

IWMS block	Device you need (key specs)	Top 5 CIIF companies to meet	Example Alibaba option (indicative price)	Quality notes you can verify fast
Smart bins	<b>Ultrasonic bin fill-level sensor</b> (IP67/68, LoRaWAN/NB-IoT/4G, tilt, flame, 3–5y battery)	Honeywell Environmental, BYD EnviroTech, Envision, CECEP, SUEZ NWS	LoRaWAN/NB-IoT ultrasonic bin sensor, IP67/IP68, multiple vendors (DYP-A11 / DF703 class) — ~US\$75–140. [Alibaba][1]	Look for IP67/68, CE/FCC/ROHS, flame/tilt status, replaceable battery, LoRaWAN 1.0.3+ compliance. UV resistance for outdoor bins is essential.
GPS & fraud control	<b>4G vehicle GPS with fuel sensor</b> (CAN/RS-485, immobilizer, >10Hz GPS, IP65)	Siemens, Schneider Electric, ZTE, Huawei, Inspur	4G GPS trackers with fuel sensor inputs (Teltonika-class clones) — ~US\$18–60 (tracker) + US\$30–80 (probe). [Alibaba][2]	Prefer CE/FCC/ROHS, eSIM option, BLE fuel probes, published API. Ensure overfill/tamper alerts.
Weighbridge	<b>OIML-certified column load cells (30–40 t) + digital indicator (RS-232/Modbus/TCP)</b>	Mettler Toledo, Zemic, HBM, Siemens, Schneider Electric	OIML C16-type 30 t column load cells — ~US\$95–120 per cell. [Alibaba][3]	Ask for OIML certificate lot#, IP68, surge protection, calibration sheet. Indicators should export logs with checksum.
Landfill fire safety	<b>Thermal camera (bi-spectrum) for hotspot detection</b> ( $\geq 256 \times 192$ thermal, analytics)	Hikvision, Dahua, Huawei, Honeywell, CECEP	Bi-spectrum thermal network cameras ( $256 \times 192$ ) — ~US\$249–269; higher-end cores $640 \times 512$ much more. [Alibaba][4]	NETD <50 mK, on-edge fire/smoke analytics, IP66/67. Request radiometric CSV export for dashboards.
Field proof	<b>4G body-worn cameras</b> (GPS/Wi-Fi, AES, 1080p+, 12–14 h)	Hikvision, Dahua, Huawei, ZTE, Inspur	4G body cams with GPS/Wi-Fi — ~US\$89–200+ depending on memory & encryption. [Alibaba][5]	Check for H.265, watermarking, docking-station workflow, AES encryption. CJIS-like chain-of-custody support if possible.
Collection & verification	<b>Rugged Android PDA</b>	Huawei, ZTE, Inspur,	IP65 Android PDA scanners	Require 1.2–1.5 m drop rating, hot-

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	<b>(QR/RFID/NFC)</b> (IP65+, 1D/2D, 4G)	Honeywell, Siemens	(Chainway/C72-class) — ~US\$230–380. [Alibaba][6]	swap battery, GMS certification, Android SDK availability for integration with Flutter apps.
Receipts/QR stickers	<b>58 mm mobile Bluetooth printers</b>	Huawei, ZTE, Honeywell, Inspur, Schneider Electric	58 mm BT thermal printers — ~US\$10–25; mid-grade ER- 58AI class units common. [Alibaba][7]	Verify paper width, print speed, escrow warranty, spare battery support.