



VM750D Body Worn Camera

Product Description

Copyright Information

Hytera is the trademark or registered trademark of Hytera Communications Corporation Limited (the Company) in the People's Republic of China (PRC) and/or other countries or areas. The Company retains the ownership of its trademarks and product names. All other trademarks and/or product names that may be used in this manual are properties of their respective owners.

The product described in this manual may include the Company's computer programs stored in memory or other media. Laws in PRC and/or other countries or areas protect the exclusive rights of the Company with respect to its computer programs. The purchase of this product shall not be deemed to grant, either directly or by implication, any rights to the purchaser regarding the Company's computer programs. The Company's computer programs may not be copied, modified, distributed, decompiled, or reverse-engineered in any manner without the prior written consent of the Company.

Disclaimer

The Company endeavors to achieve the accuracy and completeness of this manual, but no warranty of accuracy or reliability is given. All the specifications and designs are subject to change without notice due to continuous technological development. No part of this manual may be copied, modified, translated, or distributed in any manner without the prior written consent of the Company.

We do not guarantee, for any particular purpose, the accuracy, validity, timeliness, legitimacy or completeness of the third-party products and contents involved in this manual.

If you have any suggestions or would like to receive more information, please visit our website at:

<https://www.hytera.com>.

Contents

Documentation Information	1
1. Overview	3
1.1 Background	3
1.2 Product Introduction.....	3
1.3 Product Positioning.....	4
1.4 Product Layout.....	4
2. Highlights.....	5
2.1 160° Super Wide-Angle Camera	5
2.2 2.8-Inch Touchscreen	5
2.3 Anti-Shake Performance.....	5
2.4 NFC-enabled ID Switch	6
2.5 Fast Positioning	6
2.6 PoC Calls.....	6
2.7 AI-Driven Facial Recognition	6
2.8 Smart Security	7
2.9 Built-in Backup Battery	7
2.10 Professional Design.....	7
2.11 Unmatchable Ruggedness	8
2.12 Emergency Mode.....	8
3. Functions	9
3.1 Recording	9
3.1.1 Video Recording	9
3.1.2 Pre-recording.....	9
3.1.3 Post-recording	9
3.1.4 Data Protection.....	9
3.2 Audio Recording	9
3.3 Photo Taking	9
3.4 Emergency Mode.....	9
3.5 Emergency Alarm	10
3.5.1 Man Down Alarm	10
3.5.2 Disassembly Alarm	10
3.5.3 Camera Blocked Alarm	10
3.5.4 No Movement Alarm	10
3.6 Playback	10
3.7 PoC Calls.....	10
4. Solutions.....	11
4.1 Evidence Management Solution	11

4.1.1 IDS 11

4.1.2 DEM 11

4.2 Visualized Command and Dispatch Solution 12

5. Specifications 13

6. Abbreviations 16

Documentation Information

This section describes the audience, conventions, and revision history of this document.






Audience

This document is intended primarily for the following audiences:

- Sales and marketing engineers
- Technical support engineers

Documentation Conventions

Instruction Conventions

Icon	Description
 TIP	Indicates information that can help you make better use of your product.
 NOTE	Indicates references that can further describe the related topics.
 CAUTION	Indicates situations that could cause data loss or equipment damage.
 WARNING	Indicates situations that could cause minor personal injury.
 DANGER	Indicates situations that could cause major personal injury or even death.

Notation Conventions

Item	Description	Example
Boldface	Denotes menus, tabs, parameter names, window names, dialogue names, and hardware buttons.	To save the configuration, click Apply .
		The Log Level Settings dialogue box appears.
		Press the PTT key.
" "	Denotes messages, directories, file names, folder names, and parameter values.	The screen displays "Invalid Battery!".
		Open "PSS.exe".
		Go to "D:/opt/local".
>	Directs you to access a multi-level menu.	In the Port text box, enter "22".
		Go to File > New .

Item	Description	Example
<i>Italic</i>	Denotes document titles.	For details about using the DWS, refer to <i>Dispatch Workstation User Guide</i> .
Courier New	Denotes commands and their execution results.	To set the IP address, run the following command: <code>vos-cmd - m name IP</code>

Revision History

Document Version	Application Version	Release Date	Description
00	V1.0	September 2021	Initial release.

