

City of Memphis Police
Law Enforcement Event Video Documentation Solution Functional Specifications

Spec ID	Specification Description	Priority	Response	Comment
General				
1	The system is able to use cell connections for data upload.	I	Not Answered	
2	The system supports wireless communication over a CJIS compliant 802.11 network (Wi-Fi).	I	Not Answered	
3	The system supports wireless communication over cell networks.	I	Not Answered	
4	Wi-Fi does not broadcast SSID for security purposes.	I	Not Answered	
5	Data can be uploaded to storage using both cellular and Wi-Fi from the vehicle.	I	Not Answered	
6	The system security complies with applicable CJIS standards.	I	Not Answered	
7	The system provides the capability for video viewing using an iPhone application.	I	Not Answered	
8	The system provides the capability for video viewing using an Android application.	I	Not Answered	
9	The system can upload phone based video to the system storage and associate with the incident/case.	I	Not Answered	
10	The system software will associate and display BWC video and ICV video together on a dashboard.	I	Not Answered	
11	The system software will associate and display GPS location and video together on a dashboard.	I	Not Answered	
12	The system provides status of devices.	I	Not Answered	
13	The system provides status of officers.	I	Not Answered	
14	The system will interface with TriTech RMS version 4.5 to the video system for event marking.	I	Not Answered	
The system will interface with TriTech RMS to provide the following parameters to the video system:				
15	unit status	I	Not Answered	
16	event type	I	Not Answered	
17	unit ID	I	Not Answered	
18	event number	I	Not Answered	
19	case number	I	Not Answered	
20	The video system provides the capability to furnish to the RMS system a file pointer to the video file.	I	Not Answered	
21	The system accepts time standard from a master clock device.	I	Not Answered	
22	The time standard synchronizes across all components.	I	Not Answered	
23	The system time will auto-adjust for Daylight Savings Time (DST) without impacting system operation.	I	Not Answered	
24	All times are displayed and stored as local time.	I	Not Answered	
25	The system can make copies of the video via DVD write drive or file link.	I	Not Answered	
26	The system has the ability to share views of the video via a Web link.	M	Not Answered	
27	When offloading a video for viewing, the video is recorded in a non-proprietary format.	I	Not Answered	
28	The system can share video with an authorized receiver with a temporary URL.	I	Not Answered	
29	The system has the capability to categorize video.	I	Not Answered	
30	The system has the capability to categorize video via dropdown menu.	I	Not Answered	
31	The system has the capability to combine video streams as a picture in picture display.	I	Not Answered	
32	The system has the capability to combine video streams into a single video file.	I	Not Answered	
33	The vendor will provide user training.	I	Not Answered	
34	The vendor will provide train the trainer training.	I	Not Answered	
35	The vendor will provide administrative system training.	I	Not Answered	
36	The system supports pre-event recording.	I	Not Answered	
37	Pre-event recording may be disabled by an authorized user.	I	Not Answered	
38	The system will integrate with IOS and Android devices.	I	Not Answered	
39	The system provides for a battery backup option when the vehicle battery goes below a certain voltage.	I	Not Answered	
40	The system supports the user-generated alert to dispatch for special attention.	I	Not Answered	
41	The system will support an interface with CAD for the purpose of associating the incident number with the video.	I	Not Answered	
42	The system will support an interface with CAD for the purpose of associating the case number with the video.	I	Not Answered	
43	The system will support an interface with CAD for the purpose of associating the nature code with the video.	I	Not Answered	
44	When integrated with CAD, the system will obtain the case number from CAD and load into metadata.	I	Not Answered	

City of Memphis Police
Law Enforcement Event Video Documentation Solution Functional Specifications

