

Tough 4G Black Light Ultra-Compression Camera



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Product Introduction

Comprehensive analysis of the appearance design, night vision enhancement, low power consumption and other core technical indicators of the 4G Black Light Ultra-Compression Camera.

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Core Advantages

Featuring extreme ease of use without wiring and cost-effective advantages, equipped with starlight-level night vision and AI human detection to reshape the security experience.

03

Market Application

Accurately empowering small and medium shops, convenience stores and other commercial scenarios, while meeting the intelligent security needs of high-end residences, villas and remote areas.

04

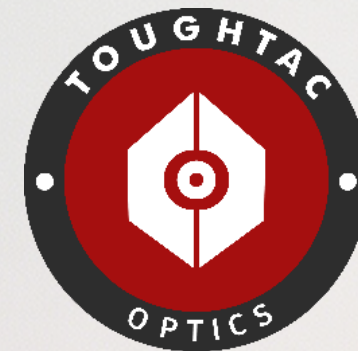
Deployment Solution

Optimizing compatibility for Pakistan's network frequency bands, providing multilingual localized APP and private/public cloud storage deployment to ensure data security and stable connection.

05

Summary and Outlook

Summarizing the commercial and social value brought by the product to the local market, and looking forward to the direction of technological iteration and the large-scale development prospects in the South Asian security market.



Executive Summary

A revolutionary security product tailored for the Pakistan civil market.



01 Extreme Ease of Use

Built-in 4G communication module, no Wi-Fi or network cable wiring required. The device can realize remote real-time monitoring via mobile APP as soon as it is powered on, truly plug-and-play, greatly reducing the threshold for installation and deployment.



02 Revolutionary Cost Saving

Equipped with self-developed video ultra-compression technology, the bit rate is only up to **384 Kbps** under 2K HD image quality, saving up to 7 times the 4G uplink traffic cost compared with traditional solutions, greatly reducing long-term operating costs.



03 All-Weather Excellent Performance

Equipped with a 1/1.8-inch large CMOS sensor and **F1.0 super aperture**, it can achieve delicate and clear "Black Light Full Color" night vision effect without any fill light, ensuring 24-hour monitoring without dead ends.



04 Complete Localization Solution

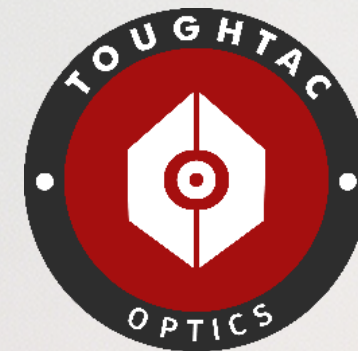
Pre-installed with SIM cards compatible with Chinese operators, it is recommended to build a localized management platform based on **Amazon Web Services (AWS)** or build a local management platform, taking into account low-latency response and high reliability.



01

Product Introduction

Tough 4G Black Light Ultra-Compression Camera



Product Overview & Appearance

01 / Smart Security, Addressing Pain Points

Integrating advanced 4G communication, H.265 intelligent encoding and AI human detection algorithms, it is designed to solve the three pain points of traditional monitoring: cumbersome wiring, strong network dependence, and high traffic costs, creating an easy-to-deploy, low-cost civil security solution.



Listed Company Manufactured

Produced by XTREND (688081), with military-grade technology, double guarantee of quality and service.



Compact & Exquisite Body

142.5×98.5mm compact size, net weight <500g, flexible installation, space-saving.



Industrial Grade Protection

4000V surge & 6000V electrostatic protection, resistant to rain and snow, suitable for harsh outdoor environments.



Durable High- Toughness Material

High-strength ABS plastic shell, UV and impact resistant, with a long service life.



Core Advantage: No broadband required, plug and play, free from network constraints. It's not just a monitor, but an intelligent security housekeeper, making home and shop security within reach.



Core Technical Specifications

01 HD Sensor Core

Equipped with a 1/1.8-inch large CMOS, with 4 million pixel physical resolution (2560×1440), providing low-noise detail resolution for the image.

02 Low-Light Full Color Technology

The minimum illumination in color mode is 0.0005Lux, combined with infrared + white light dual fill light system, achieving clear night vision at a long distance of 30 meters, fearless of low-light environments.

03 AI Intelligent Recognition Engine

Built-in deep learning algorithm, accurately identifies human figures, motor vehicles and fireworks events, effectively filters out interference such as flying insects and leaves, and reduces false alarm rates.

04 Super Large Aperture Optical Lens

Equipped with F1.0 super large aperture and 4mm fixed focus lens, which greatly increases the light intake, and can still maintain a transparent image in low-light scenes.

