SOLAR-POWERED · 4G · AI

4MP Solar-Power 4G Full-Color AI Network Camera

Standalone Solar Power · LTE Cat 4 · 24/7 Color

VTC-SPB40

Designed for remote sites without fixed power or broadband. A 60W solar panel and LFP battery keep the camera running while 4G connects intelligent human / vehicle analytics and perimeter alerts.



AI ANALYTICS & SMART ALARMS

Human / Vehicle Classification · Region Intrusion · Line Crossing · Abandoned / Missing Object · Video Exceptions · Motion · PIR · Audio / Light Alarms

Intelligent Scene Analytics

AI VIDEO DETECTION



Human / Vehicle Classification

CLASSIFICATION

Classifies people and vehicles for configured event rules.



Region Intrusion Detection

PERIMETER EVENT

Detect human / vehicle intrusion in a configured region.



Line Crossing Detection

TRIPWIRE EVENT

Detect human / vehicle line-crossing events.



Abandoned / Missing Object

OBJECT EVENT

Detect abandoned or missing objects in the scene.



Video Exception Detection

IMAGE ANALYTICS

Detect video blur, scene change and abnormal color.



Motion & PIR Smart Alarms

SMART ALERTS

Motion detection · PIR wake-up · audio / light alarms.

Solar-Power · 4G · Imaging Performance

REMOTE · CONNECTED · FULL-COLOR

4MP · 2560 × 1440	**60W ±2W Solar**	**23Ah LFP · 12.8V**	**4G Cat 4**	**F1.0 · IP67**
15fps max (60Hz) · 3 streams	Stand-alone power	More than 2,000 cycles	Micro SIM · LTE / WCDMA / GSM	20m white light · 120dB WDR

Flexible Installation & Connectivity

POWER · NETWORK · AUDIO · STORAGE

Remote 4G	Solar Power	LFP Battery	Audio / Warning	Edge Storage
LTE Cat 4 · Micro SIM	60W ±2W solar panel	23Ah · 12.8V · >2,000 cycles	1CH built-in MIC · speaker · blue / red LED	microSD up to 256GB

Protection & smart alarms: IP67 · wind resistance level 12 · PIR up to 15m · battery temperature / charge / discharge protection · low-battery sleep protection · blue / red warning lights

Connected Security Ecosystem

REMOTE · OPEN · RESILIENT

Management	Open Protocol	Multi-Stream	Remote Access
Web Browser · NVMS · NVR · Mobile APP	ONVIF · IPv4 / IPv6 · RTSP · HTTPS	3 streams · real-time transmission	Up to 6 simultaneous users

