



TERMS OF REFERENCE / FSM VESSELS CCTV PROJECT

MINIMUM EQUIPMENT QUANTITY REQUIREMENTS

Supply of product(s) and software installation, hardware installation not included

<i>MARINE DOME CAMERA</i>	27
<i>MARINE WEDGE CAMERA</i>	81
<i>MONITOR LCD</i>	27
<i>NVR HQ</i>	1
<i>NVR 6-CH POE PORTS/VESSELS</i>	27
<i>WIFI ROUTER 4G/LTE GPS MOBILE</i>	27
<i>RECORDING SOFTWARE</i>	1

TENDERER SHOULD PROVIDE PRODUCT AUTHORIZATION CERTIFICATE

TENDERER SHOULD PROVIDE AFTER SALES SERVICES AND PRODUCT TRAINING

TENDERER SHOULD CONFIGURE, TEST AND CERTIFY ALL SETUPS BEFORE SUPPLYING

ALL CAMERAS SHOULD BE MARINE GRADE

- Normal cameras with marine housing will not be accepted

TENDER WINNING PARTY MUST DO A PROOF OF CONCEPT (POC)

- If a POC cannot be shown locally, the tender winning party must facilitate a tour for 3 (three) FSM staff to any location where the product is successfully being used. The product should be utilized in a marine environment or aboard a marine vessel. This presentation should be done within 30 days after receiving the award letter.
- If the first party fails to provide POC or are unable to demonstrate technical requirement provided in the list, they will be disqualified, and award letter will be reworked.
- FSM will contact second best party for the process.

TECHNICAL REQUIREMENTS

Tenderer to fill the technical sheet below if their product meets requirements and attach proof of concept with the tender

		Yes	No
1	Should be able to search the video and data from the NVR in the Vessels for specific incidents, such as speeding or pre-configured events.		
2	Should be able to extract video, GPS, and audio information from mobile recorders located in Vessels, from a date and time that the user defines.		
3	Should be able to view from GPS maps with the Vessel route: a user Should be able to click appoint on the route to see the corresponding video and audio.		
4	Should be able to automatically download video, and audio in formation when certain alarms are triggered.		
5	Display live GPS maps with Vessel current location, route/speed /position, and associated video.		
6	Should be able to export video and audio information to external files for evidence.		
7	Should be able to have cloud central management software option		
8	Should have automatic Incident Extraction		
9	Should be able archiver to collects and stores video and other data from recording/ Vessel NVR devices.		
10	Should be able to transfer vessels NVR data wirelessly when it reaches to the port.		
11	Should be able to Push mass firmware and configuration updates to vessels cameras and NVR in just seconds and receive real-time alerts about camera disconnections or other potential problems.		
12	Should have Low Bitrate or LBR mode which reduce storage and bandwidth consumption		
13	ONVIF, allow you to connect the 3rd party cameras if required.		
14	System should be design & build with built-in firewall features to prevent cyber-attack.		
15	Should supports multiple NVR and video channels		
16	Centralized system and user management though central software		
17	Advanced, system-wide health monitoring		
18	Multi-level, user access privileges		
19	VMware High Availability and LDAP/Active Directory integrations		
20	Alarm monitoring and response		
21	Automated alarm workflow setup		
22	Camera, NVR & Central management software should be a single vendor (Brand) product		
23	NVR should have internal back up battery for fail safe when acting as a barrier to power surges it also should allow the recorder to safely power down when the vessel engine / power supply is turned off, and the recorder should automatically power up when the power is back		
24	NVR should be certified with shock and vibration industry standards certification SAE J1455, MIL-STD-810F, EN50155		
25	All the external cameras should be designed for marine / industrial grade & the material should be rust free		

WARRANTY

Minimum warranty for the product.

1	Warranty for the Cameras	3 Year(s)
2	Warranty for the NVR	3 Year(s)
3	Software	3 Year(s)

MINIMUM REQUIREMENT FOR VESSEL EQUIPMENT

- **NETWORK VIDEO RECORDER (NVR)**
 - All IP Mobile Recorder, 6 PoE ports, 180FPS, 18Mbps.
 - 2x500GB (960GB - 1.024TB total) of internal SSD storage.
 - HDD should be surveillance grade
- **STATUS INDICATOR/TAG MODULE**
 - Status LED/Tag Module - Includes tag/alarm button (to mark video segment for download) and LED (indicates system recording status and camera fault).
- **MONITOR LCD**
 - HDMI input
 - Mobile 10-inch LCD Monitor for Captain Cabin
- **WEDGE CAMERA**
 - Mobile HDR Wedge Camera - H.264 3MP, RJ45, PoE, 2.8mm fixed iris lens.
- **DOME CAMERA**
 - Dome - 2.8mm Fixed Lens, 4MP WDR, RJ45, Integrated
 - Microphone, Dynamic IR, PoE
- **5-IN-1 MOBILE ANTENNA**
 - ALL-IN-ONE Antenna supporting 802.11a/b/g/n/ac, 3G/4G/LTE.
- **WIFI ROUTER 4G/LTE GPS MOBILE**
 - All-in-One Mobile Router with 4G/LTE. WiFi 802.11a/b/g/n/ac

MINIMUM REQUIREMENT FOR CONTROL ROOM EQUIPMENT

- **CENTRAL MANAGEMENT SOFTWARE**
 - Enterprise base software to be used to manage multiple recording platforms.
- **NETWORK VIDEO RECORDER (NVR)**
 - 4x8TB (32TB RAID5) of internal storage for video archive
 - HDD should be surveillance grade