



## TFN VS01 Audio Video Life Detector



### Product Introduction

The VS01 Audio Video Life Detector is a rugged, multi-purpose search and rescue tool designed for extreme environments such as earthquake ruins, tunnels, well shafts, and underground pipelines. Equipped with a 19.5mm waterproof camera head with 6 high-intensity LEDs and a sensitive audio sensor covering 300-400 m<sup>2</sup>, it captures real-time 5MP video and crisp sound. The telescopic probe pole extends up to 5 meters, allowing safe inspection of deep or narrow spaces. A 7-inch HD monitor displays live footage, records video, and stores images. Ideal for disaster response, counter-terrorism checks, and vehicle undercarriage examination, the VS01 enhances operational safety and search efficiency.

### Product Key Selling Points

Ultra-small 19.5mm HD Camera for Confined Space Access

The VS01 features a 19.5mm diameter camera head with 500MP CMOS sensor, capable of delivering 5MP still images and 1080P video. Its tiny size allows it to slip into gaps as narrow as 2cm – such as collapsed building crevices, elevator shafts, or underground pipes. Combined with a 105° wide-angle lens and 6 LED lights (0.08Lux sensitivity), it captures clear visuals even in total darkness. Rescue teams can pinpoint trapped victims or suspicious objects without destructive entry.

5m Telescopic Pole & 6m Cable for Deep Reach Inspection

The included telescopic detection rod extends from 1.13m to 5m and weighs only 0.8kg, enabling operators to safely insert the camera into deep boreholes, vehicle underbodies, or overhead ducts. An extra 6-meter high-speed 4-core cable provides flexible positioning. This combination solves the pain point of limited reach: no need to climb into dangerous shafts or crawl under heavy vehicles. The lightweight carbon-fiber-like pole reduces operator fatigue during prolonged missions.



7-inch HD Monitor with H.264 Recording & 7500mAh Battery

The bundled 7-inch LCD monitor supports HDMI output up to 1920x1080 resolution, displaying real-time video with low latency. It records AVI files and captures 5MP JPG photos to a TF card (up to 64GB). Built-in 1W speaker and 20Hz-20KHz headphone jack allow clear audio monitoring. Powered by a 7500mAh rechargeable battery (7-24V DC input), the system runs for hours – critical for long-term search & rescue operations where power outlets are unavailable.

Audio Sensor with 300-400 m<sup>2</sup> Pickup Range for Victim Localization

Unlike ordinary inspection cameras, the VS01 integrates a high-sensitivity audio sensor capable of detecting faint sounds – tapping, crying, or breathing – across an area of 300-400 square meters. This feature is vital in earthquake rubble or collapsed mines where visual contact may be blocked. Operators can speak through the headphone (bidirectional communication supported) to reassure survivors. The combination of visual and auditory feedback dramatically increases rescue success rates.

Versatile Applications: Rescue, Counter-Terrorism & Vehicle Inspection

The VS01 is not limited to disaster rescue – it serves law enforcement and security professionals as well. Use it for under-carriage bomb checks, customs container inspections, or roadside anti-smuggling operations. The durable 0.8kg probe and IP-rated construction withstand dust, moisture, and rough handling. For municipal workers, it inspects sewage pipes and elevator pits. One device replaces multiple single-purpose tools, reducing equipment costs and training time for government and industrial buyers.

### Product Specifications

Parameter	Specification
19.5mm Camera Head	
Image Sensor	1/3" CMOS
Pixel	5 million (3200 × 1800)
Sensor Size	5.07mm (H) × 3.38mm (V)
Illumination	0.08 Lux / F1.2
LED Lights	6 pcs
Audio Sensor	1 pc
Pickup Range	300-400 m <sup>2</sup>
Lens	0.5mm, F1.2, 105° FOV
HDMI Interface	FPD-Link III
Dimensions (Camera Head)	Φ19.5mm × 35mm
Cable (4-core high-speed)	Diameter 4.5mm, Length 6m
Telescopic Probe Pole	Retracted 1.13m, Extended 5m
Pole Weight	0.8kg
7-inch HD Monitor	
HD Video Output	HDMI: 1920 × 1080 / 1280 × 720
Video Pixel (16:9)	1920 × 1080 / 1280 × 720
Compression	H.264



