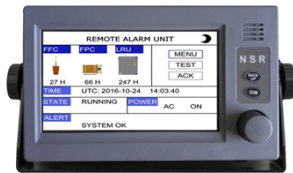# VDR (Voyage Data Recorder)

NVR-9000

- NSR's own FFC and FPC adopted
- Real monitoring software available for easy check
- Flexible configuration for either VDR or SVDR
- Linux O/S used in firmware of VDR system
- Large size color LCD with touch screen operation
- Data interface to BAM System
- Type approval with DNV (MED), CCS, RS and VR
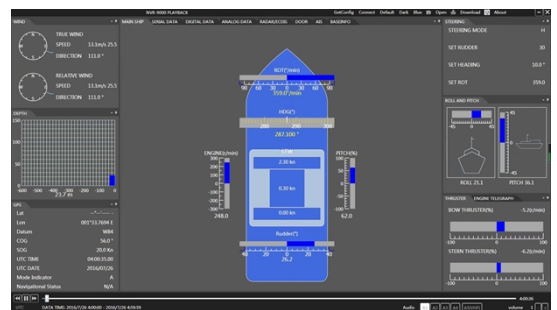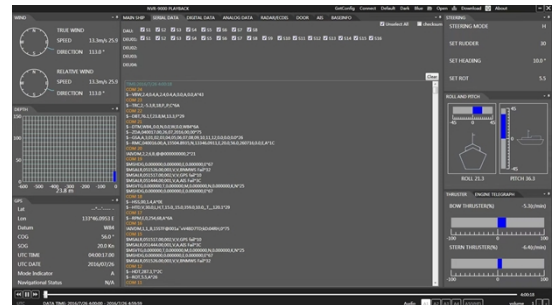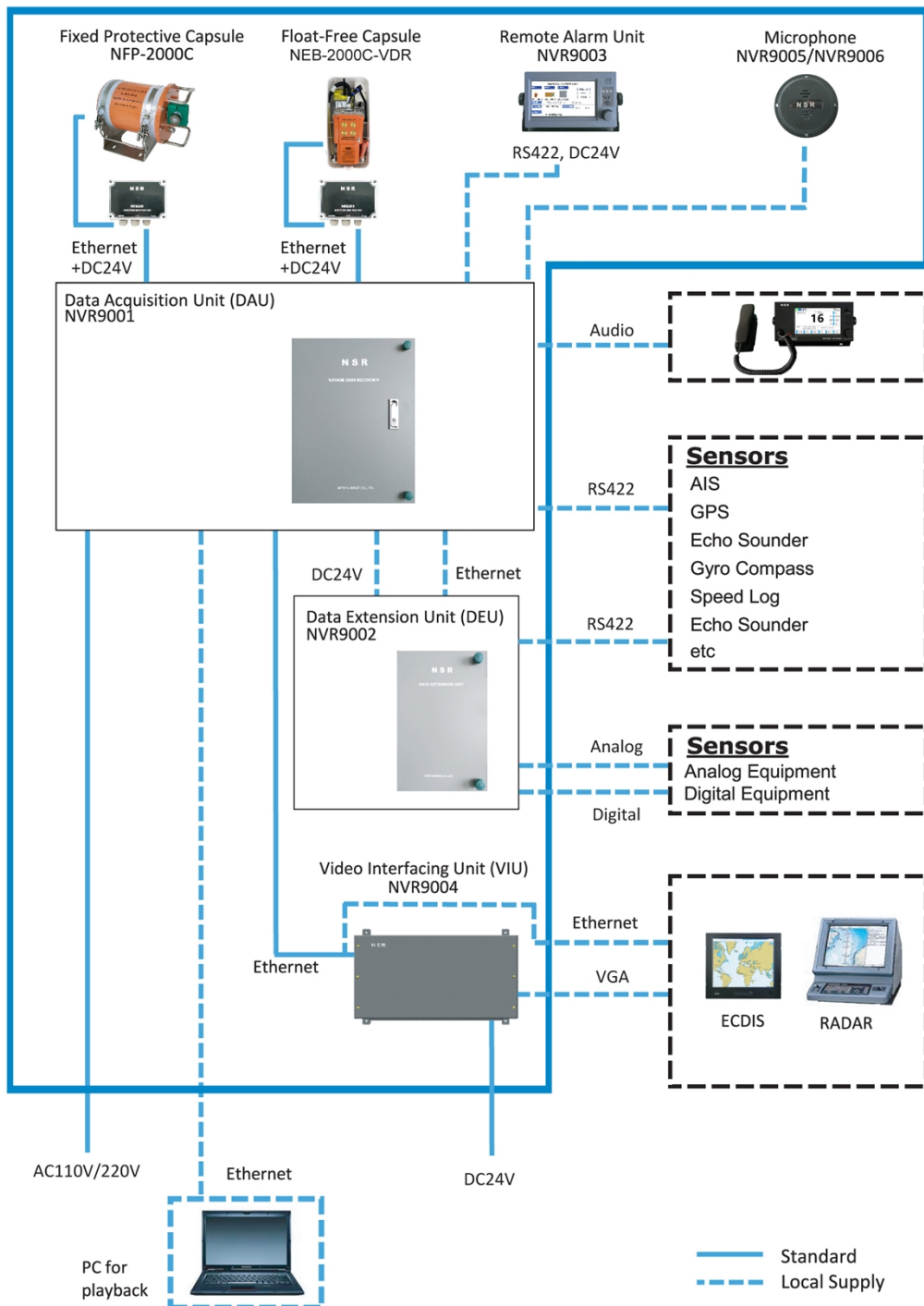

RAU

FFC

FPC

DAU

NVR-9000 VDR is designed to comply with the latest IMO rules of MSC.494 (104), IMO MSC.302 (87), IEC 61996-1, IEC 62923-1, IEC 62923-2.