Specifications

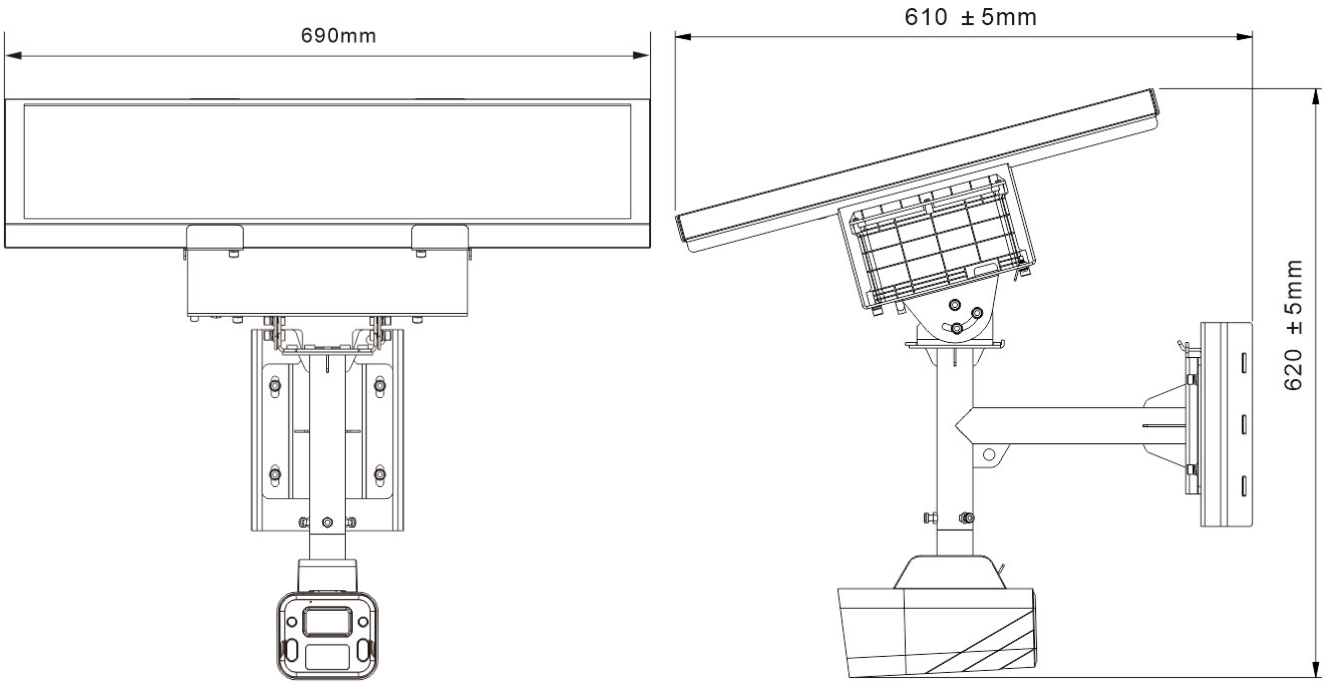
Model	VTC-SPB40
Camera	
Image Sensor	1/1.8" Progressive Scan CMOS
Max. Resolution	2560 × 1440
Min. Illumination	0.000625 lux@F1.0, AGC ON; 0 lux with LED ON
Shutter Speed	Auto
WDR	120dB
S/N Ratio	≥ 50dB
BLC	Yes
HLC	Yes
Digital NR	3D NR
Angle Adjustment	Pan: 0°~360°; Tilt:-60°~10°;
Lens	
Lens Type	Fixed focal lens, 2.8mm and 3.6 mm optional
Aperture	F1.0
FOV	2.8 mm @F1.0, H.FoV: 113°; V.FoV:60°; D.FoV:133° 3.6 mm @F1.0, H.FoV: 95°; V.FoV:50°; D.FoV:114°
Lens Mount	M16
DORI	
DORI	2.8mm, D: 50 m, O: 20 m, R: 10 m, I: 5 m 3.6mm, D: 62 m, O: 25 m, R: 12 m, I: 6 m
Illuminator	
Supplement Light Type	White Light
Supplement Light Range	Full power mode: up to 20 m; Low power mode: up to 10 m
Smart LED	Yes
Video & Audio	
Video Compression	Main stream: H.265+ / H.265/ H.264+ / H.264 Sub/Third stream: H.265+ / H.265/ H.264+ / H.264/ MJPEG
H.264 Compression Standard	Baseline Profile/Main Profile/High Profile
Resolution	4MP (2560×1440), 3MP (2304×1296), 1080P (1920 × 1080), 720P (1280 × 720), D1, 640 × 480, CIF
Main Stream	60Hz:4MP/3MP/1080P/720P(1~15fps); 50Hz:4MP/3MP/1080P/720P(1~12fps)
Sub Stream	60Hz:720P/D1/CIF (1~15fps); 50Hz:720P/D1/CIF (1~12fps)
Third Stream	60Hz:720P/640 × 480 (1 fps); 50Hz:720P/640 × 480 (1 fps)
Bit Rate	16Kbps ~ 8Mbps
Bit Rate Type	VBR/CBR
Audio Compression	G711A / U
Image Settings	ROI, Saturation, Brightness, Hue, Contrast, Wide Dynamic, Sharpness, Image Flip, Image Mirror, NR, etc. adjustable through client software or web browser
ROI	Each ROI to be configured separately
Mobile Communication	
SIM Card Type	Micro SIM
Frequency	LTE-TDD: Band 38/39/40/41; LTE-FDD: Band 1/2/3/4/5/7/8/12/13/18/19/20/25/26/28; WCDMA: Band 1/5/8; GSM: Band 2/3/5/8

*All pictures and specifications are for reference only and are subject to change without prior notice.