05 Ultimate Video Coding Technology

Achieving an average bit rate of only **384 Kbps** under 2K ultra-HD image quality, greatly saving bandwidth and storage space, and making transmission smoother.

06 Omnidirectional PTZ View

Supports flexible rotation of 0-350° horizontally and 0-90° vertically, combined with automatic cruise function, easily achieving dead-angle-free coverage of the monitoring area.

07 Two-Way Audio Intercom

Built-in high-sensitivity microphone and high-power speaker, supporting real-time two-way voice calls, which can remotely shout to deter or communicate with clear sound.

08 Dual Security Storage

Locally supports up to 512GB TF card loop recording, and also supports cloud encrypted storage service, dual backup to ensure that video data is not lost.

09 Wide Voltage and Low Power Supply

Using DC12V wide voltage input design, adapting to different power grid environments, the maximum power of the whole machine is only 7W, energy-saving, environmentally friendly, stable and reliable.

Overview

The 4G Black Light Ultra-Low-Light Camera features a 1/1.8-inch large-die CMOS sensor and an F1.0 ultra-large aperture lens, delivering full-color night vision under ultra-low illumination. It supports 4G full-network dual-SIM standby, built-in edge AI detection, and remote preview, PTZ control, two-way audio talkback, etc. via the mobile app. Perfectly suited for outdoor security scenarios such as orchards, construction sites, and parks – ready to use upon installation with year-round maintenance-free operation.

Features

- Supports super video encoding, 2K video, and up to 4 months of recording on a 512GB storage card;
- Supports human, vehicle, and fire/smoke detection;
- 4G networking – works immediately when powered on, no network configuration required;
- Built-in PTZ for multi-directional rotation;
- Event/continuous cloud storage; supports local TF card storage (up to 512GB);
- Built-in microphone and speaker for two-way audio talkback and audible alarm alerts; remote preview and control via APP;

Application Scenarios

Suitable for monitoring street-side shops, factory/logistics parks, orchards/agricultural plantations, private self-built houses/courtyard villas, and similar scenes.

Core Technical Specifications

4G Black Light Ultra-compression Camera			
Camera			
Image Sensor	1/1.8" CMOS Sensor		
Resolution	400Megapixel; Main Stream: 2560*1440@15fps; Sub stream: 1280*720@15fps		
Minimum Illumination	Color: 0.0005Lux@ (F1.6, AGC ON)		
Lens	M12 mount; 4mm fixed focal length; F1.0 fixed aperture		
Supplemental Lighting	Dual IR & white light fill light with Smart fill light algorithm to avoid overexposure		
Fill Lights	4 pcs 850nm IR LEDs, max illumination distance: 30m; 4 pcs white LEDs, max illumination distance: 30m		
Video&Audio			
Video Coding Standard	H.265、H.264		
Bitrate	2560×1440@15fpsVideo average bitrate≤384Kbps; 1280×720@15fpsVideo average bitrate≤100Kbps;		
Audio Coding Standard	G.711A		
Two-Way Audio	Built-in MIC, frequency response: 100 – 5kHz, maximum pickup distance: 7 meters; full-duplex intercom with audio noise reduction		
PTZ			
Network Transmission	Built-in 4G LTE module with dual patch IoT SIM cards	Horizontal Rotation Range	0-350°
Frequency Bands	LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41	Vertical Rotation Range	0-90°
4G Bandwidth	Max downlink: 10Mbps; Max uplink: 5Mbps	PTZ Functions	Preset positions, auto tracking, patrol positions
Other			
Intelligent Features	human, vehicle, fire & smoke detection	Storage&Reset	Local TF card storage (max 512GB) & built-in reset button
Intelligent Alarm	Multiple intelligent alarm modes, supports linked audio-visual alarm	Mobile Client	iOS & Android mobile systems
General Parameters			
Power Supply	Ø5.5mm DC barrel jack, DC12V±25%, reverse connection protection	Dimensions	142.5*Φ98.5mm (excluding mounting bracket)
Power Consumption	7W (MAX)	Weight	Net weight < 500g (including bracket)
Material	ABSPlastic	Protection Performance	Surge withstand: 4000V; ESD withstand: 6000V
Operating Temperature	-20°C–65°C	Storage Temperature	-20°C–65°C
Operating Humidity	0-95%RH (non-condensing)	Storage Humidity	10%-95%RH (non-condensing)



02

Core Advantages

Why Choose Our Product



Advantage 1: Extreme Ease of Use



4G All-Network, Wiring-Free Deployment

Built-in high-performance 4G LTE communication module, no need to rely on Wi-Fi or network cables, it can automatically connect to the network when the power is turned on. Completely get rid of the problem of network wiring in complex environments, save construction costs and time, and achieve true plug-and-play.