Video Storage Format	AVI
HDMI	FPD-Link III
Image Format	JPG (5 million pixels)
Memory Card	TF card (1GB – 64GB)
Audio	Speaker 1W; Headphone frequency range 20Hz-20KHz
OS Compatibility	Windows & Mac OS
Interfaces	USB 2.0 / AV-OUT
Languages	Multiple
Input Voltage	DC 7-24V; USB DC 5V
Power Supply	7500mAh rechargeable battery
Charger	DC 12V 2A
Others	
Headphone Color	Random black or white

## Product Features

### Feature 1: High-Resolution Visual Inspection in Zero-Light Conditions

The VS01 is equipped with a 5MP CMOS sensor and 6 high-luminance LED lights (0.08 Lux sensitivity), delivering crisp, full-color video even in complete darkness. During a night-time earthquake rescue or a pitch-black well inspection, conventional flashlights create glare and shadows that hide victims. The VS01's intelligent LED array provides uniform, shadow-free illumination. The 105° wide-angle lens captures more area per frame, reducing the need to reposition the probe. For search teams, this means faster victim localization and fewer missed spots. For security personnel inspecting vehicle undercarriages for bombs or contraband, the VS01 exposes hidden threats that would otherwise remain invisible. The result: higher detection accuracy, lower risk of oversight, and actionable visual evidence saved as 5MP JPG or 1080P AVI video.

### Feature 2: Extended Reach for Deep or Elevated Inspection Points

The telescopic probe pole adjusts from 1.13m to 5m, and the 6m camera cable gives you total flexibility. Rescue workers often face manholes 4 meters deep or elevator shafts with narrow entry points – dangers that make physical entry impossible. With the VS01, one operator lowers the camera head while standing safely at ground level. The lightweight 0.8kg pole reduces arm strain during prolonged missions. For vehicle inspection yards, the 5m reach allows checking the entire undercarriage of trucks and buses without a pit or lift. The cable's 4.5mm thin diameter passes through tiny gaps in rubble. This function solves the “can't reach / can't see” problem, turning impossible inspections into routine tasks.

### Feature 3: Two-Way Audio for Victim Communication & Localization

Beyond video, the built-in audio sensor detects weak sounds across 300-400 square meters – equivalent to a large warehouse or a collapsed three-story building. When a survivor taps on a pipe or calls for help, the VS01 captures it and plays through the monitor's 1W speaker or the supplied headphones (20Hz-20KHz frequency response). Operators can speak back via the



optional microphone, reassuring the trapped person and guiding them to signal their location. This bidirectional communication is a game-changer: previous generation cameras only listened passively. In counter-terror scenarios, agents can confirm if a suspect is hiding inside a container without opening the door. The audio capability reduces false alarms and speeds up decision-making during critical minutes.

#### Feature 4: On-Site Recording & Playback for Evidence & Training

The 7-inch HD monitor records every inspection as an AVI video file onto TF cards up to 64GB. Still images are saved as 5MP JPGs. For search & rescue teams, recordings help analyze victim positions before committing personnel – replaying the footage helps plan safe extraction routes. In law enforcement, video records serve as courtroom evidence of suspicious items found under a vehicle or inside a tunnel. The HDMI output allows real-time viewing on larger screens for command centers. Later, recordings become training materials for new operators. The H.264 compression saves storage space while maintaining quality. No more lost evidence or second-guessing – the VS01 provides a verifiable digital trail.

#### Feature 5: Rugged, Portable Design for Rapid Deployment

Weighing only 0.8kg (pole) plus the compact monitor, the VS01 fits into a carrying case that goes on any truck or helicopter. There is no complex setup – extend the pole, connect the cable, and power on. The monitor accepts wide voltage DC 7-24V, so you can run it from vehicle batteries or the included 7500mAh internal battery (charging via 12V 2A adapter). The camera head is sealed against dust and moisture, surviving muddy wells or rainy disaster sites. For earthquake first responders who carry heavy gear, every gram matters. The VS01’s lightweight construction reduces fatigue while maintaining professional-grade performance. Quick deployment means you start searching within 30 seconds of arrival – a critical advantage in golden-hour rescues.