1. Overview

1.1 Background

Social governance is an important issue in most countries. To maintain social order and protect public rights, law enforcement has become a critical need. Yet during the process of law enforcement, officers may still encounter some problems.

- Insufficient situational awareness
 - Without real-time on-site videos, the command center fails to grasp the filed situation and allot resources after assigning missions.
 - In case of emergencies or collaborations with multiple parties, it is difficult to provide evidence for decision-making authorities.
- Spread of misinformation

In the Internet era, photos or videos of police-involved incident recorded by citizens tend to go viral online to cause rumor and undermine public trust in the police.
- Difficulties in post-event evidence management

After law enforcement, the evidence cannot be stored for further statistics and analysis.
- Difficulties in cooperation
 - The task assignments can be informed only by phone calls or personally conveyed one by one.
 - Commands for a linked task cannot be sent to various parities at the same time especially in emergencies where fast decisions and commands are critical.
 - Officers cannot make group calls to share information and play teamwork during a task in time.
- Difficulties in supervision
 - It is difficult to manage, monitor, and evaluate the work of the officers who are dispersed in a wide range.
 - It is difficult to supervise the law enforcement officers' misconducts such as misuse of force and corruption.
- Difficulties in device maintenance

Different departments may work independently to purchase the solutions for software, hardware, traffic, and maintenance. Without a unified planning and deployment, problems such as longer construction period, repeated construction, and maintenance difficulties may appear.

1.2 Product Introduction

The VM750D body worn camera (BWC) is an all-in-one device of Hytera, which is designed to capture, store, and

upload evidence such as pictures, videos, and audios in the field, and initiate PTT calls during law enforcement operations. The VM750D aims to build trust with the public, promote officer accountability, and enhance transparency between the police and the public.

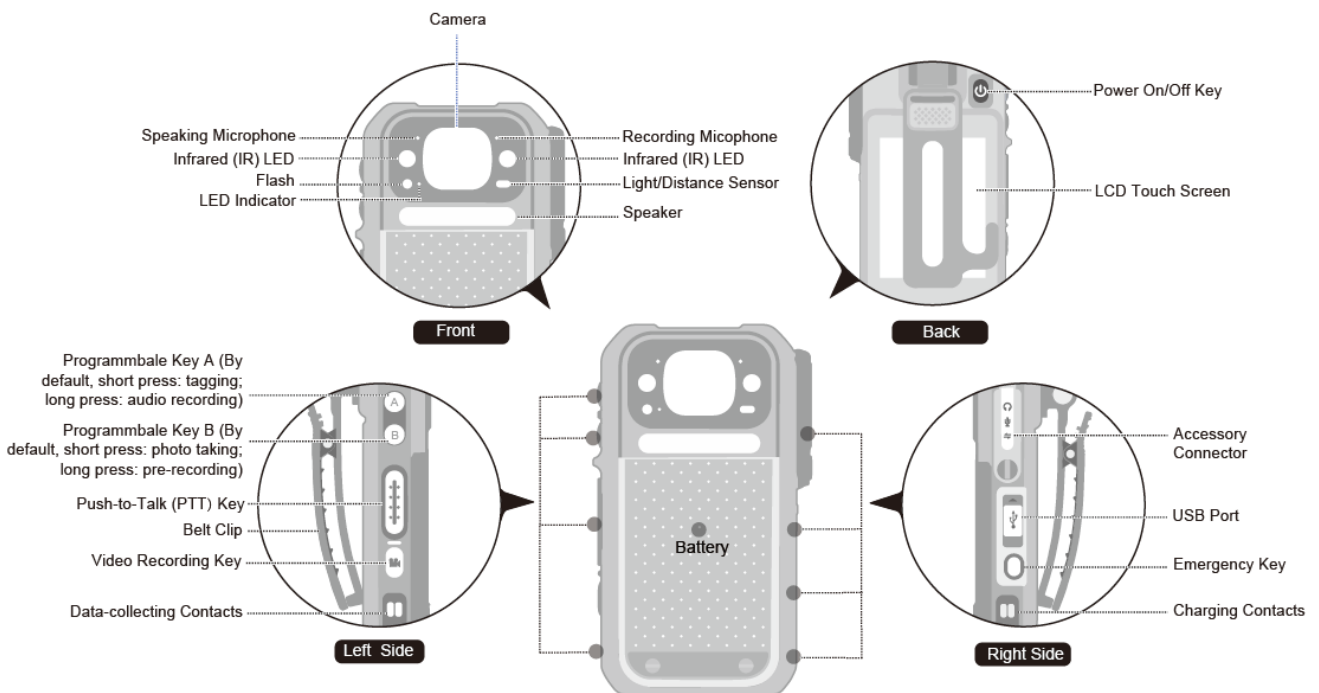
With a 160 °diagonal field of view (DFOV), the VM750D expands users' view in a significant way and captures more details than their eyes can see. The built-in smart multi-functional sensor can detect what is happening and start an automatic alarm in case of blocked camera, unauthorized disassembly, no movement within preset time, and an officer who is down. It can also stream the real-time video in the field over 3G, 4G, or WLAN network to the control center for better situational awareness. The evidence management solution allows users to securely collect, manage, and share all the data from the VM750D.

