

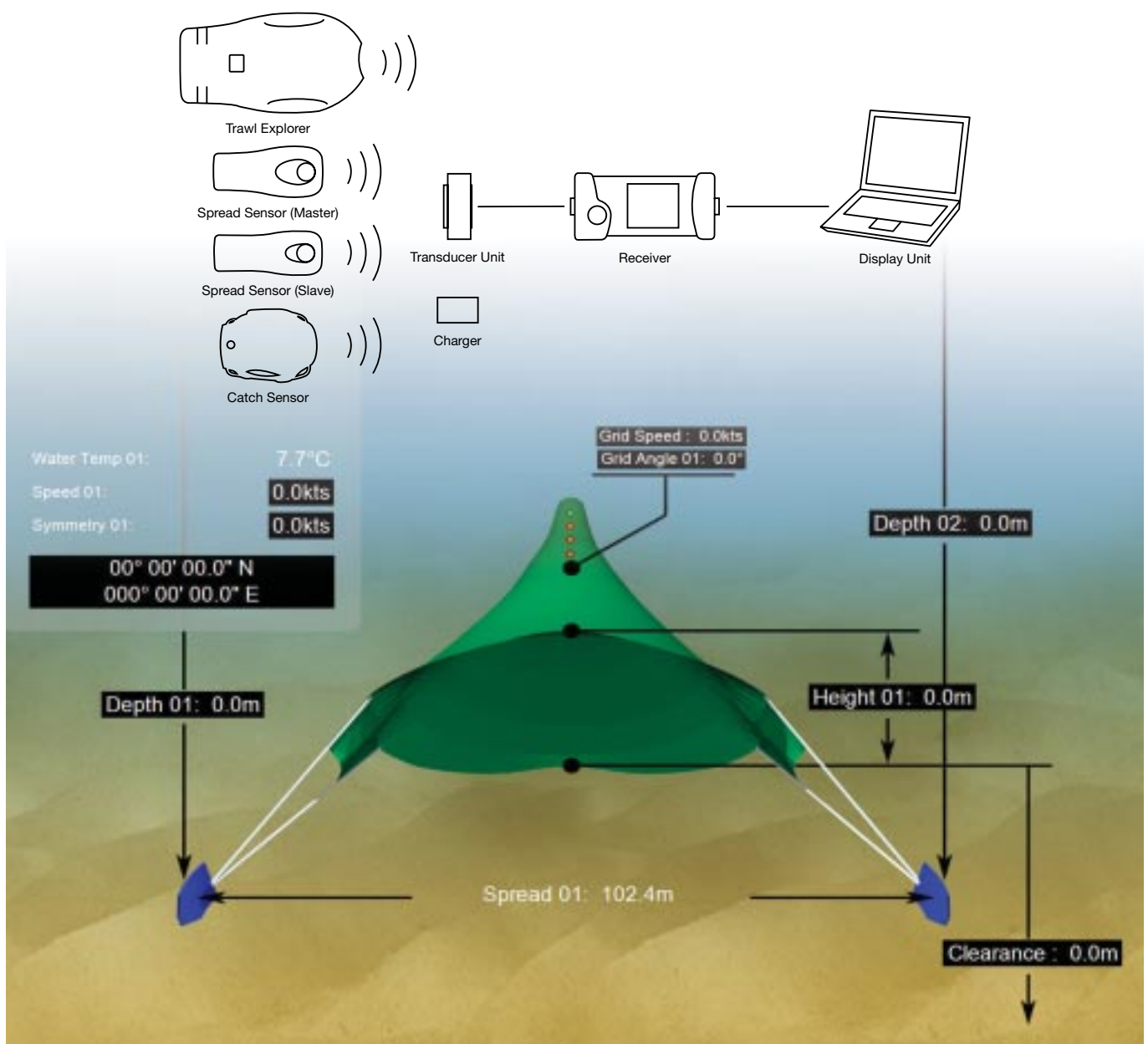
TrawlFish System for Asian Fishery

● System Outlines

Latest trawl fishing net monitoring system assisting efficient catch.

- Provides accurate information on the distance between **your trawl doors**.
- Monitors fish school as well as fish catches within **your net**.
- Monitors depth and temperature at the net mouth.
- Employs long-life, easy-to-recharge Li-ion battery for sensors.