APP QR Code Scan, 5-Minute Quick Configuration

No need for professional technicians to come to the door, users open the mobile APP to scan the device QR code, and follow the instructions to complete the addition and parameter debugging. The whole process is visualized, which greatly reduces the installation threshold and saves labor and time costs.

Adapt to Diverse Scenarios, Flexible and Boundless



Street Shops

No need to modify the original network, quickly deploy store security, ready to use, 7x24 hours to protect business safety and assets.



Construction Sites

No wiring required in complex construction environments, remote monitoring of progress and materials, real-time grasp of site dynamics, and reduction of management costs.



Smart Farms

Stable networking in remote farmland, real-time monitoring of crop growth, irrigation status and security, worry-free and efficient smart management.



Villa Courtyards

No need to damage the decoration and wiring, concealed installation is beautiful, all-round protection of the courtyard and home security, peace of mind.



Advantage 2: Revolutionary Cost Saving



Video Super Coding

Using advanced video compression algorithms, on the premise of retaining 2K (2560×1440) ultra-clear image quality, the average video bit rate is extremely compressed to **384 Kbps**, achieving a double breakthrough in image quality losslessness and volume.



Cost-Effectiveness Leap

Traffic Consumption Greatly Reduced

85%

Traditional Solution: 2K Video ≈ 2-3 Mbps

Our Solution: 2K Video = 384 Kbps



Business Value Reshaping

Thoroughly solve the pain point of high traffic fees for 4G surveillance, make the originally expensive outdoor surveillance and mobile device surveillance economical, greatly reduce the operating cost of large-scale deployment, and promote the inclusive application of intelligent surveillance.

Breaking the cost barrier with extreme technology, turning HD 4G surveillance from a "luxury" into a "necessity".



Advantage 3 & 4: Excellent Image Quality & AI Empowerment



All-Weather Excellent Image Quality: Black Light Full Color

01 Black Light Night Vision Technology

Breaking through the limit of 0.0005Lux extreme environment, without infrared assistance, it still presents delicate and realistic full-color images, clearly restoring every detail at night, and bidding farewell to the black-and-white blurry era of traditional surveillance.

02 Smart Intelligent Fill Light

Using an adaptive intelligent fill light algorithm, the light source intensity is automatically adjusted according to the scene brightness, effectively avoiding the overexposure and reflection problems of traditional LED fill lights, and ensuring that the person's face is clearly visible.



Intelligent AI Empowerment: Active Defense System

01 AI Accurate Recognition and Detection

Built-in deep learning algorithm, accurately identifies key targets such as human figures, vehicles, fireworks, etc., intelligently filters out interference sources such as wind and rain, light and shadow, flying birds, etc., greatly reducing the false alarm rate and making monitoring more accurate.

02 Millisecond-Level Active Alarm

Once abnormal behavior is detected, the alarm mechanism is triggered in milliseconds, real-time messages are pushed to the mobile APP, and the on-site sound and light alarm is linked to deter, realizing the leap from "post-event viewing" to "pre-event prevention".

Upgrading from "passive monitoring" to "active defense", with hardcore image quality and cutting-edge AI technology, we build an all-weather, dead-angle-free security defense line for you.



03

Market Application

Pakistan Civil Market



Application Scenario: Small and Medium Business Users



Supermarkets & Convenience Stores · Rapid Coverage

Addressing the pain points of scattered stores and high wiring costs, it can deploy multiple stores within a day, ready to use, completely saying goodbye to the cumbersome and high costs of network construction.



Chain Retail · Controllable Cost

Solving the problem of high traffic fees in traditional monitoring, relying on ultra-low bit rate technology to greatly reduce operating costs, making the network and security expenses of multiple stores no longer a burden.



Business Travel Hotels · Remote Intelligent Control

Breaking the time and space constraints of remote management, managers can view the real-time situation of hotel lobbies, guest rooms and other areas through their mobile phones anytime and anywhere, keeping the security situation in hand.



Rapid Deployment

No wiring required, ready to use



Stable and Reliable

4G all-network, strong signal



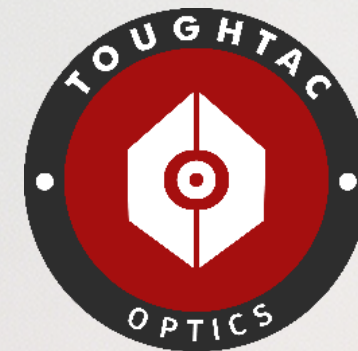
Cost Controllable

Ultra-low power consumption,
lower cost



Remote Management

Mobile phone in hand, full control



Application Scenario: Personal and High-End Residential Users



Focusing on high-end residential areas, villas and private courtyard scenarios, providing customized intelligent security and network coverage solutions for complex living environments and security needs, creating an all-round home security line of defense.