Standard	LTE-TDD, LTE-FDD, WCDMA, GSM, 4G Cat4
PIR	
PIR Angle	Horizontal: 82°, vertical:50°
PIR Range	Up to 15 m
Interfaces	
Network	1 CH RJ45 10 M/100 M self-adaptive Ethernet port
Audio	1 CH built-in MIC, 1 CH built-in Speaker
Warning Light	1 blue LED light, 1 red LED light
RS-485	Yes, half-duplex
Storage	Built-in micro SD card slot, up to 256GB
Reset	Yes
Functions	
Remote Monitoring	Web Browser/NVMS/NVR/mobile APP
Web Browser	Chrome 105.0+/Edge 105.0+/Firefox 121.0+/Safari 14.0+
Online Connection	Support simultaneous monitoring for up to 6 users; Support multi-stream real time transmission
Network Protocol	UDP, IPv4, IPv6, DHCP, NTP, RTSP, RTP, RTCP, RTMP,SNMP, PPPoE, DDNS, 802.1x, SMTP, FTP, UPnP, HTTPS, HTTP, QoS,NAT, HTTP POST
Interface Protocol	ONVIF
Intelligent Analytics	Region intrusion detection (human/vehicle classification), line crossing detection(human/vehicle classification), and abandoned / missing object detection
Smart Alarm	Motion detection, SD card error, SD card full, video exception (video blur, scene change and abnormal color detection), audio alarm, light alarm, PIR alarm
Linkage	Upload to memory card/ FTP, notify surveillance center, trigger audio alarm, trigger light alarm , trigger recording, trigger snapshot, send emails
General function	Watermark, video mask, heartbeat, corridor pattern, ANR, cloud upgrade, disarming
Security	Video encryption, firmware encryption, HTTPs encryption, configuration encryption, illegal login lock, IP address filtering, 802.1x authentication, basic and digest authentication for HTTP/RTSP/API
General	
Power	Power Consumption: < 5W Lower Power Mode:< 3.5 W (4 G working) Power Supply: 12 VDC ± 25% * for debugging only 60 W ±2 W Solar panels
Startup and Operating Conditions	-20℃ to 50 ℃ (-4 °F to 122 °F); Humidity 95% or less (non-condensing)
Gross Weight	Approx. 16.9KG (without LFP battery); Approx. 20.65 KG (with LFP battery)
Battery	
Batter Type	LFP battery (lithium iron phosphate battery)
Capacity	23Ah
Battery Voltage	12.8V
Operating Temperature	Charging: -20 ℃ to 45 ℃ (-4 °F to 113 °F) ; Discharging: -20 ℃ to 60 ℃ (-4 °F to 140 °F)
Storage Environment	-10℃ to 35 ℃ (14 °F to 95 °F); Humidity 75% or less (non-condensing)
Battery Life	More than 2000 cycles
Protection	
Protection	Camera: IP67 Wind Resistance 12 level
Certificate	CE, FCC, Complies with Directive EU RoHS, WEEE(2012/19/EU) , directive 94/62/EC and REACH(EC1907/2006) Li-Battery: UN38.3, CE, FCC 4G Communication: SRRC/CCC, GCF, CE/UKCA, PTCRB, FCC, IC, Anatel, IFETEL, KC, NCC, JATE/TELEC, RCM, FAC, NBTC, IMDA, ICASA,etc.

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Dimensions



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