

VDR Voyage Data Recorder



Alert List

Alert ID	Alert Name
412234	GPS No Connectio
412218	MIC Test Failure
412301	No.01 Serial No

Model:
VR-7000

Records all crucial data to identify the cause of maritime casualty as well as contribute to the future prevention of the catastrophe of any kind.

A Voyage Data Recorder (VDR) is similar to the black boxes carried on aircraft. The VR-7000 aids investigators in securing evidence by reviewing procedures and instructions in the moments before an accident. The VR-7000 collects data from all interfaced sensors on board the vessel, storing it in an external Data Recording Unit (DRU). The system comes with two tamperproof DRU units, one fixed and one float-free. They are designed to withstand the extreme impact, pressure, shock and heat, which may happen during an incident. When the DRU is retrieved, the stored data can be replayed by authorities to investigate the cause of the accident.



► **Complies with the new IMO performance standards for VDR**

- Data storing for 48 hours both in fixed and float-free recording medium
- Data storing for 30 days/720 hours in SSD in the Data Collecting Unit
- No.1, 2 Radar and main ECDIS display images can be stored

* Up to 5 display images from FURUNO Radar FAR-3000/FCR-2xx9 series or FURUNO ECDIS FMD-3200/3300 can be stored simultaneously through Ethernet without optional SSD.

* Radar and ECDIS images can be recorded at 15-second intervals.

► **Easy to integrate with FURUNO INS Network**

FURUNO Radar FAR-3000/FCR-2xx9 series and ECDIS

FMD-3100/3200/3300 can be interfaced through Ethernet

* Radar and ECDIS that utilizes LAN interface based on IEC 61162-450 can be connected through Ethernet.

► **Video LAN converter can convert the Radar signal (DVI or RGB) into Ethernet**

* Necessary when FURUNO Radar FAR-15x8/FAR- 2xx7, ECDIS FEA-2107/2807 or the products of third-party manufacturers are connected to VR-7000.

► **Optional sensor adapter gathers all the serial/analog/digital sensor data and collectively feeds it to DCU**

Multiple sensor adapters can be interfaced depending upon the number of sensors to be interfaced.

► **“Live Player V5” for monitoring and playback of the collected data in the DCU on the PC**

► **Extracted the data can be retrieved onto the USB flash memory**

Revised performance standards of VDR MSC.333 (90)

To be applied to VDR installed on or after 1 July 2014.