Core Pain Points

Signal Dead Zone

Weak Wi-Fi coverage in the courtyard/outdoor, monitoring equipment is prone to offline, posing security risks.

Security Risks

Difficult to identify visitor identities, abnormal intrusions cannot be detected in time, and home security cannot be guaranteed.

Cumbersome Deployment

Traditional equipment installation requires drilling and wiring, relying on professional construction, which is time-consuming and laborious.

Core Value of the Solution

Self-Service Quick Installation

No-drilling, no-wiring design, residents can quickly complete the deployment by themselves without professional personnel.

All-Scenario Dead-Angle-Free Coverage

Flexibly adapt to key locations such as courtyards and gates, with HD night vision function to achieve all-weather and full-area protection.

Two-Way Voice Real-Time Intercom

Initiate a voice call with one click on the mobile phone, talk directly with the visitor outside the door, and confirm the identity remotely with more peace of mind.

AI Human Figure Accurate Alarm

Intelligent algorithm accurately identifies human figures, effectively filters out interference such as pets and fallen leaves, and captures abnormal situations immediately.



04

Deployment Solution

For Pakistan Market



Issue 1: 4G Module Compatibility Solution



01 Full Band Compatibility Coverage

Product Support: LTE-FDD (B1/B3/B5/B8) & LTE-TDD (B34/B38/B40/B41) full standard support.

Local Status: (Requires confirmation from Pakistani partners) The core frequency bands of major operators in Pakistan are B3/B5/B8/B40, which completely overlap with the product frequency bands.

Conclusion: No hardware modification is required, the device can directly access the local 4G network, with stable signal coverage, ensuring the business is online 24/7.



02 Localized Patch Card Pre-installation

Product Feature: Built-in dual patch IoT card design, industrial-grade protection, users cannot disassemble and replace by themselves.

Solution: Pre-install local operator patch cards before leaving the factory, and complete activation and APN configuration in advance.

Conclusion: Achieve "zero-configuration" networking, users plug and play, avoid the risk of on-site card opening and debugging, and improve deployment efficiency.

Core Value: Dual adaptation from hardware frequency band to software configuration ensures the plug-and-play and stable operation of the device in the Pakistan market.



Issue 2: APP Availability Solution

Conclusion: Domestic APP cannot be used directly, a localized management platform and APP must be deployed to build an independent local service ecosystem.

01 Core Pain Point Analysis



IP Address Access Restriction

Domestic security APPs generally have strict IP access policies, limited to IP connections within Chinese mainland, and cannot log in and use functions normally in overseas network environments.



Official Channel Access Blocked

Relevant applications are not listed on the Google Play Store, and Pakistani users cannot download and install them through formal and safe official channels. Informal channels are risky and difficult to update and maintain.

02 Localization Deployment Solution



Independently Deployed Management Platform

Deploy independent servers and management backends in Pakistan, breaking away from dependence on domestic cloud, and realizing independent control and stable operation of the system.



Exclusive Listing on Google Play

Customize and develop Android clients that comply with overseas specifications, complete the compliance listing on the Google Play Store, ensuring that users can obtain applications conveniently and safely.



Local Data Closed Loop and Low Latency

Business data is stored and processed locally, eliminating the instability of cross-network transmission, greatly reducing response delay, and improving user operating experience.

Solution Comparison: Local Server Room vs. Amazon Web Services (AWS)

Comparison Dimension	Solution A: Local Self-built/Hosted Server Room	Solution B: Amazon Web Services (AWS) Public Cloud
Initial Investment (CAPEX)	High: One-time investment in servers, network and other hardware is required	Extremely Low: Pay-as-you-go, zero upfront hardware procurement cost
Operation and Maintenance (OPEX)	High: Requires special personnel for maintenance, and needs to bear electricity and site fees	Medium-Low: Cloud automated operation and maintenance, no physical server room management required
Deployment and Launch Speed	Slow: Hardware procurement, shelving and debugging take weeks or even months	Extremely Fast: Resources are activated instantly, and applications can be deployed within hours
Reliability and SLA Guarantee	Low: High risk of single point of failure, difficult to achieve remote disaster recovery	99.99%+: Multi-AZ architecture, financial-grade disaster recovery capability
Business Elastic Expansion	Limited: Need to re-purchase equipment, long expansion cycle	Unlimited: Second-level capacity expansion, easily cope with peak business traffic
Final Recommendation:Comprehensively considering cost-effectiveness, operation and maintenance efficiency, and business continuity, it is strongly recommended to use Amazon Web Services (AWS) as the deployment solution for the Pakistan management platform. This not only reduces the risk of upfront investment, but also provides a solid technical foundation for the rapid growth of the business.		

Thank You



Looking forward to working with you to create the future

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