



ShuttlePilot



Providing pilots safer and more efficient FPSO berthing operations

ShuttlePilot is a precision Navigation system for the offshore oil and gas industry. ShuttlePilot is an essential tool providing the Offshore Installation Manager and Pilots with a real-time, accurate and independent picture of the relative position and movements between the vessels.

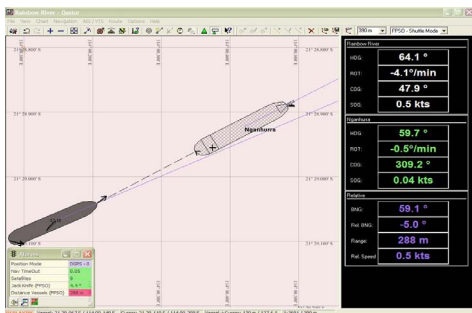


(The portable system is housed in two hard cases)

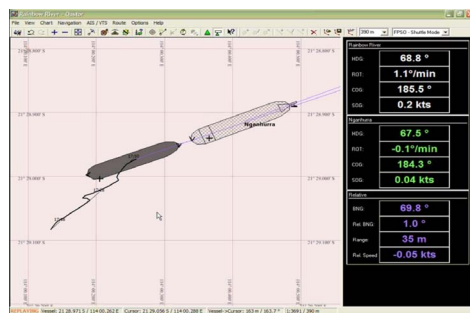
ShuttlePilot can also include important monitoring warnings: developing jack-knife situations, proximity alarms and riser monitoring.

System feedback:

ShuttlePilot uses GPS to give the highly accurate real-time feedback to the Pilots which is shown on a electronic chart displayed on a portable laptop or tablet device.

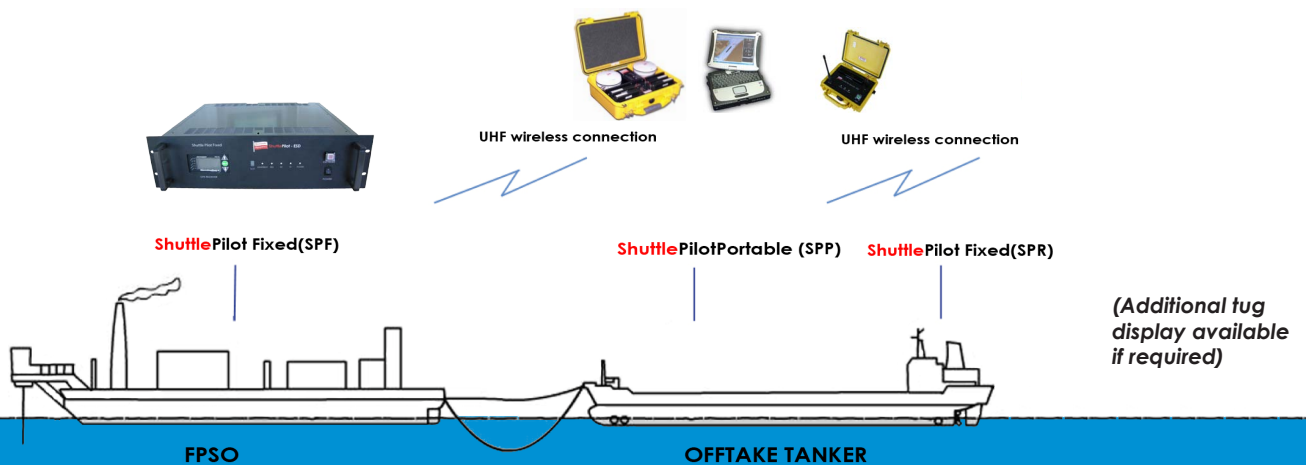


Offtake/Shuttle Tanker Operations



RTM Reconnection Operations

Typical system layout:





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ShuttlePilot Alarms

| Alarms | | |
|-------------------------|-------------|--------|
| Jack Knife (FPSO) | 4.2 ° | Sno... |
| Distance Vessels (FPSO) | 1243 m | Sno... |
| Position Mode | DGPS - 0.00 | Sno... |
| Nav Time Out | 0.00 | Sno... |
| Satellites | 8 | Sno... |
| AIS Time Out | N/A | Sno... |

(FPSO Alarm Box shown using Qastor software)

A wide variety of alarms available. All user-selectable and configurable.

Including:

- Position Mode
- Navigation Data Timeout
- Distance between ends(Tanker bow and FPSO stern)
- Jack-knife. Warns of impending Jack-knife scenario

Specifications

ShuttlePilot Fixed - SPF

- Weight:** 8kg
- Start up:** Less than one minute to determine position and heading. Normally left permanently on.
- Supply:** 110/240VAC 50/60Hz
UPS option Available
- Accuracy:** Position: 50cm (DGPS – 95%)
Heading: $\pm 0.2^\circ$
Rate of turn: $\pm 0.5^\circ/\text{min}$
- Features:** UHF connectivity for transmit. Option re-transmission of received data over LAN connection for on-board use.

ShuttlePilot Remote - SPR

- Weight:** 2.5kg
- Battery life:** >16hrs. Rechargeable in use.
- Features:** Class 1 Bluetooth connectivity to laptop. Option to include ESD.

ShuttlePilot Display - SPD

- Weight:** 8kg approx
- Features:** Contains SPR,Laptop, Antennas, Charges and sundries.

ShuttlePilot Portable - SPP

- Weight:** 9kg approx
- Start up:** Less than one minute to install, less than one minute to determine position and heading.
- Battery life:** Up to 30 hrs with hot-swappable batteries for longer periods.
- Accuracy:** Position: 50cm (DGPS – 95%)
Heading: $\pm 0.2^\circ$
Rate of turn: $\pm 0.5^\circ/\text{min}$
- Features:** UHF connectivity, fast installation, waterproof, shock-proof.



(The SPP unit)



(A Typical SPD Unit)