Spec ID	Specification Description	Priority	Response	Comment
45	The system will support an interface with RMS for the purpose of associating video with the RMS case	I	Not Answered	
46	The system will select all the video sources that pertain to the incident and link them all together with the case using one number.	I	Not Answered	
47	The system can be configured to establish a delete schedule per agency established policy.	I	Not Answered	
48	The system will link the ICV and the BWC on the server.	I	Not Answered	
49	The system will delete successfully downloaded video files from the BWC once download occurs and is verified as successfully downloaded.	I	Not Answered	
50	The system supports the automatic upload of video files.	I	Not Answered	
51	The system will provide a "low charge" indicator when the component battery is nearing depletion.	I	Not Answered	
52	Metadata may be appended to the video.	I	Not Answered	
53	Metadata may be appended to the video after uploading.	I	Not Answered	
54	The system supports redaction and auto redaction.	I	Not Answered	
55	Adding metadata does not alter the video.	M	Not Answered	
56	An authorized user is able to add case number to the metadata of a video using the integrated software.	I	Not Answered	
57	The system will accept an import of user data in MS Excel format.	I	Not Answered	
58	The system will accept an import of user data in text file format.	I	Not Answered	
59	The system records in a nonproprietary format.	M	Not Answered	
60	The system records in a digital format.	I	Not Answered	
61	The system synchronizes audio with the video of the ICV and BWC.	I	Not Answered	
62	The system is capable of synchronizing the video with GPS location of the ICV and BWC.	I	Not Answered	
63	The system will record audio, video, and GPS, and merge the data and display.	I	Not Answered	
64	The vendor is capable of partnering with other vendors, if necessary, to provide the services needed for the City of Memphis.	I	Not Answered	
65	The system is designed to prevent the video from being viewed or downloaded from non-authorized accounts or workstations.	M	Not Answered	
66	Cameras are capable of continuous recording. Triggers create an event.	I	Not Answered	
67	Cameras are capable of continuous recording. The officer can create an event.	I	Not Answered	
68	Cameras can be configured with default settings. Changing the default settings is restricted to authorized user.	I	Not Answered	
69	The user is able to perform an operational test of video equipment and software at the beginning of the shift.	I	Not Answered	
70	The system utilizes active directory for login coordination.	I	Not Answered	
71	The system will upload to a secure CJIS-compliant web hosting solution.	I	Not Answered	
72	If uploading to a secure Web-hosting solution, the data is transmitted and stored in a CJIS-compliant manner.	I	Not Answered	
73	The BWC is integrated to the ICV; when the ICV is activated, recording will automatically to start on the BWC.	I	Not Answered	
74	The system will synchronize the BWC and ICV video recording.	I	Not Answered	
75	The system is capable of implementing video file retention policies.	I	Not Answered	
76	The system will apply the video file retention policies automatically.	I	Not Answered	
77	All hardware and software on commercially available enterprise level platform.	I	Not Answered	
78	The query function will utilize keyword search.	I	Not Answered	
79	Video file names are unique.	I	Not Answered	
Parameters for inquiry are:				
80	start time	I	Not Answered	
81	date and end time	I	Not Answered	
82	user name	I	Not Answered	
83	activation trigger		Not Answered	
84	Dashboard can be set up by nature, groups, Active Directory integration to suit the hierarchy of the department.	I	Not Answered	
85	Web-based links to video can be generated and sent via email.	I	Not Answered	
86	Web-based links can be set to expire by Administrator.	I	Not Answered	
87	Web-based links can be audited by the Administrator.	I	Not Answered	
88	The system provides the capability to mark the video for reference by hash for the purpose of later review.	I	Not Answered	
89	SD cards are not required.	I	Not Answered	
90	All the video and data can be integrated into a single case file.	I	Not Answered	
91	Each camera is assigned a unique network identifier.	I	Not Answered	
92	The system is capable of capturing video/snapshot for sharing.	I	Not Answered	

City of Memphis Police
Law Enforcement Event Video Documentation Solution Functional Specifications

