



GLEN ENGINEERING *limited*
FOCUS ON MARINE AND OFFSHORE

Solutions for Mooring and Docking

IntDock™

Intelligent Docking Equipment: BAS

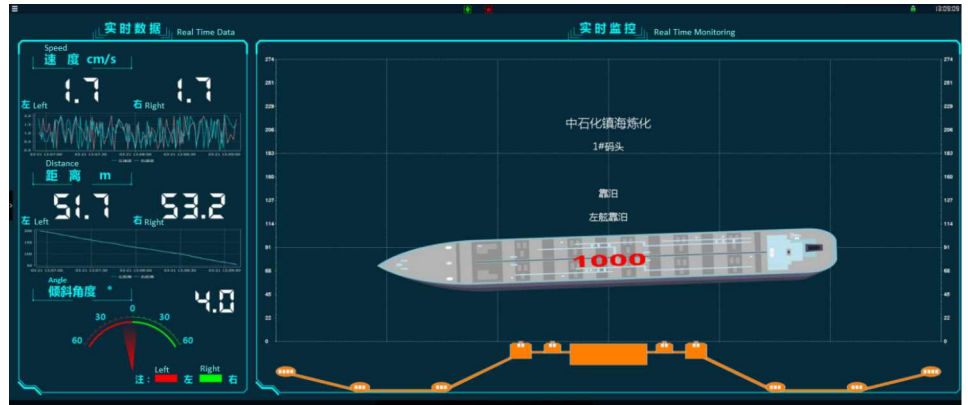
BERTHING APPROACH SYSTEM



IntDock™ - Berthing Approach System (BAS)

Introduction

A Glen-supplied Berthing Approach System consists of a laser sensing system, which relays the key data to LED displays and traffic light displays located close to the berth, as well as triggering audio alarms where the potential for collision has been identified.



System Screen

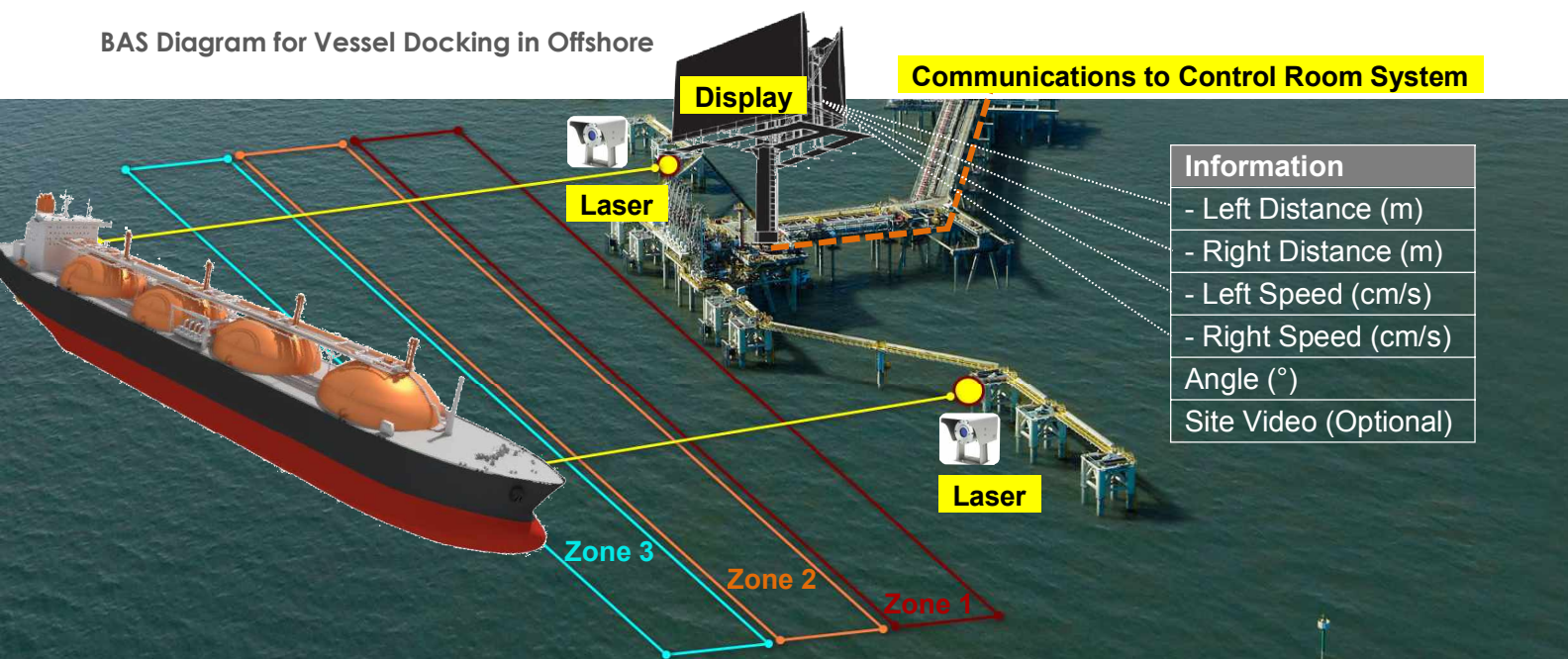
The rich stream of data produced during the berthing operation includes the approach speed, distance, and angle. The data is displayed both on highly visible LED displays, and on the ship's bridge. Subsequent to the mooring, the system continues to monitor the vessel for signs of drift or fender deflection, with alarms set to monitor activities that could potentially damage the fenders and the jetty. A comprehensive data logging system records a comprehensive and continuous record of activity for peace-of-mind.