- Store data for min 48 hours both in Float-free Capsule (FFC) and Fixed Protective Capsule (FPC).
- Store data for min 30 days/720 hours in Data Acquisition Unit.
- Record image of two radars and two ECDIS.
- Three separate channels for audio input:
  - One for up to 4 microphones
  - One for up to 4 microphones
  - One for 2 VHF audio
- As standard configuration, below ports provided:
  - Serial port×24 ch (8 at DAU and 16 at DEU)
  - Digital port×64 ch (DEU)
  - Analog port×8 ch (DEU)
- PC software available for playback & real time monitoring.

Fixed Protective Capsule
NFP-2000C

Float-Free Capsule
NEB-2000C-VDR

Remote Alarm Unit
NVR9003

Microphone
NVR9005/NVR9006

RS422, DC24V

Ethernet +DC24V

Ethernet +DC24V

Data Acquisition Unit (DAU)
NVR9001

Audio

Sensors
AIS
GPS
Echo Sounder
Gyro Compass
Speed Log
Echo Sounder
etc

RS422

DC24V   Ethernet

Data Extension Unit (DEU)
NVR9002

RS422

Analog

Sensors
Analog Equipment
Digital Equipment

Digital

Video Interfacing Unit (VIU)
NVR9004

Ethernet

Ethernet

VGA

ECDIS   RADAR

AC110V/220V   Ethernet   DC24V

PC for playback

Standard
Local Supply

NSR
marine

SYSTEM DIAGRAM

SPECIFICATIONS

Data Acquisition Unit (DAU)	Interface	Ethernet IEC 61162-450	4 ch
		Serial IEC 61162-1/2, RS422	8 ch
		VHF Audio	2 ch
		Microphone	8 ch
		Remote Alarm Unit	1 ch
		USB	1 ch
	DC 24V output	Remote Alarm Unit (RAU)	1 ch
		Fixed Protective Capsule (FPC)	1 ch
		Float-Free Capsule (FFC)	1 ch
	Recording Duration		min 720 hours
	Reserve Battery Capacity		min 2 hours
Fixed Protective Capsule (FPC)		Memory	64 GB
		Recording Duration	min 48 hours
		Beacon Battery Capacity	min 90 days
		Beacon Battery Life	3 years
Float-Free Capsule (FFC)		Memory	64 GB
		Recording Duration	min 48 hours
		Battery Capacity	min 168 hours
		Battery Life	5 years
Data Extension Unit (DEU)	Interface	Analog Input	8 ch
		Digital Input	64 ch
		Serial IEC 61162-1/2, RS422	16 ch
		Ethernet	1 ch
Video Interface Unit (VIU)	Interface	VGA	1-2 ch
		Ethernet	1-2 ch
Remote Alarm Unit (RAU)		Serial IEC 61162-1/2, RS422	1 ch
POWER SUPPLY			
Data Acquisition Unit (DAU)	AC110V/220V, 0.5～1.5A, 50/60Hz		
Data Extension Unit (DEU)	DC24V, 0.5A		
Video Interface Unit (VIU)	DC24V, 0.3A		

EQUIPMENT LIST

Standard

1	Data Acquisition Unit (DAU)	NVR9001	1 unit	5	Indoor Microphone Unit (IMU)	NVR9005	4 units
2	Data Extension Unit (DEU)	NVR9002	1 unit	6	Outdoor Microphone Unit (OMU)	NVR9006	2 units
3	Remote Alarm Unit (RAU)	NVR9003	1 unit	7	Fixed Protective Capsule (FPC) *	NFP-2000C	1 unit
4	Video Interface Unit (VIU)	NVR9004	0～4 units	8	Float-Free Capsule (FFC) *	NEB-2000C-VDR	1 unit

* NEB-2000C-VDR/NFP-2000C is supplied together with a Junction Box (NEB205) and cable (30m).

Options

1	Data Extension Unit (DEU)	NVR9002
2	Video Interface Unit (VIU)	NVR9004
3	Indoor Microphone Unit (IMU)	NVR9005
4	Outdoor Microphone Unit (OMU)	NVR9006

※ Specifications subject to change without notice

1	Data Acquisition Unit (DAU)	NVR9001	IP22	15.2 kg	
2	Data Extension Unit (DEU)	NVR9002	IP22	5.2 kg	
3	Remote Alarm Unit (RAU)	NVR9003	IP22	1.6 kg	
4	Video Interface Unit（VIU）	NVR9004	IP22	2.5 kg	
5	Indoor Microphone Unit（IMU）	NVR9005	IP22	0.1 kg	
6	Outdoor Microphone Unit（OMU）	NVR9006	IP56	0.2 kg	
7	Fixed Protective Capsule（FPC）	NFP-2000C	IP68	16.5 kg	
8	Float-Free Capsule（FFC）	NEB-2000C-VDR	IP67	3.5 kg	