1.3 Product Positioning

The VM750D is ideal for the following scenarios:

- Public safety: police, urban management, judiciary, firefighting, and so on.
- Business: property management, supermarket, hotel, construction, and so on.
- Energy: electric power, petrochemical industry, and so on.

1.4 Product Layout



2. Highlights

2.1 160° Super Wide-Angle Camera

Benefits

The super wide-angle camera allows users to capture more objects in a broader scope. Even at most one meter away, the VM750D can capture the hand actions at close quarters.

Key Features

- The lens protector features high transmittance with 12-layer films, and is resistant to fingerprint, oil stain, and sweat stain with the AF coating.
- Prime lens, full glass, and infrared (IR) night vision mode.
- Aperture: F/2.3.
- Field of view: 160° diagonal, 127° horizontal, and 67° vertical.
- The VM750D supports 1080p video recording and pulling, and 16 MP photo taking.

2.2 2.8-Inch Touchscreen

Benefits

The 2.8-inch touchscreen is large enough for readability and easy operation.

Key Features

- Colored TFT-LCD touch screen.
- Resolution: 240 x 320 QVGA
- Contrast > 1000:1
- The scratchproof screen supports operations with wet hands or gloves.

2.3 Anti-Shake Performance

Benefits

The digital image stabilization (EIS) allows users to always capture clear, smooth, and steady videos at up to 1080p at a closer or longer range.

Key Features

- The VM750D adopts 6-axis stabilizer.
- The built-in acceleration sensor and gyroscope can detect the shake amplitude.
- The software algorithm is adopted to calculate image displacement and properly crop the image.

2.4 NFC-enabled ID Switch

Benefits

The near field communication (NFC) realizes fast ID switch so that users can use the same VM750D in different duty time.

Key Features

- The NFC chip is built in the VM750D.
- The VM750D with apps can provide more services such as attendance check and ID switch.

2.5 Fast Positioning

Benefits

The VM750D delivers precise location quickly.

Key Features

- The VM750D supports GPS, GLONASS, BDS, and A-GPS positioning.
- Based on satellite positioning, the VM750D can connect to the LTE base stations or WLAN for assistant positioning. This can realize accurate indoor positioning.
- After the **Emergency** key is pressed, the VM750D sends its location to the command center.
- With the Hytera PoC solution, the VM750D can report its location to the command center, allowing the dispatcher to view the real-time location, play back historical tracks, set electronic fences, and manage routes.

2.6 PoC Calls

Benefits

The VM750D allows users to initiate PTT calls over the carrier's network without the extra network infrastructure.

Key Features

- The VM750D can make a PTT call over 2G, 3G, LTE, and WLAN networks.
- The VM750D has a SIM card slot, which allows users to insert a Nano SIM card for accessing network services.
- For the supported frequency bands, see [5 Specifications](#).
- With the Hytera PoC solution, the VM750D can deliver instant PTT voice calls and dispatch services.

2.7 AI-Driven Facial Recognition

Benefits

The VM750D can recognize faces of people who are moving.

Key Features

- The AI-driven facial recognition algorithm is adopted.
- The offline matching between the local faces and the captured faces is supported.
- The online matching between faces on the server and the captured faces is supported.
- There are reminders for matching results.

2.8 Smart Security

Benefits

In case the camera is blocked, stays still beyond preset time, or disassembled without authorization, or the officer lays on the ground, the VM750D can automatically send an alarm to the command center.

Key Features

- With built-in sensors such as light sensor and gravity sensor, the VM750D can detect the device status.
- The VM750D can automatically send an alarm to the control center.
- The videos shot by the VM750D can be pulled by the dispatcher.

2.9 Built-in Backup Battery

Benefits

The battery allows users to replace the main battery without interrupting the ongoing recording or turning off the VM750D.

Key Features

The 50 mAh built-in battery allows three to five minutes of continuous video recording during main battery replacement.

2.10 Professional Design

Benefits

With the intuitive touchscreen and ergonomic designs, the VM750D is professional and easy to operate.

Key Features

- The housing adopts two-shot injection molding to enhance quality and aesthetic appeal.
- The **PTT** key outlined by orange and the orange **Emergency** key are highly visible.
- The oversized and textured **PTT** key is easy to locate and use.
- The anti-slip textured housing protects the device from accidental drop.
- The belt clip is lightweight and comfortable to wear.

- The multiple interfaces on the side are used to connect more accessories.
- The simple and intuitive user interface helps users focus on the mission itself.

2.11 Unmatchable Ruggedness

Benefits

The VM750D is crafted to survive in extreme environments, such as dust and rain.

Key Features

- Built with the impact-resistant polycarbonate (PC) plastics and high rigidity structure, the VM750D (with belt clip) is tested and proved to withstand 3 drops from 2 meters on each of the faces.
- The screen and keypad are protected by raised ridges around from smash in drops
- The **PTT** key is tested with 400,000 presses.
- Rated at IP68, the VM750D is well-protected against dust and can survive 1-meter submersion for two hours.
- Certificated to MIL-TD-810 G, the VM750D can work in high temperature (up to 60°C) and high humidity (95% relative humidity) environments.

2.12 Emergency Mode

Benefits

In case of an emergency, users can press the **Emergency** key to turn to their companion or the dispatcher for assistance.

Key Features

- With one press of the **Emergency** key, an emergency call is sent to the pre-configured contact.
- The emergency call has the highest priority. It can interrupt any ongoing calls and be answered automatically.
- After an emergency call is initiated, the location of the VM750D will be automatically sent and displayed on the map of Hytera PoC solution.

3. Functions

3.1 Recording

3.1.1 Video Recording

The VM750D allows users to capture the video by one touch, and tag the footage as important evidence in the field.

3.1.2 Pre-recording

The VM750D automatically captures the video and audio at an earlier time than the user actually presses the **Video Recording** key.



The pre-recording time can be preset according to actual needs.

3.1.3 Post-recording

The VM750D automatically continues recording for a preset amount of time after the recording is manually stopped.



The post-recording time can be preset according to actual needs.

3.1.4 Data Protection

If the ongoing recording is interrupted due to battery power failure or device malfunction, the VM750D automatically saves the recording files to ensure data integrity.

3.2 Audio Recording

The VM750D allows users to record the on-site audio such as voice calls by one touch, or tag the audio files as important evidence.

3.3 Photo Taking

The VM750D allows users to capture the photo by one touch, or take snapshot during the video recording.

3.4 Emergency Mode

In case of an emergency, users can press the **Emergency** key to start tagged video recording and upload the real-time video to the command center.

3.5 Emergency Alarm

3.5.1 Man Down Alarm

When tilted by an angle equal to or greater than 60 °for one minute or longer, the VM750D will automatically send an alarm to the command center.

3.5.2 Disassembly Alarm

In power-on mode, when the battery is detached or the housing is removed, the VM750D will automatically send an alarm to the command center.

3.5.3 Camera Blocked Alarm

In power-on mode, when the camera is blocked, the VM750D will automatically send an alarm to the command center.

3.5.4 No Movement Alarm

When keeping motionless for a preset duration, the VM750D will automatically send an alarm to the command center.