● System Configurations



● Major Components

[1] Software

Marport Command View Software operating on Windows PC

[2] Display Unit

Operating System:	Microsoft Windows XP Professional with Service Pack 2 or later
RAM:	512 MB of RAM or above
Hard Disk:	80 GB of available hard disk space
Video Card:	ATI or NVIDIA
Monitor Size and Resolution:	LCD 10.4 inch or larger; 1024 x 768 pixels
CPU:	Intel or AMD, 1 GHz
Network adapter:	100Base-TX (RJ-45)
Others:	DirectX v9.0 or higher Bluetooth

[3] Trawl Explorer (fish finder/temperature and depth sensors)

Monitors the temperature and depth at the net mouth.
Monitors fish images above or below sensors, or fish school images within the net.

Uplink Frequency:	30.0 - 60.0 kHz
Beamwidth:	70° (-3 db)
Range to Vessel:	2800 m
Maximum Depth:	1200 m
Update Rate:	0.9 seconds
Fish Finder Range:	160 m
Fish Finder Frequency:	86 or 210 kHz
Fish Finder Transducer Beamwidth:	40° or 16°
Temp Measurement Range:	-5°C to +40°C
Temp Accuracy:	±0.1°C
Depth Resolution:	0.1 m
Depth Accuracy:	0.1%
Battery Type:	Li-ion
Battery Life:	20 - 100 hours
Charging Time:	10 - 14 hours
Dimensions:	L511 x W269 x H135 mm
Weight:	14.5 kg (in air); 1.2 kg (in water)

[4] Spread Sensors (Master/Slave)

Mounted on the trawl doors, these sensors measure and display the interval as well as pitch/roll.

Uplink Frequency:	40.8 - 43.4 kHz
Beamwidth:	40° (-3 db)
Range to Vessel:	2500 m
Maximum Depth:	1200 m
Resolution:	0.1 m
Pitching Accuracy:	±0.1°
Rolling Accuracy:	±0.1°
Update Rate:	3 - 8 seconds or 11 - 15 seconds
Battery Type:	Li-ion
Battery Life:	1000 hours (master); 2000 hours (slave)
Charging Time:	5 - 8 hours
Dimensions:	L305 x φ142 mm (master); L301 x φ112 mm (slave)
Weight:	Master: 5.0 kg (in air); 0.8 kg (in water) Slave: 3.5 kg (in air); 0.8 kg (in water)

This system is marketed in Asia by Koden in alliance with Marport.
Marport: www.marport.com

[5] Catch Sensor

Monitors fish catches within the net.
Up to four Catch Sensors placed on the cod-end can be used simultaneously.

Uplink Frequency:	40.8 - 43.4 kHz
Beamwidth:	70° (-3db)
Range to Vessel:	2500 m
Maximum Depth:	1200 m
Update Rate:	20 - 30 seconds
Battery Type:	Li-ion
Battery Life:	2000 hours
Charging Time:	5 - 8 hours
Dimensions:	L268 x W204 x H127 mm
Weight:	5.0 kg (in air); 0.9 kg (in water)

[6] Transducer Unit

Receiving Frequency:	40.8 - 43.4 kHz
Transducer Beamwidth:	Horizontal: 55° (-3 db); Vertical: 35° (-3 db)
Cable length:	25 m
Dimensions:	L165 x W65 x H64 mm
Weight:	5.4 kg

[7] Receiver

Receives signals ranging from 30 to 60 kHz, so that the high performance acoustic processing technology can provide an image presentation and processing with the use of the latest FPGA.

DSP:	Dual DSP with FPGA
Frequencies:	30 - 60 kHz (variable in increments of 1 Hz)
Number of Transducers:	Up to four
Network:	Power over Ethernet (PoE), IEEE 802.3af
Digital I/O:	Ethernet, RS232, NMEA 0183
Analog Output:	Video output, Signal output
Sync Signal:	Receiving signal output automatic sync type External pulse input sync type
Power Supply:	10 - 30 VDC, 12 W
Mounting Method:	Panel mount, Desktop mount, Ceiling mount
Dimensions:	L375 x W157 x H141 mm



[3] Trawl Explorer



[4] Spread Sensors



[6] Transducer Unit



[5] Catch Sensor



[7] Receiver

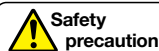
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Safety precaution

To ensure proper and safe use of the equipment, please carefully read and follow the instructions in the Operation Manual.

For details, please contact: