)
- PM2.5
- Ammonia (NH_3)
- Hydrogen Sulfide (H_2S)

DATA REPORTING INTERVAL

Configurable via cloud platform

COMMUNICATION METHOD

BLE (Bluetooth Low Energy) Networking

POWER SUPPLY

3.7V 1350mAh Lithium-Ion Battery

DIMENSIONS

85 × 85 × 50 mm

TEMPERATURE

Range: -40°C to +125°C
Accuracy: ±0.2°C (within 0 – 65°C)
Resolution: 0.01°C

HUMIDITY

Range: 0 - 100% RH
Accuracy: ±2% RH
Resolution: 0.01% RH

OXYGEN (O_2)

Measurement Range: 0 - 30% VOL
Recommended Operating Range: 19.5 - 23.5% VOL

AMMONIA (NH_3)

Range: 0 - 100 ppm
Resolution: 0.01 ppm
Accuracy: ±1%

HYDROGEN SULFIDE (H_2S)

Range: 0 - 100 ppm
Resolution: 0.01 ppm
Accuracy: ±1%

www.yysmarttech.com
hello@yysmarttech.com

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)

AMMONIA DETECTOR

CODE: HK-AMDT

The Ammonia Detector is a high-precision sensor designed to monitor ammonia (NH_3) levels in restroom environments. It also monitors temperature and humidity with exceptional accuracy, making it a reliable tool for comprehensive environmental sensing. Ideal for maintaining air quality and safety.

AMMONIA (NH_3)

Detection Range: 0-100 ppm

MEASUREMENT ACCURACY

0.01 ppm

TEMPERATURE

Detection Range: -40°C to 125°C

DATA READING FREQUENCY

Platform-configurable monitoring interval

HUMIDITY

Detection Range: 0 - 100%RH

DIMENSIONS

56.5 × 56.5 × 19 mm

www.yysmarttech.com
hello@yysmarttech.com

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)

Odour Detector

CODE: HK-ODDT

The Odour Detector is a specialized sensor designed to monitor unpleasant gases in restroom environments, with a focus on detecting hydrogen sulfide (H_2S) - a key indicator of foul odours. It ensures accurate and timely identification of odour levels to support ventilation control and hygiene management.

AMMONIA (NH_3)

Detection Range: 0 - 100ppm

MEASUREMENT ACCURACY

0.01 ppm

TEMPERATURE

Detection Range: -40°C to 125°C

DATA READING FREQUENCY

Platform-configurable monitoring interval

HUMIDITY

Detection Range: 0 - 100%RH

DIMENSIONS

56.5 × 56.5 × 19 mm

www.yysmarttech.com
hello@yysmarttech.com

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)

Water Leakage Sensor

CODE: HK-WTLK

The Water Leakage Sensor is a compact and highly sensitive device designed to detect water accumulation in restroom environments. Using capacitive sensing technology, it offers precise and adaptive detection across a wide frequency range, ensuring early alerts for potential leaks or flooding.

FUNCTIONALITY

- Water accumulation detection
- Low power consumption
- High detection accuracy
- Fully sealed design with waterproof capability
- Low battery reporting

DETECTION METHOD

Adaptive capacitive sensing

DETECTION FREQUENCY RANGE

1 MHz - 40 MHz

COMMUNICATION METHOD

Bluetooth BLE Mesh Networking

FREQUENCY

2.402 GHz - 2.480 GHz

POWER SUPPLY

3.7V 1350mAh Lithium-Ion Battery

MATERIAL FEATURES

Flame-retardant ABS housing

DIMENSIONS

56.5 × 56.5 × 19 mm

www.yysmarttech.com
hello@yysmarttech.com

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)

Worker's Location Tag

CODE: HK-WKTG

The Worker's Location Tag is a compact and intelligent BLE beacon designed to track personnel movement within restroom facilities, with contactless and proactive attendance tracking, for real-time location tracking and enhanced operational safety.

USER DATA FIELDS

- Name
- Contact Information
- Service Area
- Job Role
- Position
- Service Hours
- Etc.

COMMUNICATION METHOD

Bluetooth Low Energy (BLE)

Frequency Range:
2.402 GHz to 2.480 GHz

POWER SUPPLY

3.7V 650mAh Lithium-Ion Battery

Air Refresher Diffuser

The Air Refresher Diffuser is a smart scent control device designed to enhance restroom environments with automated fragrance dispersion. Interoperable with air quality sensors, it enables precision mist output based on real-time air condition data, ensuring a consistently fresh and pleasant atmosphere.

COVERAGE AREA

Up to 200 m²

ESSENTIAL OIL CAPACITY

150 ml

POWER SUPPLY

DC 5V / 1A
3 × AA batteries
3.7V Lithium Battery (optional)

DIMENSIONS

195 × 140 mm

Weight: 350g

MATERIAL

PP / POM

SOS Emergency Alert Device

CODE: HK-SOSB-V

The Smart SOS Emergency Alert Device is an emergency assistance system that enables rapid response through one-touch activation and voice recognition. It supports voice broadcast through a built-in speaker and connects to a data center for coordinated response, enhancing user safety.

ACTIVATION METHODS

- Voice recognition (supports Chinese and English)
- Physical push-button trigger

ALERT BROADCAST

- Voice alerts via built-in speaker
- Linkage with data center systems

COMMUNICATION METHODS

- Wireless Mesh networking
- Wi-Fi
- LoRa with self-organizing network support

OPERATING TEMPERATURE

-20°C to +105°C

ESSENTIAL OIL CAPACITY

- Based on HX Bluetooth firmware and protocol stack
- Complies with Bluetooth v5.0 LE standard
- Supports data rates:
- 2M / 1M / 500K / 125K
- Supports networking of up to 20 Bluetooth devices
- Master-slave concurrent operation supported
- Max transmission power: 10 dBm
- Receiving sensitivity: -95 dBm @ 1M (LDO power mode)
- Supports AES/CCM encryption

DIMENSIONS

126 × 80 × 37 mm

POWER SUPPLY

- USB Type-C interface
- Lithium battery (Type-C specification)

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)

INTERACTIVE FEEDBACK PANEL

CODE: HK-INFP

The Interactive Feedback Panel is a user-friendly device designed for places like public restrooms to gather feedback, and report issues, helping facility managers improve maintenance. The panel also plays promotional videos or images. It's built to work reliably in various lighting and temperature conditions, and with internet connectivity and remote update options, it offers flexibility and convenience for content management.

FUNCTION OVERVIEW

- Collects user feedback through satisfaction surveys
- Plays advertisements in video or image format
- Allows for customized fault reporting functionality

TECHNICAL SPECIFICATIONS

Display:
- Type:
  - LED LCD (a-Si TFT-LCD with WLED backlight)
  - Grade A
- Size: 10.1 inches (Aspect Ratio: 16:10)
- Active Display Area:
  - 220.51 mm (W) × 139.51 mm (H)
- Resolution: 1280 × 800
- Brightness: 400 cd/m²
- Viewing Angle:
  - Ultra-wide 89° (Left/Right/Up/Down)
  - Contrast Ratio ≥10

Touch Technology:
- Projected Capacitive Touchscreen
- Touch Response Time: < 5 ms
- Touch Points: 10-point multi-touch (supports gestures like pinch-to-zoom)
- Touch Sensitivity: Recognizes touch inputs > 1.5 mm

Performance:
- RAM + Storage: 2GB RAM + 16GB ROM
- Operating System Options:
  - Default: Android 11
  - Optional: Android 7.1 / Android 9.0 / Android 12

POWER SUPPLY

- Input: 12V / 3A via power adapter
- Power Consumption:
  - Operating: < 22W
  - Standby: < 0.5W
  - Speaker Output: 8Ω, 2W

SOFTWARE & MEDIA FEATURES

- Pre-installed feedback application
- Advertisement support for MP4 / JPG / PNG formats
- Data upload protocol: HTTP POST
- Custom UI services available at additional cost

ENVIRONMENTAL DURABILITY

- Anti-light Interference:
  Operates reliably under direct sunlight, incandescent, and fluorescent lighting
- Surface Hardness:
  - Chemically tempered explosion-proof glass
  - Mohs hardness level 6
- Operating Temperature: -10°C to +60°C
- Operating Humidity: 0-90% RH (non-condensing)

CONNECTIVITY

Network:
- 100 Mbps adaptive RJ45 Ethernet
- Wi-Fi 2.4 GHz
- Bluetooth 4.1
- Optional 4G / 5G module
  USB Ports: Full-speed USB 2.0 / 3.0
  OTA Firmware Updates: Supported via USB

PRODUCT DIMENSIONS

- 255 (W) × 172 (H) × 26 (D) mm
- Weight: 850 g

INSTALLATION

Mounting:
- Wall-mounted
- VESA 75mm / 100mm
- Recommended height: 150 cm

www.yysmarttech.com
hello@yysmarttech.com

YY SMART TECH
by YY Group Holding (Nasdaq:YYGH)