● **Final recording medium and recording period**

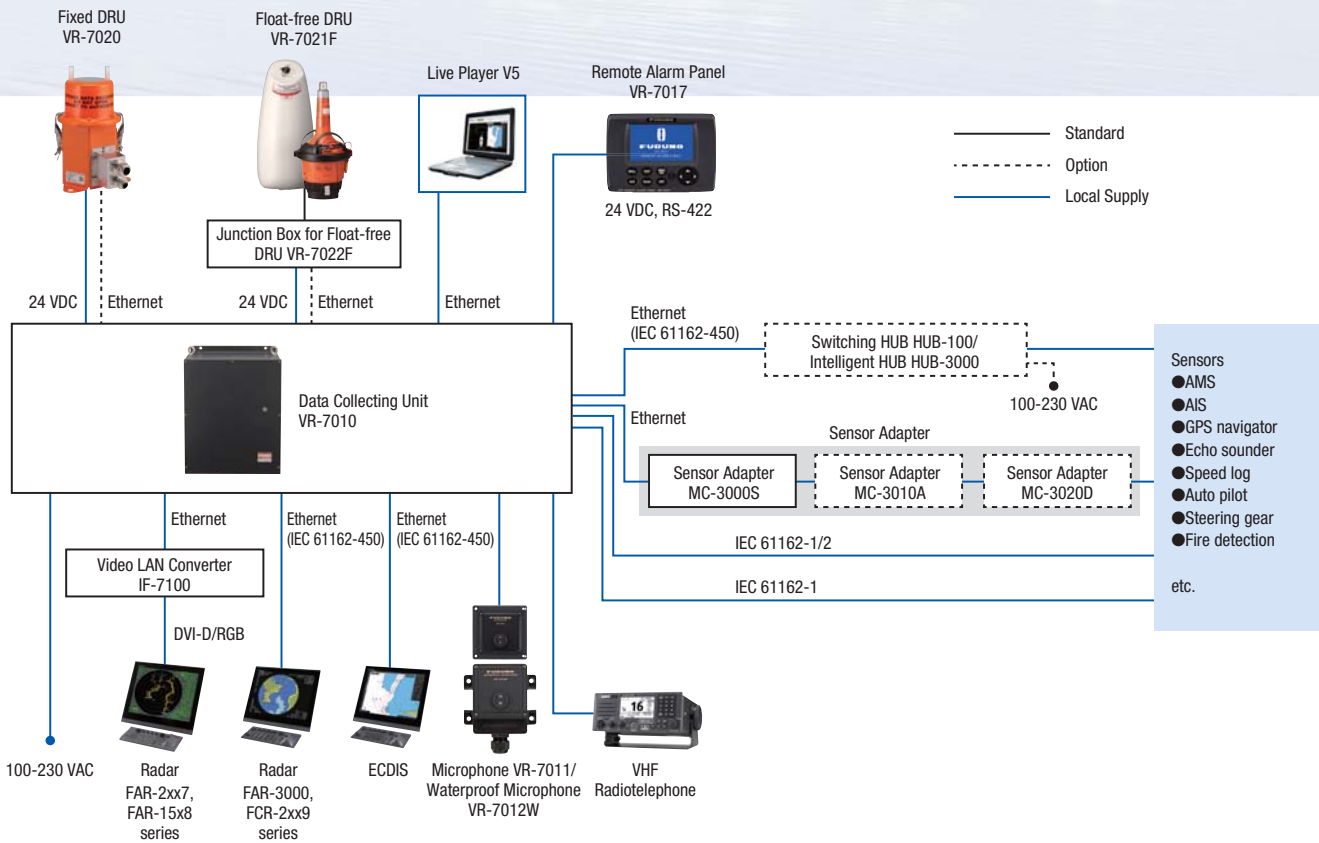
	Current	New
fixed recording medium	12 hours	48 hours
float-free recording medium	NA	48 hours
long-term recording medium	NA	30 days/720 hours

- At least 2 ch for bridge audio, at least 1 ch for outside on bridge wings

- Record Bridge audio and VHF com. relating to ship's operation on a separate channel from the bridge audio above
- Record No.1 and No.2 Radar (Current: No.1 Radar only)
- Record 1 main ECDIS (Current: no requirement)
- All AIS data needs to be recorded (Current S-VDR records it instead of Radar image)
- Record Bridge Alert Management System, if installed.
- Record thrusters, if fitted.
- Record electronic inclinometer, if fitted.
- Record information from electronic logbook, if fitted, etc.

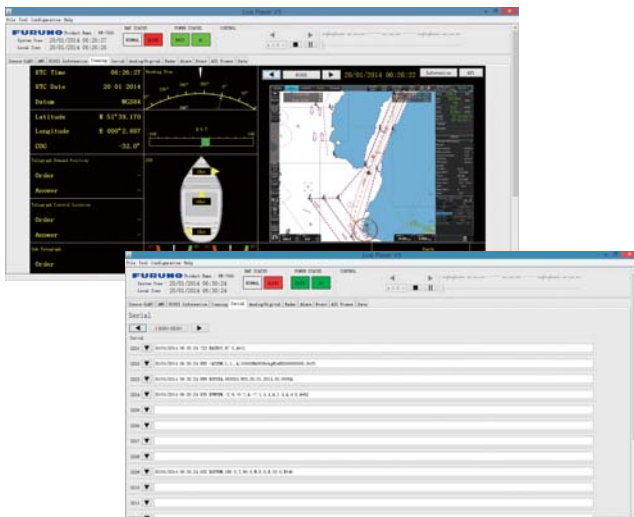
Easy to input the sensor data and review stored data

The onboard sensors can be integrated and interfaced to the VR-7000 thanks to Video LAN converter and sensor adapters. Also, the collected data can be replayed with the PC software or extracted onto a USB flash memories for later analysis.