#### Applications & Pain Points Solved

Scenario	Customer Pain Point	VS01 Solution
Earthquake / collapsed building rescue	Visual contact with victims buried under rubble is impossible; rescuers cannot enter unstable voids.	The 19.5mm camera head slides through tiny cracks. 5m telescopic pole reaches deep. Audio sensor detects tapping/crying across 400 m <sup>2</sup> . Two-way talk reassures victims.
Underground pipeline / well / elevator shaft inspection	Dark, narrow, and deep spaces (up to 6m or more) pose suffocation or fall risks for human inspectors.	6m slim cable + 5m pole provide safe access from ground level. 6 LED lights + 0.08Lux camera deliver clear video in pitch black. 7" monitor shows real-time conditions.
Vehicle undercarriage bomb / contraband check	Lying on the ground with a mirror is dangerous and misses hidden objects (e.g., magnetic bombs).	Pole extends to 5m, letting operator stand while scanning. 105° wide-angle lens covers entire undercarriage. Recorded video serves as evidence.
Customs / border smuggling	Large shipping containers or vehicle cabins cannot be	Probe inserts through small openings (e.g., vent holes). Audio sensor picks up hidden



interdiction	visually inspected without unloading or opening doors.	persons' breathing or movement. No need to unpack cargo.
Mine / tunnel collapse rescue	Poor lighting, dust, and debris block line-of-sight. Miners may be trapped behind rock falls.	Rugged camera head survives dust. LED lights cut through darkness. 300-400 m <sup>2</sup> audio range detects faint hammering or voices. Long battery life (7500mAh) supports multi-hour search.

## Q&A

Q1: Can the VS01 detect a person who is unconscious and not making any sound?

A: Yes. The VS01 relies primarily on its high-resolution visual camera with 6 LED lights to locate victims even if they are silent. The audio sensor is an additional aid for conscious survivors. For non-responsive persons, the operator scans the area visually using the 5m telescopic pole and 6m cable. The 5MP image sensor can detect subtle body movement or clothing color differences.

Q2: What is the maximum depth the cable can reach? And can I extend it?

A: The standard cable is 6 meters long. Combined with the 5-meter telescopic pole, the effective reach is up to 11 meters from the operator's position. The cable uses a 4-core FPD-Link III interface; while we do not recommend soldering extensions (signal degradation), you can contact the factory for custom-length cables (e.g., 10m or 15m) for special orders.

Q3: Does the monitor support live viewing on a PC or remote screen?

A: Yes. The monitor has an HDMI output (1920x1080) and a USB 2.0 port. You can connect it to a laptop (Windows/Mac) via a video capture dongle, or directly to a larger TV/monitor using an HDMI cable. For remote teams, you would need an external video transmitter (not included). The USB port also allows file transfer.

Q4: Can I use the VS01 underwater?

A: The camera head is rated IP67 (dust-tight and waterproof up to 1 meter for 30 minutes). It is suitable for inspecting flooded basements, sewer pipes, or shallow wells. However, the cable connector and monitor are NOT waterproof – keep them dry. For full submersible applications, please inquire about our underwater housing accessory.

Q5: What kind of memory card does it take, and how much recording time?

A: It accepts standard TF (microSD) cards from 1GB up to 64GB (Class 10 recommended). For a 32GB card, you can record approximately 4 hours of 1080P H.264 video, or store about 15,000 5MP JPG photos. The monitor also supports playback and deletion of files.

## Package Contents

VS01 Main Unit (19.5mm camera head with 6m cable) \*1

Telescopic probe pole (1.13m – 5m) \*1



7-inch HD monitor (with built-in 7500mAh battery) \*1

DC 12V 2A charger \*1

Headphone (black or white, random) \*1

USB 2.0 cable (for data transfer) \*1

HDMI cable (short) \*1

TF card (16GB or 32GB – optional, may not be included in base package) \*1

Carrying case (hard or soft shell) \*1

User manual (English) \*1

> Note: Actual package content may vary by order. Contact sales to confirm TF card inclusion and carrying case type.