

April 19, 2022

Mitsui O.S.K. Passenger Line, Ltd.

Furuno Electric Co., Ltd.

SKY Perfect JSAT Corporation

Mitsui O.S.K. Passenger Line's Cruise Ship "NIPPON MARU" Upgrades High-Speed Internet Access with "JSATMarine" Service

Mitsui O.S.K. Passenger Line, Ltd. (Head Office: Minato-ku, Tokyo; President: Yusuke Ueno; "MOPAS"), Furuno Electric Co., Ltd. (Head Office: Nishinomiya City, Hyogo, President and Chief Executive Officer: Yukio Furuno; "Furuno") and SKY Perfect JSAT Corporation (Head Office: Minato-ku, Tokyo; Representative Director, President & Chief Executive Officer: Eiichi Yonekura; "SKY Perfect JSAT") announced today that cruise ship "NIPPON MARU" *¹ operated by MOPAS underwent an upgrade in this March with SKY Perfect JSAT's high-speed maritime broadband service "JSATMarine" *² to further enhance its onboard passenger Wi-Fi service and internet access environment for operational use. NIPPON MARU is the first cruise ship to use the JSATMarine.



(Left) Nippon Maru

(Below) Onboard Lounge



NIPPON MARU has been using satellite internet access service under the MOPAS, Furuno and SKY Perfect JSAT partnership since 2010 which was the dawn of internet usage on vessels. In 2020, NIPPON MARU celebrated the 30th anniversary of its services, and after undergoing a major renovation in the same year, onboard passenger Wi-Fi service became available on almost all areas of the ship (guest rooms and public areas). The upgrade to JSATMarine service is intended to boost the

speed to meet customers' increasing demand for internet usage, especially at sea around Japan where cellular network cannot be reached.

MOPAS Radio Room official said, "Cruise trips have aspects where you can enjoy extraordinary experiences, but when it comes to using the internet, it can be said that being able to access information at will from anywhere onboard, without giving you the feeling that you are on a ship, is ideal."

Furthermore, by taking advantage of JSATMarine's significantly fast downlink (shore-to-ship) speed, it is expected to be used for always-on large data communications, for example, internet broadcasting and video downloads as well as ship's operational communications, which is not an easily available option on conventional satellite internet access services due to limitations such as speeds rates.

On NIPPON MARU, JSATMarine's test service started in March and planned to increase its speed plan up to 30Mbps (shore-to-ship) and 3Mbps (ship-to-shore) in future.



JSATMarine User Experience:

MOPAS Radio Room official commented, "We tried basic web browsing and felt there wasn't much difference to the internet we use on-land. Looking back on history of maritime communications, we didn't think such high-speed plan at a fixed price would be possible."

For this upgrade, Furuno provided the JSATMarine service together with its VSAT equipment and technical support. As a marine electronics company, Furuno has been a long-time experienced provider of satellite communication equipment, but this was the first time for Furuno to provide equipment for JSATMarine service. Furuno conducted prior tests in order for its smooth onboard commissioning and operation, and also provides a stable 24/7/365 support.



Furuno's VSAT antenna installed above deck

MOPAS, Furuno and SKY Perfect JSAT will strive to meet customer needs for internet access and further improve our services as important infrastructure that supports vessel operations.

■ Related Links

- November 5, 2020 Release
Renovated Nippon Maru Makes Long-awaited Resumption of Service
- With Autumn in Full Swing, Take a Cruise Trip with Safety, Security, Hospitality -
<https://www.mol.co.jp/en/pr/2020/20072.html>
- October 28th, 2021 News Release
SKY Perfect JSAT launches High-speed Maritime Broadband Service "JSATMarine"
https://www.skyperfectjsat.space/en/news/detail/sky_perfect_jsat_launches_highspeed_maritime_broadband_service_jsatmarine.html
- SKY Perfect JSAT Space Business Website
<https://www.skyperfectjsat.space/jsat/en/>

*1 “NIPPON MARU”: Built in 1990. Ocean-going cruise ship that offers a broad lineup of cruises from overnight jaunts to around the world cruise. With more than a century-worth experience of cruise ship operation since the Meiji Era, trip on NIPPON MARU provides hospitality and relaxation of life at sea. Cruise guests enjoy cuisines, and many are repeating guests.

*2 “JSATMarine”: High-speed maritime broadband service provided by SKY Perfect JSAT using its own satellites and platform. Service coverage includes major shipping routes from Western Pacific Ocean region to Indian Ocean and Middle East region with speeds as fast as 50Mbps (ship-to-shore). For details, please contact SKY Perfect JSAT (JSAT-Maritime-Sales@sptvjsat.com). Furuno provides the equipment for JSATMarine service.

Company Overview:

About Mitsui O.S.K. Passenger Line

Mitsui O.S.K. Passenger Lines, Ltd. (MOPAS) offers a broad lineup of cruises aboard the NIPPON MARU, from casual overnight jaunts to cruises all over Japan and overseas cruises with a variety of themes and ports of call. MOPAS cruise guests can experience the relaxation of life at sea, and of course superb seasonal and local cuisine. This epicurean relaxation harkens back to our century of experience in pampering our passengers. In commemoration of the 30th anniversary of the NIPPON MARU's services in September 2020, it underwent a renovation lasting about 50 days in the spring of that year. Passengers can enjoy more comfort and options with the new NIPPON MARU while enjoying the fine tradition of cruise travel. Press contact: mopas_press@molgroup.com.

About Furuno

Making full use of our core technological expertise, namely, sensing, processing and communication, FURUNO strives to bring about safety and efficiency in vessels' operation, sustainable fishery with

thorough resource management, safe healthcare and the pleasant society filled with safety and peace of mind. For more information, visit: <https://www.furuno.co.jp/en/>.

About SKY Perfect JSAT

SKY Perfect JSAT Corporation is Asia's largest satellite operator with a fleet of 16 satellites, and Japan's only provider of both multi-channel pay TV broadcasting and satellite communications services. SKY Perfect JSAT delivers a broad range of entertainment through the "SKY PerfecTV!" platform, the most extensive in Japan with a total of approximately 3 million subscribers. SKY Perfect JSAT's satellite communications services, which cover Asia, Indian Ocean, Russia, Middle East, Pacific Ocean and North America, play a vital role in supporting communications infrastructures for mobile backhaul, government, aviation, maritime, oil & gas and disaster recovery. For more information, visit our corporate website (<https://www.skyperfectjsat.space/en/>) and Space Business website (<https://www.skyperfectjsat.space/jsat/en/>).