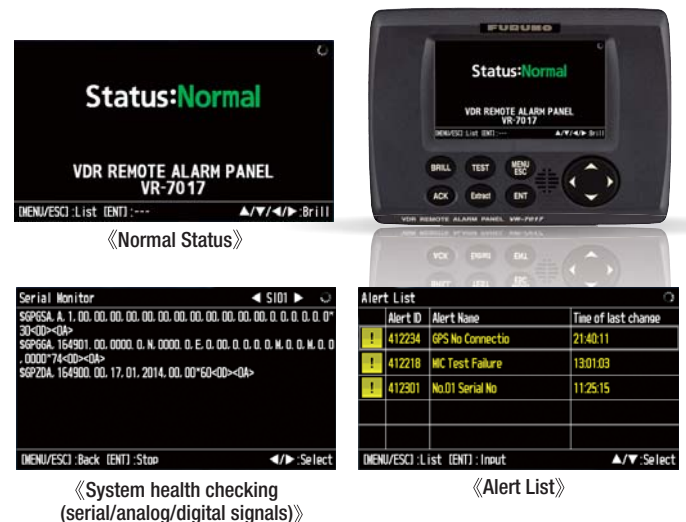
Live Player V5

This software extracts and displays the data accumulated from the VR-7000, in real time, on the networked PC screen. Also, the data can be replayed for a more thorough data analysis at a later date.



Remote Alarm Panel

At-a-glance recognition of VDR status with minimal operation.



SPECIFICATIONS

Product Name		VOYAGE DATA RECORDER	
Data	Recording Period	720 hours	
Collecting Unit (DCU)	Interface	Ethernet (IEC 61162-450)	13 ch (1 ch for PC)
		Serial (IEC 61162-1/2) Input	2 ch (when interfaced with the MC-3000S, 4 additional channels can be added)
		Serial (IEC 61162-1) Input	6 ch (when interfaced with the MC-3000S, 4 additional channels can be added)
		Digital Input	Option (when interfaced with the MC-3020D, 8 channels can be added)
		Analog Input	Option (when interfaced with the MC-3010A, 3 channels can be added)
		Bridge audio	8 ch
		VHF audio	2 ch
		Remote Alarm Panel	1 ch
		24 VDC for Fixed DRU	1 ch
		24 VDC for Float-free DRU	1 ch
	24 VDC for Sensor Adapter	1 ch	
	AMS (Serial IEC 61162-1 Input/Output)	1 ch	
	AMS (Contact)	Input: 2 ch Output: 3 ch	
	USB	1 ch (for USB flash memory to extract the data only)	
Fixed Data Recording Unit (Fixed DRU)	Memory	32 GB	
	Recording Period	48 hours	
Float-free Data Recording Unit (Float-free DRU)	Memory	64 GB	
	Recording Period	48 hours	
Remote Alarm Panel	Display	4.3" color LCD	
Video LAN Converter	Interface	DVI-D/RGB: 2 ch Ethernet: 1 ch	
Sensor Adapter (Serial)	Interface	IEC 61162-1/2: 4 ch IEC 61162-1: 4 ch Ethernet: 1 ch	
Sensor Adapter (Analog)	Interface	Analog Input: 3 ch	
Sensor Adapter (Digital)	Interface	Digital Input: 8 ch	
Intelligent Hub	Interface	Ethernet: 8 ch	
Switching Hub	Interface	Ethernet: 8 ch	

