

Trelleborg SeaTechnik™ Ship-Shore Link (SSL) System For LNGCs and Bunkering

- Assured compatibility with existing systems
- Flexible and independent ESD connection locations (Port, Starboard,
 Aft Port and Aft Starboard), for complex LNG/CNG transfer applications
- Fully independent ESD connectivity path options for FSRU applications including optical fiber, optical fiber digital, Pyle
- Fully scalable options for mid-scale vessels
- Independent systems to ISO 28460
- Future-proofed to allow interfaces to external systems



SmartPort by Trelleborg is a technology platform that connects disparate, data-driven assets, giving stakeholders a holistic view of operations to power communication and decision making.

Ship-Shore Link System for LNGCs

Trelleborg Marine Systems has a proven track record in the development of specialist systems for the Marine Industry worldwide. The all new Trelleborg SeaTechnik™ LNGC Ship-Shore Link (SSL) system is one of a range of products that can be supplied standalone for existing tonnage or for integration with other key safety and montoring systems.

Trelleborg Marine Systems has been involved in the supply of SSL systems since 1996 and is the leading supplier throughout the World, having contracted for over 700 systems, including 500 LNGCs/FSRUs and 125 LNG/LPG Condensate Terminals.

Our extensive knowledge and experience gained as a result of this significant reference list has led to the development of our SSL system that is the most advanced on the market.

The newly designed integrated system provides the ultimate in flexibility to today's evolving systems while remaining compatible with the existing installed base.

System Features and Benefits Include:

- Simple electronic reconfiguration to match respective terminal
- Enhanced diagnostics capability
- Micro-controller based main system
- Future-proofing to allow interfaces to external systems e.g. DCS
- Fiber optic, electric and pneumatic are totally independent to conform fully with ISO 28460
- Options to connect to bunkering systems including
 5 pin ESL electric or 2 optical fiber systems

Key characteristics of the system are:

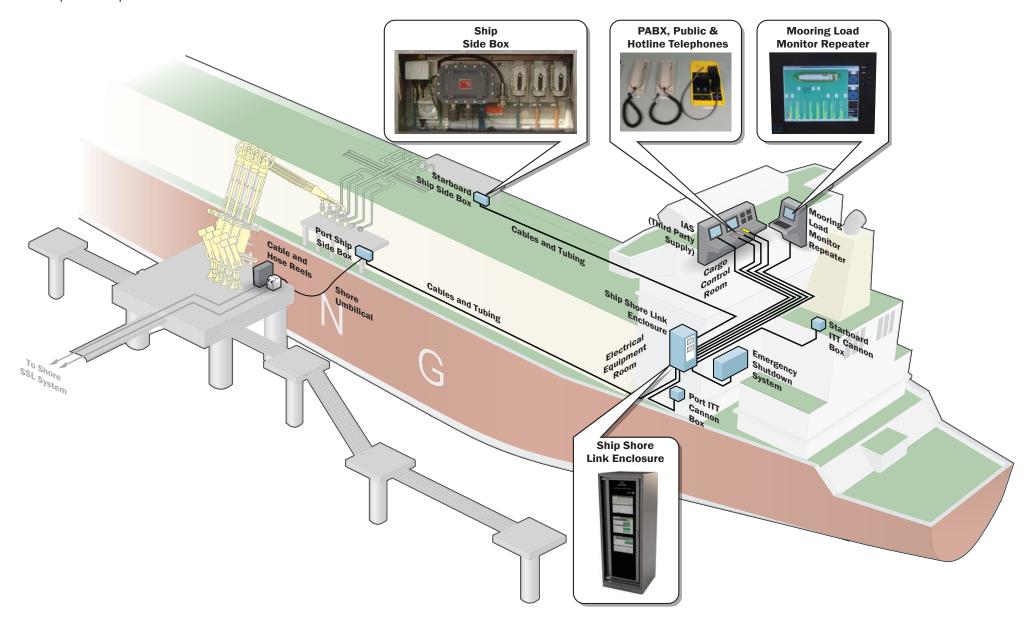
- Large high resolution, up to 19" touchscreen displays - cabinet or console mountable
- Menu driven graphic operation

- Dual redundant power supply
- Available in a range of cabinets to suit installation conditions
- ESL, USL connections available
- Remote control possible and screen viewing
- Operator friendly graphical display
- Data logging option
- Extreme climate hardware available suitable for low temperature operation

Trelleborg Marine Systems Brings You:

- Pioneers of integrated SSL systems worldwide including FSRU and bunkering systems
- Proven track record supplying specialist systems to the marine industry
- Proven worldwide compatibility
- Experience of all types of SSL solutions for both ships and terminals

- Involvement in all stages of LNG terminal projects, offering consultancy and advice to ensure worldwide compatibility
- Worldwide service & support network
- Continuous development philosophy, with latest technology system available, ensuring full compatibility with existing and future systems
- Digital capability communicates high speed voice, data or video across the link.



Ship-Shore Link System for LNGCs

The Trelleborg SeaTechnik™ SSL system features fully ATEX EX'd' certified electrical connectors for use in Hazardous areas. For added safety Trelleborg incorporates EX'ia' Galvanic Isolator interfacing for Emergency Shut Down ESD circuits.

A flexible range of input/output signals can be configured to interface with any control system to suit customer requirements.

The Trelleborg SeaTechnik™ SSL can be supplied with any combination of the following systems:

- Fiber optic analog
- Fiber optic digital (USL compatible)
- Electric
- 5 pin electric (ESL and 'SIGTTO' system compatible)
- Pneumatic

Interface Connection Options

- Trelleborg SeaTechnik™ fiber optic connectors
- Electric 37 way Pyle connectors
- Electric 6 way 'Miyaki' connectors
- Electric ITT Cannon connectors
- 5 way SIGTTO link systems
- Pneumatic systems

- Anti-surge connectors
- Miyaki/Pyle adaptors

Associated Systems and Options

- Trelleborg SeaTechnik™/Iwatsu hotphone
- Fiber optic MLM system
- VHF radio link
- Five way SIGTTO connectors
- USL small scale system

Test Equipment Options

- Fiber optic Active Test Unit (ATU)
- Fiber optic loop-back test connectors
- Electric Test Unit (ETU)
- Miyaki test unit

Service & Support

Trelleborg Marine Systems has been designing, manufacturing and supporting leading edge marine energy management and safety systems for over 20 years. With the head office located in Northwest UK, a team of experienced service engineers and performance analysts/specialists provides installation, commissioning and in-service support worldwide. The worldwide team includes dedicated staff in our Korea and Singapore offices.

A network of experienced sales/technical agents and associates worldwide provides further support, and ongoing technical training is offered to both customers' and associates' engineers worldwide.