



# DVR Product Series

Flexible Technical Surveillance Solutions





# Booz Allen's Family of Digital Video Recorders

IN SENSITIVE TECHNICAL SURVEILLANCE OPERATIONS, MILITARY AND LAW ENFORCEMENT PERSONNEL RELY ON DIGITAL VIDEO RECORDERS (DVR) THAT ARE EASY TO USE, COMPACT, DURABLE AND ABLE TO PROVIDE CONSISTENTLY HIGH-QUALITY AUDIO AND VIDEO PERFORMANCE. FROM MOBILE TO COVERT SURVEILLANCE, TRADITIONAL RECORDING DEVICES DO NOT PROVIDE USERS WITH THE FLEXIBILITY AND DURABILITY TO MEET MISSION NEEDS, RESULTING IN HOURS OF UNNEEDED FOOTAGE, PERSISTENT DRAINS ON BATTERY POWER AND DEVICES DAMAGED FROM SENSITIVITY TO HARSH ENVIRONMENTAL CONDITIONS. GIVEN THE EVER-CHANGING NATURE OF SURVEILLANCE, PERSONNEL NEED THE ABILITY TO ACTIVATE A DEVICE REMOTELY, CUSTOMIZE ITS RECORDING AND RETRIEVING FEATURES AND PLACE IT IN SOMETIMES RUGGED AND INCONSPICUOUS LOCATIONS.

## Tailored to Your Surveillance Mission Needs

Booz Allen Hamilton, a leading strategy and technology consulting firm, can help federal agencies meet complex surveillance mission needs. Our family of remote monitoring devices offers real-time collection capabilities with high-quality video performance in a variety of configurations to adapt to the complexities of different surveillance mission scenarios. Booz Allen's DVR products are user friendly, lightweight and highly configurable for application-specific requirements.

Booz Allen has developed its DVRs with specialized activation features, such as

an external trigger or scheduler, that reinforce a user's ability to tailor recording settings to the mission's exact time and duration without sacrificing resources or applicability. In addition, each model offers a setting to activate the device based on motion detection, which is useful for missions that require recording at times based solely on nearby movement. Operators can also configure the format and the way in which recorded materials are transmitted back to the end user. Each device can allow users to retrieve recorded video automatically for playback at a later date without physically touching the DVR. Additionally, users can configure the device to stream live video over radio frequency.

## Selecting the DVR for Your Most Pressing Challenges

In selecting the device that's right for your mission needs, Booz Allen provides the right balance in form factor, cost and configurability. Users choose the feature-set and size that make sense for their mission or application. From simple to complex, Booz Allen's three DVRs balance features against price point. The simpler models are small and less conspicuous, while the larger DVRs are more robust, offering advanced feature sets.

## MICRO SIMPLE DIGITAL VIDEO RECORDER (USDVR)

The simplest version in our DVR family, the uSDVR, is a standard definition (SD) recorder with two channels of audio, which was developed specifically for mobile-based surveillance. It comes with a docking station that provides additional battery capacity, allowing users to greatly extend record times without access to external power. An external trigger also makes this device ideal for mobile surveillance operations. It supports industry standards and customer-supplied NTSC/PAL cameras with larger, standard connectors.

### uSDVR Features

- + Built-in Lithium-polymer battery for portable recording
- + Li-poly battery rechargeable via USB or external power input
- + Easy access to SD memory (up to 64GB) and USB connector
- + Adapter cable for standard A/V connectors (ideal for concealments)
- + Camera or NTSC video input video output for a monitor
- + Sources 12 VDC power for external camera (camera must be externally powered when uSDVR operates from its internal battery)
- + Stereo audio input and output (line level) Record/Stop slide switch
- + External slide-switch dongle overrides uSDVR internal slide switch
- + On-board web-based configuration utility that allows graphical configuration of the uSDVR without a separate software installation
- + Docking station with standard, built-in A/V connectors, and two Li-poly batteries provide extended recording time



## MOBILE DIGITAL VIDEO RECORDER (MDVR)

The mDVR is an SD recorder that's an ideal option for general-purpose surveillance. With features that range from Global Positioning System (GPS) tracking and two channels of audio to mature recording features and an external trigger, the mDVR features advanced configurability to support specific user requirements. The device includes an on-board, web-based configuration utility that allows users to graphically configure the device without a separate software installation. There are two options for battery consumption: internal battery and externally supplied power.

