WatchAI
Smarter Security. Safer Homes.

WatchAI 5MP PoE & WiFi Video Doorbell

DB-F52-1.2



Key Features

- 1/2.7” progressive scan CMOS
- Max. 5MP (2880 × 1616) @25/30fps resolution
- Supports face and human detection & capture
- Supports human attribute detection
- Supports intrusion, smart motion detection, line crossing, and parcel detection
- Supports Wi-Fi 802.11 b/g/n
- Supports PoE and 12–24 VAC power input
- Two-way audio and voice call through app
- Tamper alarm
- IP65 protection

NDAA compliant

Specifications

Camera	
Image Sensor	1/2.7” Progressive Scan CMOS
Max. Resolution	5MP, 2880(H) × 1616(V)
Shutter Speed	Auto/Manual, 1/5 to 1/20,000s
Min. Illumination	Color: 0.03 Lux @ (F1.8, AGC ON), B/W: 0.008 Lux @ (F1.8, AGC ON), 0 Lux with illuminator on
Day & Night	Auto (ICR)
Lens	
Lens Type	Fixed lens
Focal Length	1.2 mm
Max. Aperture	F1.8
Field of View (FOV)	H: 120°, V: 180°
Iris	Fixed Iris
Focus Control	Fixed
Illuminator	
Illuminator Type	IR, Warm light
IR Wavelength	850 nm
Illumination Distance	IR up to 5 m (16.4 ft), Warm Light up to 2 m (6.56 ft)
Control	Auto/Manual
Intelligent Analytics	
AI Multi-Target Detection	- Supports face and human detection with snapshot capture - Supports human attribute analysis
Attribute Analysis	Human Attributes: Gender, age, glasses, hat, bag, upper clothing color & style, lower clothing color & style, reflective vest
Intelligent Analysis	Intrusion, smart motion detection, line crossing, and parcel detection
Video & Audio	
Number of Streams	3 Streams
Resolution	Stream 1: 2880 × 1616, 2304 × 1296, 1920 × 1080, 1280 × 720 Stream 2: D1, VGA, 640 × 360, CIF, QVGA Stream 3: VGA, CIF, QVGA
Frame Rate	Up to 25/30 fps
Bit Rate Control	CBR/VBR
Bit Rate	Stream 1: 200 Kbps to 12 Mbps Stream 2: 100 Kbps to 6 Mbps Stream 3: 100 Kbps to 3 Mbps

Smart Encoding	Supported
Region of Interest (ROI)	Up to 8 zones
Audio Compression	G.711 A-law, G.711 μ-law, RAW_PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (RAW_PCM)
Two-way Audio	Supported
Image	
Image Adjustment	Brightness, Sharpness, Contrast, Saturation
Scene Mode	Indoor, Outdoor, Mirror, Corridor mode
Exposure Mode	Auto, Manual, Shutter priority
White Balance	Auto, Tungsten, Fluorescent, Daylight, Shadow, Manual
Day/Night Setting	Auto, Day mode, Night mode, Timer
Noise Reduction	2D/3D DNR
Image Enhancement	WDR, HLC, BLC, Defog
Wide Dynamic Range	True WDR (120 dB)
Privacy Masking	Up to 4 configurable zones
Event	
Alarm Triggers	IVS, Motion detection, Alarm input, Network alarm, Disk alarm, Day/Night switch alarm, Abnormal sound detection
Event Actions	Alarm record, FTP upload, SMTP upload, Snapshot, Audible alarm output, Wiegand output
Network	
Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPoE, RTSP/ RTCP/RTP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, ICMP, IGMP, SMTP, 802.1x, SNMP, Multicast
Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz / 5 GHz, WPA-PSK/WPA2-PSK
Application Programming Interface	ONVIF (Profile S/T/G/M), SDK, CGI (Tuya optional)
Max. Concurrent Streams	10 channels
Web Viewer	Chrome, Firefox, Microsoft Edge, IE11 or earlier
Cybersecurity	
OS / Firmware Protect	Encrypted firmware, Secure boot, Signed firmware
User Authentication	Digest authentication, Prevent brute-force attack
Network Authentication	IEEE 802.1X (EAP-TLS)
Secure Communication	HTTPS, WSS (WebSocket Secure), SRTP
Access Control	IP-based access control, Auto logout
Data Protect	Encryption credentials
Audit	Access, system, and event logs
Secure Storage	AES-256 encrypted SD card storage
Supply Chain Security	SBOM support

Interface	
Network Interface	1 × Ethernet (10/100 Base-T), RJ-45 connector
Built-in Microphone	Supported
Built-in Speaker	Supported
Alarm I/O	1 input
Door Lock Interface	Supported
Wiegand	Supported, configurable as input/output
Tamper Switch	Supported
Doorbell Button	Supported
SD Card Slot	Built-in microSD card slot, up to 1 TB
Reset Button	Supported
Indicator	Supported
General	
Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Power Supply	12 to 24 VAC / PoE (IEEE 802.3af)
Power Consumption	Standby: 2.5 W (Wi-Fi enabled) Max.: 4 W (IR and speaker on)
Operating Temperature	-20 °C to 50 °C (-4 °F to 122 °F)
Operating Humidity	≤90% RH (Non-condensing)
Ingress Protection	IP65
Certifications	RCM / CE / FCC
Material	Plastic (PC+ABS)
Dimensions	51.3 × 34.8 × 136.3 mm (2.02 × 1.37 × 5.37 inch)
Net Weight	Approx. 175 g (0.386 lb)
Mounting Method	Wall mount; horizontal angle adjustable with included 15° and 30° tilt brackets
Chime (Selected Configurations)	
Audio	Built-in speaker; 10 selectable ringtones
Controls	Pairing/unpairing, volume adjustment, ringtone selection
Wireless	433 MHz RF; up to 100 m (328 ft) in open areas
Power Supply	5 VDC, 150 mA via USB Type-A
Operating Temperature	-20°C to +50°C (-4°F to +122°F)
Dimensions	60.5 × 37.3 × 60 mm (2.38 × 1.47 × 2.36 in)
Net Weight	Approx. 40 g (0.09 lb)

Dimensions (mm)