Spec ID	Specification Description	Priority	Response	Comment
93	The system is capable of historic playback for incidents and units.	I	Not Answered	
The system will trigger the start of recording based on:				
94	GPS	I	Not Answered	
95	X/Y coordinate	I	Not Answered	
96	date and time	I	Not Answered	
97	G-sensor	I	Not Answered	
98	light bar	I	Not Answered	
99	speed	I	Not Answered	
100	accelerometer	I	Not Answered	
101	braking	I	Not Answered	
102	crash sensor	I	Not Answered	
103	power loss	I	Not Answered	
104	remote activated trigger		Not Answered	
105	agency-defined triggers, e.g., trunk opens, back camera; back door opens, backseat triggers	I	Not Answered	
106	Triggers are user definable.	I	Not Answered	
107	An authorized user may search the data files on triggers.	I	Not Answered	
108	Data download can be accomplished via defined docking station.	I	Not Answered	
ICV				
109	The system support the integration of multiple cameras.	I	Not Answered	
110	The system supports the integration of input from License Plate Readers.	I	Not Answered	
111	The system will integrate with out-of-the-box Bing or Google maps.	I	Not Answered	
112	The system will integrate with custom maps.	I	Not Answered	
113	The system is able to log in more than one officer at a time.	I	Not Answered	
114	The ICV cameras are IP based.	I	Not Answered	
115	The ICV microphone is 900 MHz wireless.	I	Not Answered	
116	The system is capable of utilizing the BWC as the wireless mic.	D	Not Answered	
117	The system is capable of downloading video data using cellular connection.	I	Not Answered	
118	The system is capable of downloading video data using wireless access point connection.	I	Not Answered	
119	The ICV can record at a D1 resolution.	I	Not Answered	
120	The resolution of the ICV camera is adjustable.	I	Not Answered	
121	The ICV camera is capable of image stabilization.	I	Not Answered	
122	An authorized user is able to remotely control cameras and start/stop video.	I	Not Answered	
123	The user is capable of manually starting the ICV video recording.	I	Not Answered	
124	The user is capable of manually stopping the ICV video recording.	I	Not Answered	
125	The ICV supports triggers to start video recording.	I	Not Answered	
126	The speed trigger is based on a speed limit threshold. When a vehicle exceeds the preset speed trigger, the video will start recording automatically.	I	Not Answered	
127	The system is capable of setting multiple templates for camera profiles, e.g., forward looking, passenger compartment.	I	Not Answered	
128	The system will add a watermark with the video that includes the X/Y coordinates.	I	Not Answered	
129	The system will display X/Y coordinates with the video.	I	Not Answered	
130	The system will associate GPS coordinates with the video.	I	Not Answered	
131	The system does not require MDTs in vehicles.	I	Not Answered	
132	The system can utilize an MDT for video integration and control.	I	Not Answered	
133	The system allows CJIS compliant multi-factor authentication.	I	Not Answered	
Mobile Data Terminal				
134	If an MDT is utilized with the proposed solution, the system provides for a viewer application loaded on the MDT to view the video.	I	Not Answered	
135	If an MDT is utilized with the proposed solution, the ICV video is saved to the laptop then uploaded to storage.	I	Not Answered	
136	The MDT video data is encrypted using CJIS-compliant techniques.	I	Not Answered	
137	The MDT incorporates the Trusted Platform Model for encryption of Hard Disk Drive (HDD) video files.	I	Not Answered	
BWC				
138	The system has the capability to group BWC docking stations.	I	Not Answered	
139	The system coordinates the data download of the grouped docking stations.	I	Not Answered	
140	An authorized user is capable of inhibiting the manual starting of the BWC video recording.	I	Not Answered	
141	An authorized user is capable of inhibiting the manual stopping of the BWC video recording.	I	Not Answered	

City of Memphis Police
Law Enforcement Event Video Documentation Solution Functional Specifications