LED Data Display

A high-quality LED is a critical component in communicating data to pilots and crew, requiring to be visible at minimum distance of 300 meters in all light and weather conditions, including fog and rain, and easily viewable from a wide viewing angle. Typical data relayed via the display includes vessel distance, speed of approach, and berthing angle, with the unit able to provide audible warning alarms for factors such as speed and collision. Traffic lights are integrated into the display, and the LED units can set to display ambient environmental data derived from weather stations, such as wave, tidal, and sea current information.

Integrating a high-quality display with quick refresh speeds into a robust and rugged designed to weather the elements, LED digital displays to have a long operational life with no maintenance requirements.

BAS Diagram for Vessel Docking in Offshore





IntDock™ - BAS Technical Specification

BERTHING APPROACH SYSTEM (BAS)

- DIGITAL LARGE DISPLAY
- Laser
- JServer (4C)

Multi-function: Distance, speed, angle, report, warning & alarm, site video, combination with central control system etc.

DIGITAL LARGE DISPLAY

Left Distance

Right Distance



Left Speed

Right Speed

DESIGNED FOR BERTHING APPLICATIONS
CERTIFIED FOR ZONE 1
ALL STAINLESS STEEL 316L
LOW POWER CONSTRUCTION
VISIBLE UP TO 350M
DISTANCE 485 MODBUS



The Digital Large Display is designed for berthing applications and harsh marine environment. The pilot and the staff members of the quay are easy to read the real-time distance, speed and angle in both direct sun and darkness.

Technical Specification:

Supply Voltage	
Rated Voltage	220VAC (50~60Hz)
Power Requirement	
Display	450W
Construction	
Visibility, Min	350m
Display Material	Stainless Steel 316L
Digital Display	MTBF 60,000 hours
Light-emitting Diode	SMD2835
Angle of readability	120°
Refresh Interval, Min	1 Second
Temperature	-20℃~60℃



EEx Classification	
Grade	Ex mb IIC T4 Gb
Level of Protection	IP57, IP65 for Electrics
Distance Display	
Display Range	0-999m
Number of Digits	6 Digital Panels
Min. Increment	0.1m
Speed Display	
Display Range	0-99cm/s
Number of Digits	2 Digital Panels, 2 Tendency Panels
Min. Increment	1 cm/s
Speed Tendency	Arrows
Speed warning lamp	Red/Yellow/Green

LASER

HIGH PRECISION LASER DEVICE

EASY FIXING & INSTALLATION



Technical Specification:

Measuring Precision	±4 cm
Wave Length	905 nm (No harm for eyes direct sight)
Power Supply	12~24VDC
Current at Standby Status	40 mA
Current at Working Status	150 mA
Interface	Industrial Grade Electrical Protection
Data Output	Standard Data Transport Protocol
Output Frequency	1~8 Hz
Housing	Industrial Grade Electrical Protection
Installation	Easy and simple fixing

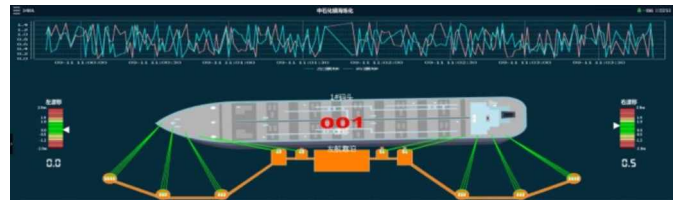


JServer (4C)



JServer (4C) is based on modular design and includes intelligent IntMoor of distributed interaction system. System management of basing on web mode can build BAS, EMS, MLMS and QRH Supporting device to deploy cloud management, plugging and playing efficient system deployment. Industrial design to satisfy the communicative requirements meet of harsh temperature, humidity and electromagnetic interference environment. Long life and low failure rate can ensure the reliability and stability of interactive data.

SMART EMBEDDED DATA SERVER
INTEGRATED INTELLIGENT DISTRIBUTED DATA
INTERACTION SYSTEM



Technical Specification:

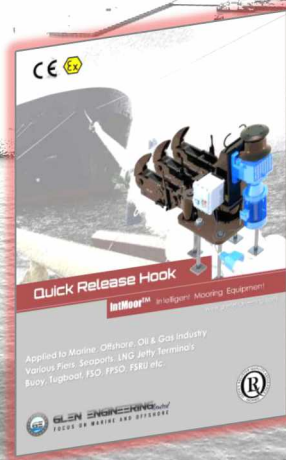
Supply Voltage	
Rated Voltage	Single 12V DC Power Input
Power Requirement	
Display	4.89W
Ethernet	
Speed	10/100/1000Mbps
Connector	RJ45
I/O	
USB	2 X USB 3.0
Serial	2 x RS485 with auto-flow control
Firmware	
Hardware	Rev. A
Software	JServer 2.0
Environment	
Operation	-40°C~85°C
	40°C @ 95% RH Non-condensing
Non-Operation	-40°C~85°C
	60°C @ 95% RH Non-condensing
Embedded OS/API	
OS	Linux
Software API	All-in-one 2.0
Dimensions	
Dimensions	40mm x 93mm x 135mm



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Extension Product Recommended

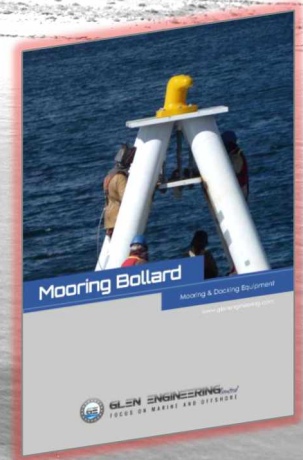
Your Professional Partner in Mooring & Docking



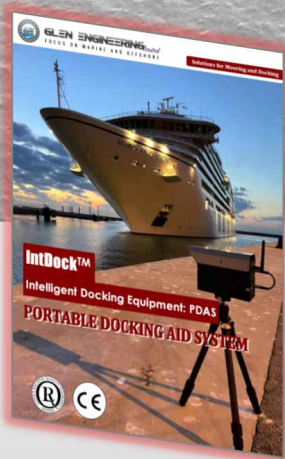
Quick Release Hook



Free Standing Capstan



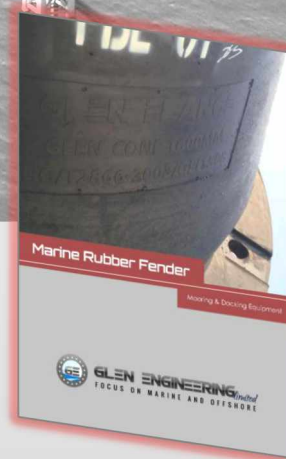
Mooring Bollard



Portable Docking Aid System



Berthing Approach System



Rubber Fender

Contact

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