3.6 Playback

The VM750D allows users to play back videos, audios, or view photos in the local gallery.

3.7 PoC Calls

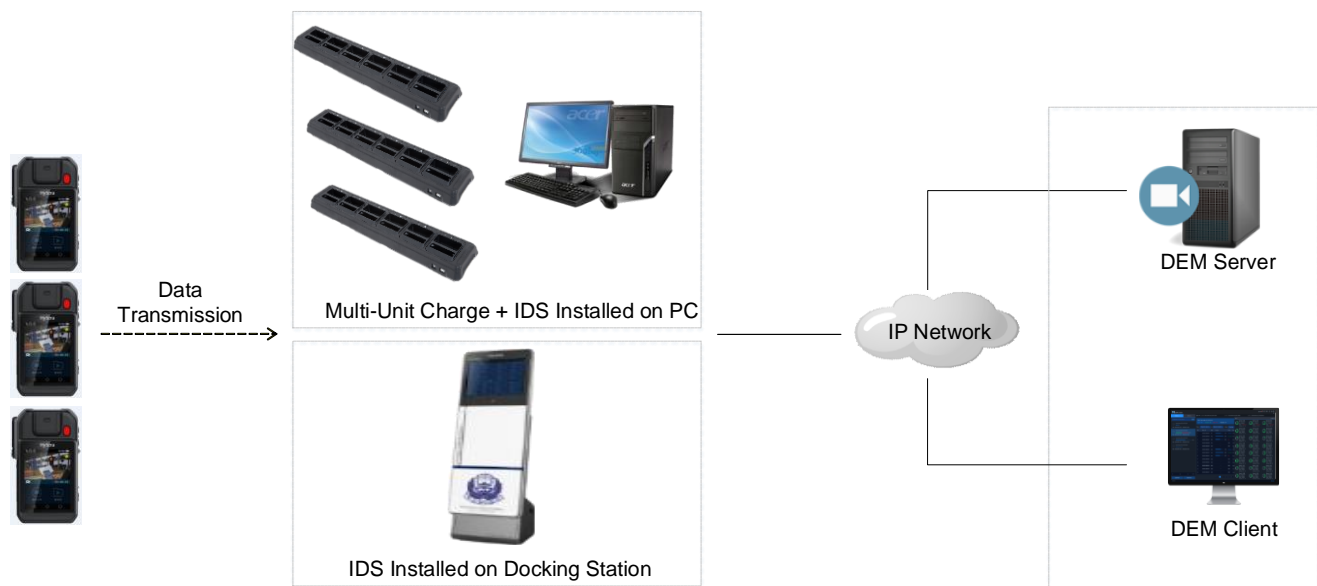
The VM750D allows users to make a private or group call by one press of the **PTT** key. For details, refer to the *Hytera VM750D Body Worn Camera User Manual*.

4. Solutions

Hytera offers one-stop BWC solutions to comprehensively improve your experience.

4.1 Evidence Management Solution

The evidence management solution is used to collect, transfer, store, and manage the videos, pictures, and audio files from BWCs. This solution consists of BWCs, multi-unit chargers, integrated device station (IDS), and digital evidence management (DEM), as shown in the following figure.



4.1.1 IDS

The IDS can automatically collect and store videos, pictures, and audios files from the BWC. It greatly saves users' time and effort. With intuitive GUI, users can view and upload evidence simply and efficiently.

The highlights of the IDS are as follows:

- Standardize the data collection process.
- Reduce labor costs and human intervention.
- Manage the local data, including playing back, editing, and tagging.
- Export data for archive and storage.
- Search for data through web pages.
- Upload data to digital evidence management platform.

4.1.2 DEM

The DEM makes it simple to manage the massive data from IDSs dispersed in different locations in a single and secure

system. It enhances collaboration inside and outside the organization.

The highlights of the DEM are as follows:

- Support centralized evidence management and system cascading.
- Share evidence with other organizations for collaboration.
- On the e-map, play back tracks stored in pictures and videos.
- Perform smart statistics on the data.
- Monitor user operations and keep data intact.

4.2 Visualized Command and Dispatch Solution

Hytera Hytalk Sight (HHS) is a command and dispatch system that can pull the audio and videos from the BWC.