Spec ID	Specification Description	Priority	Response	Comment
142	An authorized user is able to add metadata to a video via the mobile application.	I	Not Answered	
143	The user is capable of manually starting the BWC video recording.	I	Not Answered	
144	The user is capable of manually stopping the BWC video recording.	I	Not Answered	
145	The BWC can be positioned on different spots on the uniform.	I	Not Answered	
146	Magnetic mounts allow the BWC to be placed anywhere on the uniform.	I	Not Answered	
147	The BWC will provide positive feedback when the camera is on, e.g., vibration.	I	Not Answered	
148	The BWC can be used as an ICV.	I	Not Answered	
149	The BWC camera is capable of image stabilization.	I	Not Answered	
150	The BWC is time synchronized with other components on the system.	I	Not Answered	
151	An authorized user can view BWC video on an iPad.	I	Not Answered	
152	An authorized user can view BWC video on an Android.	I	Not Answered	
153	Video data is uploaded from the BWC through a wireless access point.	I	Not Answered	
154	Video data is uploaded from the BWC while charging using a docking station.	I	Not Answered	
155	If interrupted while uploading data, the upload will continue from the point of interruption to completion.	I	Not Answered	
156	Video data is uploaded to the storage component through the charging station.	I	Not Answered	
157	The charging stations can be configured together to form a single upload point.	I	Not Answered	
158	The microphone is able to synchronize with the system.	I	Not Answered	
159	The system has an audio recording only feature.	I	Not Answered	
160	The BWC system is capable of pre-event buffering.	I	Not Answered	
161	The BWC system is capable of 30 second pre-event buffering.	I	Not Answered	
162	The BWC system is capable of 1 minute pre-event buffering.	I	Not Answered	
163	The system will not record audio during pre-event buffering.	I	Not Answered	
164	The system is capable of user-defined time period of pre-event buffering.	I	Not Answered	
165	The BWC support triggers to initiate video recording.	I	Not Answered	
166	The BWC is weather resistant and warranted for outdoor use.	I	Not Answered	
167	The BWC, at a minimum, complies with IP55 (NEMA IEC 60529 Degrees of Protection Provided by Enclosures - IP Code) standard.	I	Not Answered	
168	The BWC meets or exceeds the MIL-STD 810F Method 506.4 Procedure I - Rain and Blowing Rain	I	Not Answered	
169	The BWC is capable of utilizing an auxiliary battery to extend the recording time.	I	Not Answered	
170	The BWC is capable of low-light resolution.	I	Not Answered	
171	The BWC is capable of a user-defined range of low light resolution.	I	Not Answered	
172	The system is capable of disabling the low-light resolution capability for the BWC.	I	Not Answered	
173	The BWC has low-light capability but not better than the human eye.	I	Not Answered	
174	The BWC system is capable of creating and maintaining an audit trail.	I	Not Answered	
175	BWCs have the capability of assignment to an individual officer as determined by distinct software labels or login.	I	Not Answered	
176	The resolution of the BWC camera is adjustable to optimize storage on the device.	D	Not Answered	
177	The BWC can become fully charged from a fully depleted battery state in less than 4 hours.	I	Not Answered	
178	The BWC battery life is a minimum of 8 hours on a full charge.	I	Not Answered	
The BWC charging capabilities include:				
179	Docking	I	Not Answered	
180	AC secondary charging capability	I	Not Answered	
181	DC secondary charging capability	I	Not Answered	
182	The BWC device will provide indications on battery life.	I	Not Answered	
183	The BWC device will provide indications on assigned officer.	I	Not Answered	
184	The system provides the capability of charging the BWC in the vehicle.	I	Not Answered	
185	The BWC camera has multiple lenses that can provide a panoramic view.	I	Not Answered	
186	The BWC camera buttons are customizable.	I	Not Answered	
187	The BWC is able to configure a button to classify the video.	I	Not Answered	
188	The BWC is capable to perform as the total video solution.	I	Not Answered	
189	The BWC power activation is performed by an on/off switch.	I	Not Answered	
190	The total system weight for the BWC is less than 16 ounces.	I	Not Answered	
191	The BWC system provides for protection from deleting or altering the original video and audio file.	I	Not Answered	
192	The BWC provides for a mechanism for activation of the recording feature which is not easily activated by mistake.	I	Not Answered	

City of Memphis Police
Law Enforcement Event Video Documentation Solution Functional Specifications