### mDVR Features

- + Removable internal microSD card for hours of recorded NTSC video
- + H.264 video recorded to multiple industry standard formats (MKV, ASF, FLV, M4V, and TS)
- + External switch with built-in vibrator to provide non-visual recording confirmation
- + Two "stub" moisture-resistant microphones for smallest package size
- + Quick-swap secure-latching Harwin-style connectors for easy exchange of the included microphones
- + Built-in lithium-ion rechargeable battery
- + Built-in scheduler for planned unattended recording
- + On-board web-based configuration utility that allows graphical configuration without a separate software installation
- + USB peripheral port that allows optional use of Wi-Fi, 4G, wired Ethernet, and GSM network connectivity
- + Wide range of power input from 8–36 VDC
- + Configurable camera power source
- + Region-of-Interest motion detection
- + Optional built-in GPS receiver for tracking
- + Optional locking connectors for power and GPS modules



## MICRO HIGH DEFINITION DIGITAL VIDEO RECORDER (UHDVR)

Booz Allen's uHDVR is an easy-to-use, low-power, lightweight, high definition (HD) DVR with a built-in CMOS imager and lens (the lens is also available with an infrared filter). With its small size, easy external power support, and external trigger, the uHDVR is ideal for covert surveillance missions that require placing a device in a hidden or embedded location. The uHDVR includes an integrated HD camera and two internal microphones. The HD recording options (HD 1080p 30fps and 720p 60fps) provide users high quality video without sacrificing size and weight. The uHDVR has the smallest form factor (1.1 x 1.1 x 1.0 in with enclosure) of any device within the DVR family. Its compact nature allows personnel to use smaller batteries and insert the device into smaller places where traditional DVRs wouldn't fit.

### uHDVR Features

#### ***Simplest Operating Mode:***

- + Apply power—recording starts
- + Remove power—recording stops
- + Remove uSD card and play on PC
- + Use optional record/stop switch dongle

#### ***Sensor Net Option:***

The uHDVR is designed to work with Booz Allen's Sensor Net, which is a long-range, low-power, wireless sensing and queuing system.

- + Cabled to tracking tag
- + Uses tag to power uHDVR on/off
- + Uses tag to control record/stop function
- + Allows remote record start/stop using a radio frequency link
- + Sends picture to command center
- + Uses geo-track if mobile

#### ***PC Attached Option:***

- + Connects to PC via USB cable
- + Uses PC to control configuration and recording
- + Allows direct view of recorded video on PC

#### ***Developmental Options:***

- + Internal battery
- + Externally triggered record/stop
- + Stereo audio input
- + USB host interface to support Wired Ethernet, Wi-Fi, GSM





	mDVR	uSDVR	uHDVR
<b>Size (W X L Xh)</b>	2.4" x 3.2" x 0.7" (W x D x H)	1.85" x 3.16" x 0.73" (W x L x H)	1.1" x 1.1" x 1.0" (W x L x H)
<b>Weight</b>	125 grams	85 grams	30 grams
<b>Input Power</b>	8-36V, 3.5W or Internal Battery	9 VDC – 36 VDC    Active: 1W Maximum; Standby: 50 Uw Maximum; Charging Internal Battery: 2.5W Maximum (Power Numbers Do Not Include Power To The Camera)	3.5V to 6V DC, 2.5W maximum (1.6W @ 720p, 30fps; 2.5W @ 1080p, 30fps)
<b>Internal Battery</b>	Rechargeable Li-ion, 1AH, 3.7V	Rechargeable Li-ion, 1AH, 3.7V in uSDVR, 4.6AH with optional Dock	Optional
<b>Storage</b>	Removable 32GB uSD card	Removable 32GB SD card	Removable 64GB uSD card
<b>Audio Input</b>	2 channel Line or Mic inputs	2 channel Line inputs	Integrated 2 channel microphones
<b>Video Input</b>	NTSC/PAL analog	NTSC analog	Integrated camera
<b>External Camera Power</b>	5,9,12V @ 1.4W	12 VDC @ 3.5 W	N/A, Integrated camera
<b>Live Video Output</b>	N/A	1Vpp	N/A
<b>Live Audio Output</b>	N/A	Line Level, 20 Hz to 3.3KHz	N/A
<b>Remote On/Off</b>	Wired	Wired	Wired, Magnetic
<b>Video Format</b>	H.264 (MKV, ASF, FLV, M4V, TS), 720x480 NTSC 720x576 Pal	H.264, MKV 720x480 Interlaced	H.264, MKV 1920x1080 Progressive 1280x720 Progressive
<b>Frame Rate</b>	Up to 30 fps interlaced, User programmable	Up to 30 fps interlaced, User programmable	1080p up to 30 fps 720P Up To 60 fps Progressive
<b>Audio Format</b>	96 or 48 Ksps stereo or monaural AAC-LC	MPEG4-Audio 8ksps	AAC-LC
<b>Scheduler</b>	1 min resolution, 1 year advanced	Optional	Optional
<b>Configuration</b>	GUI thru USB2.0	GUI thru USB2.0	GUI thru USB2.0
<b>802.11A/B/G</b>	Optional	-	Optional
<b>Wired Ethernet</b>	Optional	-	Optional
<b>GPS</b>	Optional	Optional	Optional
<b>GSM</b>	Optional	-	Optional
<b>Sensor Net Link</b>	Optional	Optional	Optional
<b>Motion Detect</b>	Optional, ROI	-	-
<b>Face Detect</b>	No	No	Yes
<b>Vcom Compatible?</b>	Yes	Yes	No



## Unique Specifications

### mDVR

- + **Microphones:** 2 stub microphones (100 Hz to 5.5 Hz), sensitivity -53 dB, +/- 2 dB 2 Gam microphone modules with 3 ft of cable (same specifications as stub microphone)
- + **Switch:** Built-in momentary push button
- + **Microphone Connectors:** 2, 3-pin Harwin (bias, signal, ground)
- + **Remote Switch and Power Connector:** 4-pin (2x2) male Harwin connector—pins provide Power, Ground, Switch Sense, and Vibrator Activate. 8–36 VDC power input allowed on power pin
- + **Camera Connector:** 4-pin male Harwin—pins provide NTSC composite video input, camera power output (5, 9, and 12 VDC at up to 1.4W), ground, and secondary power input
- + **USB Connector:** MicroUSB for connection to a PC or to a USB host adapter for peripherals
- + **Video Compression:** H.264 with user-selectable bit rate and resolution. Supported file formats include MKV, ASF, FLV, M4V, and TS

mDVR KIT CONTENTS	OPTIONAL ACCESSORIES
mDVR	GPS Antenna and Cable
2, Stub Microphones	CCD Camera and Cable
2, GAM Microphones with 3ft. Cable	USB 4G/GSM Adapter
32GB usD Flash Card	16, 32 or 64GB uSD Card
uSD Card Reader	Wired GAM Microphones with 3ft. Cable
USB Cable (type-A to micro-B)	Accessory Break-Out Boards (solderable)
User's Manual	
Quick-Start Guide	
Pelican Case	



## uSDVR

- + **Internal Battery Capacity:** 1AH standalone or 4.6AH with Dock
- + **Recorder Memory:** 64 GB, removable SD Card
- + **Memory File System:** Resilient against power failure (no missing data)
- + **Video Recording Resolution:** 720 x 480
- + **Video Recording Frame Rate:** 30 fps
- + **Audio Sampling:** 8 Ksps
- + **Audio Compression:** MPEG4-Audio profile
- + **Recorder Control:** Slide switch, external dongle, or Mark I or II
- + **Configuration Interface:** USB 2.0
- + **PC Operating System:** Windows XP or Windows 7 (32 and 64 bit)



SPECIFICATIONS	USDVR DOCKING STATION
Size	3.13" x 4.47" x 1.58" (W x L x H)
Power	9 VDC - 46 VDC: 5W (Charging internal batteries only); 12W (uSDVR recording, batteries charging, and powered camera)
Batteries	Two Li-poly, 13.4 W-Hr
Input Power Connector	Tajimi part # R05-R2M (mates with R05-PB2F)
Power to Camera	12 VDC, 3.5 W maximum
Camera Power Connector	Tajimi part # R05-R2F (mates with R05-PB2M)
Video Connectors	BNC
Audio Connectors	3.5mm Stereo Jacks (mate with 3.5mm Stereo Plugs)

## uHDVR

- + **Recording Time:** Determined by power source capacity, uSD card size, and video recording format (about 2 GB/hr, 1080p, 30 FPS, H.264/MPEG4)
- + **Battery Options:** External power can be supplied by microUSB battery pack or via provided cable
- + **Recorder Memory:** 64 GB, removable SD Card
- + **Memory File System:** Resilient against power failure (no missing data)
- + **Video Recording Resolution:** up to 1080p, 30fps or 720p, 60fps
- + **Recorder Control:** Magnet, external dongle, or by applying power
- + **Configuration Interface:** USB 2.0
- + **PC Operating System:** Windows XP or Windows 7 (32 and 64 bit)
- + **Integrated CMOS imager and stereo microphones**



### **About Booz Allen**

Booz Allen Hamilton has been at the forefront of strategy and technology consulting for 100 years. Today, the firm provides services primarily to the US government in defense, intelligence, and civil markets, and to major corporations, institutions, and not-for-profit organizations. Booz Allen offers clients deep functional knowledge spanning consulting, analytics, mission operations, technology, and engineering—which it combines with specialized expertise in clients' mission and domain areas to help solve their toughest problems.

Booz Allen is headquartered in McLean, Virginia, employs approximately 23,000 people, and had revenue of \$5.76 billion for the 12 months ended March 31, 2013. In 2014, Booz Allen celebrates its 100th anniversary year. To learn more, visit [www.boozallen.com](http://www.boozallen.com). (NYSE: BAH)

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