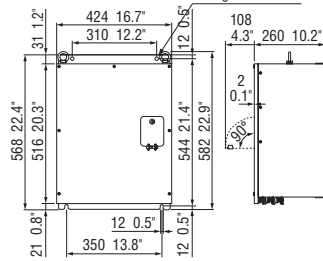
POWER SUPPLY

DCU	100-230 VAC: 1.6-0.7 A, 1 phase, 50/60 Hz
Video LAN Converter	24 VDC: 0.7 A

Data Collecting Unit

VR-7010

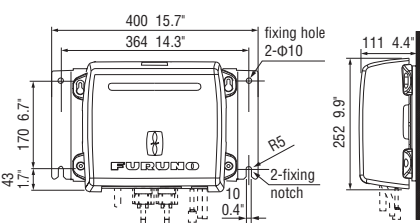
29 kg 63.9 lb



Video LAN Converter

IF-7100

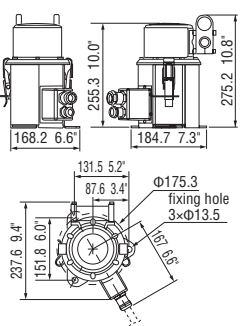
3.2 kg 7.1 lb



Fixed Data Recording Unit

VR-7020

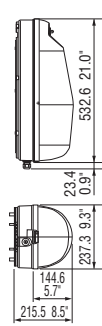
7.3 kg 16.0 lb



Float-free Data Recording Unit

VR-7021F

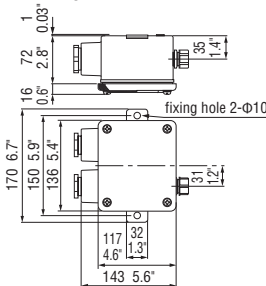
4.8 kg 10.6 lb



Junction Box for Float-free Data Recording Unit

VR-7022F

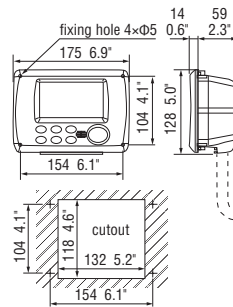
1.5 kg 3.3 lb



Remote Alarm Panel

VR-7017

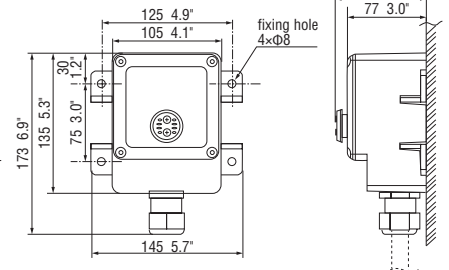
0.64 kg 1.4 lb



Waterproof Microphone

VR-7012W

0.6 kg 1.3 lb



ENVIRONMENT

Ambient Temperature	DCU	-15°C to +55°C
	Fixed DRU	-25°C to +55°C
	Float-free DRU	-20°C to +55°C
	Microphone	-15°C to +55°C
	Waterproof Microphone	-25°C to +55°C
Relative Humidity	Remote Alarm Panel	-15°C to +55°C
	Video LAN Converter	-15°C to +55°C
Degree of Protection		95 % at 40°C
Degree of Protection	DCU	IP20
	Fixed DRU	IP56 equivalent
	Float-free DRU	IP67 equivalent
	Microphone	IP22
	Waterproof Microphone	IP56
	Remote Alarm Panel	IP22 (front panel), IP20 (back)
Video LAN Converter	IP22 (bulkhead mount), IP20 (tabletop mount)	
	Vibration	

EQUIPMENT LIST

Standard

1. Data Collecting Unit (DCU)	VR-7010	1 unit
2. Remote Alarm Panel	VR-7017	1 unit
3. Fixed Data Recording Unit (Fixed DRU)	VR-7020	1 unit
4. Float-free Data Recording Unit (Float-free DRU)	VR-7021F	1 unit
5. Junction Box for Float-free DRU	VR-7022F	1 unit
6. Video LAN Converter	IF-7100	0-2 units
7. Microphone	VR-7011	1-8 units
8. Waterproof Microphone	VR-7012W	
9. Sensor Adapter (Serial)	MC-3000S	0-2 units

Option

1. Sensor Adapter (Serial*/Analog/Digital)	MC-3000S/3010A/3020D
2. Video LAN Converter*	IF-7100
3. Microphone	VR-7011
4. Waterproof Microphone	VR-7012W
5. Intelligent HUB	HUB-3000
6. Switching HUB	HUB-100
7. SSD for DCU	
8. DVI cable	

*1 Up to 8 units (including 1 unit of the standard configuration) can be connected
*2 Up to 2 units (including 1 unit of the standard configuration) can be connected

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