Spec ID	Specification Description	Priority	Response	Comment
193	The BWC provides for a mechanism for activation of the recording feature which is easily activated intentionally with a raised button or switch.	I	Not Answered	
194	The BWC is capable of GPS tagging of the video.	I	Not Answered	
AVL				
195	The AVL system will interface with Intergraph CAD version 9.3.	I	Not Answered	
The system will interface with Intergraph CAD to provide the following parameters to the video system for event marking:				
196	unit status	I	Not Answered	
197	event type	I	Not Answered	
198	unit ID	I	Not Answered	
199	event number	I	Not Answered	
200	case number	I	Not Answered	
201	The AVL system will interface with the camera components to enable location parameters to be added to the video.	I	Not Answered	
202	The AVL devices do not require external GPS or cellular antennas for unit installations.	I	Not Answered	
203	Officer is notified when driving through a geofence or a proximity marker via text message.	I	Not Answered	
204	Officer is notified when driving through geofence or a proximity marker via audible alert.	I	Not Answered	
205	The system is able to import shapefiles.	I	Not Answered	
206	The system is capable of utilizing map-based polygons as "geofence" boundaries.	I	Not Answered	
207	The system supports a battery backup with a minimum of 10 minutes of power when the car battery no longer is supplying power.	I	Not Answered	
208	The system will provide statistics on the incident time, location and duration for the following triggers:	I	Not Answered	
209	speed	I	Not Answered	
210	G force	I	Not Answered	
211	power loss	I	Not Answered	
212	The system will track miles traveled so that maintenance can be scheduled. An alert will be sent to the administrator.	I	Not Answered	
213	The system will provide live GPS location of device/officer/car.	I	Not Answered	
214	The system has the capability of displaying the AVL-enabled unit's Web user interface.	I	Not Answered	
215	The system can interface with the AVL application without Mobile Data infrastructure.	I	Not Answered	
216	The reporting time from the GPS device is adjustable based on vehicle status.	I	Not Answered	
217	The AVL system utilizes an Application Programming Interface (API).	I	Not Answered	
The AVL system API will provide the following information to CAD:				
218	Current vehicle status	I	Not Answered	
219	Current closest vehicles within configurable number of miles to a known point, landmark, or address	I	Not Answered	
220	The AVL system is capable of providing user-configurable alerts.	I	Not Answered	
The AVL system is capable of providing configurable alerts to notify of, at a minimum:				
221	Long stops	I	Not Answered	
222	Speeding	I	Not Answered	
223	In-or-out of a geofence activity	I	Not Answered	
224	Long idling times	I	Not Answered	
225	Fast stop/crash	I	Not Answered	
226	Fast acceleration	I	Not Answered	
227	Lights and siren activation	I	Not Answered	
The AVL system will provide the following tracking capabilities:				
228	Pinpoint and view the current location of any MPD vehicle	I	Not Answered	
229	The ability to view the entire fleet on an integrated map or on the Intergraph CAD map indicating vehicle location and key-on status	I	Not Answered	
230	View the location history of any vehicle	I	Not Answered	
231	GPS update rates based on unit response status, minimum of 1 minute and adjustable to 5 seconds for units in pursuit, for example. Respondent may also list other variable update rate capabilities.	I	Not Answered	
232	View when the vehicle was last operated	I	Not Answered	
233	The AVL system will notify designated system administrators through email or text message as determined by MPD.	I	Not Answered	
The AVL system notification will occur when:				
234	A diagnostic trouble code alert	I	Not Answered	

City of Memphis Police
Law Enforcement Event Video Documentation Solution Functional Specifications

Spec ID	Specification Description	Priority	Response	Comment
235	A device tampering alert	M	Not Answered	
236	Scheduled maintenance alert	I	Not Answered	
237	The AVL system is capable of generating reports	I	Not Answered	
The AVL system reports are based on:				
238	daily activity	I	Not Answered	
239	vehicle alerts	I	Not Answered	
240	time spent on calls by nature	I	Not Answered	
241	total mileage	I	Not Answered	
242	speed	I	Not Answered	
243	The system is capable of reporting on how each officer's time is spent during a shift.	I	Not Answered	
244	The system is capable of scheduled report distribution.	I	Not Answered	
245	The system is capable of comparing status times reported by users to times reported by GPS data.	I	Not Answered	
246	GPS is used to stamp the speed of the vehicle. GPS is equivalent to AVL capabilities to provide speed, geofence, etc.	I	Not Answered	
Mobile Video Data Storage				
247	Video recording will not overwrite when storage is full.	I	Not Answered	
248	The system can securely email a link to another agency and the link will expire after a preset time period and then logged in the back end.	I	Not Answered	
249	The system will allow a system administrator (authorized user) to:	I	Not Answered	
250	add user accounts	I	Not Answered	
251	assign security rights	I	Not Answered	
252	assign security groups	I	Not Answered	
253	view all video	I	Not Answered	
254	view master audit log	I	Not Answered	
255	generate master audit log reports	I	Not Answered	
256	monitor user logging on	I	Not Answered	
257	restrict specific users from logging on	I	Not Answered	
258	regulate the copies of video	I	Not Answered	
259	On completion of video upload from the camera to the upstream storage device, the system verifies the uploaded video duplicates the camera storage.	I	Not Answered	
260	Upon verification of the source video and the uploaded video are identical, only then is the video is erased from the .	I	Not Answered	
261	Access to the component cabinetry is restricted.	I	Not Answered	
262	The user can blank out the monitor screen so viewing of the monitor is restricted.	I	Not Answered	
263	Changes to the data are restricted to the metadata file.	I	Not Answered	
264	Security of the data storage component can be enabled by individual.	I	Not Answered	
265	Security of the data storage component can be enabled by individual or by group.	I	Not Answered	
266	Data storage access policies are implemented using active directory.	I	Not Answered	
267	The operating system and software can be upgraded automatically.	I	Not Answered	
268	The system supports chain of custody confirmation and reporting when any video file is accessed.	I	Not Answered	
269	The system data files are shared in a proprietary format requiring a player to be provided.	I	Not Answered	
270	The data storage component complies with applicable CJIS requirements.	M	Not Answered	
271	The data storage component includes fully redundant storage capabilities.	M	Not Answered	
272	The data storage component provides an automatic backup process to an off-site storage facility.	M	Not Answered	
273	A remote hosting proposal must include a fully redundant, multiregional, fault-tolerant storage solution.	M	Not Answered	
Video security				
274	All video data is irrevocably stamped with features that demonstrate if the video has been altered in any way.	I	Not Answered	
275	All video data is irrevocably stamped with the date and time.	I	Not Answered	
276	When a copy of the video is created, the activity is logged as an audit trail record.	I	Not Answered	
277	When a video is uploaded to data storage, the system will verify the video uploaded replicates the video stored.	I	Not Answered	
278	Upon verification that the video uploaded replicates the video stored, then the video is erased from the uploaded video device.	I	Not Answered	
279	Access to the component cabinetry is restricted to an authorized user.	I	Not Answered	