The BWC can also upload the real-time video to the HHS for better situational awareness, so the control center can make a quick response.

The highlights of the HHS are as follows:

- Real-time video streaming for improved situational awareness.
- Group call and instant messages for better communications.
- Positioning on e-map.
- File query.
- Alarm linkage.

5. Specifications

Parameter		Specification
Dimensions (H x W x D)		115.5 mm x 61 mm x 26 mm
Weight (with battery)		210 g
Camera	Lens	<ul style="list-style-type: none"> ● Prime lens, IR night vision mode. ● FOV: 127 °horizontal, 160 °diagonal, and 67 °vertical
	Focus length	0.5 m to infinity
Battery	Battery life (continuous video recording)	≥ 11 hours (720p@30fps)
	Capacity	3,500 mAh
	Charging time	≤ 4 hours
Display	Size	2.8 inches
	Resolution	240 x 320 QVGA
	Type	TFT-LCD color screen
Storage	RAM	2 GB
	ROM	16 GB
	Capacity	<ul style="list-style-type: none"> ● 32 GB (standard) ● 64 GB/128 GB (optional)
	Video format	MP4
	Video resolution	<ul style="list-style-type: none"> ● 480p@30fps ● 720p@30fps/60fps ● 1080p@30fps

Parameter		Specification
	Video encoding format	Compatibility/high efficiency
	Audio format	AAC
	Photo format	JPG
	Photo resolution	16 MP
Frequency range	Versions for Europe, Asia-Pacific region, and Africa	<ul style="list-style-type: none"> ● GSM: 850 MHz/900 MHz/1800 MHz/1900 MHz ● TD-SCDMA: B34/B39 ● CDMA: BC0 ● WCDMA: B1/B3/B5/B8 ● LTE TDD: B34/B38/B39/B40/B41 ● FDD-LTE: B1/B3/B5/B7/B8/B20/B26/B28
	American version	<ul style="list-style-type: none"> ● GSM: 850 MHz/1900 MHz ● WCDMA: B2/B4/B5 ● TDD-LTE: B38/B40/B41 ● FDD-LTE: B2/B4/B5/B7/B12/B13/B17/B26/B28
Connection	WLAN	802.11 b/g/n/ac Support hotspot, STA mode, and WLAN Direct.
	BT	BT 4.2 Support voice and BLE.
	SIM card slot	1
	Micro USB port	Support OTG.
Positioning		GPS/BDS/GLONASS/A-GPS
Supplementary Features	LED indicator	1, three-color LED
	IR LED	2

Parameter		Specification
	Night vision	<ul style="list-style-type: none"> Identifies distinguishing features within 5 meters Recognizes the object within 10 meters
Connectivity	Wired RSM	Supported
	BT RSM	Supported
	Radio	PD78X
Reliability	Ingress protection	IP68
	Drop resistance	2 meters (with belt clip)
	ESD	<ul style="list-style-type: none"> ± 6 kV (contact) ± 12 kV (air)
	Operating temperature	-30°C to 60°C
	Storage temperature	-40°C to 85°C
Certificate		<ul style="list-style-type: none"> CE FCC IC MIL-STD-810G
Accessories	Standard	USB cable, power adapter, belt clip, battery, user manual
	Optional	Desktop charger, multi-unit charger, multi-unit charger shelf, camera, wired earpiece, BT earpiece, PTT ring, coils for RSM, and magnetic belt clip.

6. Abbreviations

Abbreviation	Full Name
CE	Conformité Européenne
DEM	Digital Evidence Management
DFOV	Diagonal Field of View
EIS	Electric Image Stabilization
FPS	Frame Per Second
GPS	Global Positioning System
HD	High Definition
IDS	Integrated Device Station
IP	Ingress Protection
PoC	Push-to-Talk over Cellular
PTT	Push-to-Talk
RSM	Remote Speaker Microphone
SIM	Subscriber Identity Module
USB	Universal Serial Bus



is the trademark or registered trademark of Hytera Communications Corporation Limited.

© 2021 Hytera Communications Corporation Limited. All Rights Reserved.

Address: Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District,
Shenzhen, People's Republic of China

Postcode: 518057

<https://www.hytera.com>