City of Memphis Police
Law Enforcement Event Video Documentation Solution Functional Specifications

Spec ID	Specification Description	Priority	Response	Comment
280	The user can blank out the monitor screen so viewing of the monitor is restricted.	I	Not Answered	
281	Source video can not be edited or changed under any circumstances.	I	Not Answered	
282	Changes to the data file is restricted to the metadata file.	I	Not Answered	
283	Security to system components are enabled by individual.	I	Not Answered	
284	Security to system components are enabled by individual or by group.	I	Not Answered	
Access to the video files can be restricted to:				
285	creating user	I	Not Answered	
286	intended recipient of the video file	I	Not Answered	
287	system administrator	I	Not Answered	
288	an authorized user	I	Not Answered	
289	Access policies are implemented using active directory.	I	Not Answered	
290	There are no default accounts configured in the system.	I	Not Answered	
291	There are no hidden or "backdoor" accounts configured in the system.	I	Not Answered	
292	Each access account must be disclosed to the City.	M	Not Answered	
293	The City maintains all security aspects of the system, without reliance on the vendor to perform security functions.	I	Not Answered	
294	The system supports remote maintenance.	I	Not Answered	
295	The system supports video and data file chain of custody confirmation and reporting when any video file is accessed.	I	Not Answered	
296	The system video files are shared in a proprietary format requiring a player to be provided.	I	Not Answered	
Audit log				
297	The audit log will capture all automatic and user-initiated activities of the system, both successful and unsuccessful.	I	Not Answered	
298	The audit log will capture all administrative automatic and user-initiated activities, both successful and unsuccessful.	I	Not Answered	
299	Retention time for the system transaction logs is defined by the City.	I	Not Answered	
300	The system transaction logs can be searched and retrieved by any parameter stored with the transaction.	I	Not Answered	
301	The system transaction logs can be sorted by any parameter stored with the transaction.	I	Not Answered	
302	The system maintains transaction logs for each transaction across all modules.	I	Not Answered	
303	The system records and creates an audit record when a video is accessed.	M	Not Answered	
304	The system records and creates an audit record when a video is shared.	M	Not Answered	
The audit log will store the following information, at a minimum:				
305	User ID	I	Not Answered	
306	Device ID	I	Not Answered	
307	IP address	I	Not Answered	
308	MAC address	I	Not Answered	
309	Date/time	I	Not Answered	
310	Activity	I	Not Answered	
311	Transaction description	I	Not Answered	
312	Outcome success/failure	I	Not Answered	
313	connection/disconnection with start and stop time	I	Not Answered	
314	The audit log reporting component can provide agency specific reports.	I	Not Answered	
315	The audit log will track individual transactions.	M	Not Answered	
No further requirements below this line				