News release

2026.6.4
NTT, Inc.

IOWN Goes to Space

—NTT and MBRYONICS collaborate toward next-generation optical communication modules—

TOKYO—June 4, 2026—NTT, Inc. (“NTT”) and MBRYONICS Ltd. (“MBRYONICS”), an Ireland-based company developing optical communications platforms for space applications, signed a memorandum of understanding (MoU) on June 3, 2026, to collaborate in the field of space optical communications.

Under this MoU, the two companies will collaborate on business development in the field of space optical communications and advance studies of related technologies. The partnership represents an effort to extend the technologies developed under NTT’s Innovative Optical and Wireless Network (IOWN※1) into the space domain and accelerating the realization of the IOWN vision.

Background and Purpose

In recent years, the expansion of satellite constellations and growing demand for data communication have increased the need for high-capacity, low-latency communications infrastructure in space. In addition to conventional radio-frequency communications, optical communications technologies are expected to play a key role in addressing these needs.

Through the IOWN (Innovative Optical and Wireless Network) Initiative, NTT has been advancing research and development of optical communications and signal-processing technologies for terrestrial networks.

MBRYONICS has expertise in laser-based optical communications technologies for satellite-to-satellite and space-to-ground communications, and is advancing the development of its optical communications platform.

Against this backdrop, the two companies have agreed to collaborate on business development and the advancement of related technologies in the field of space optical communications.

Building on this partnership, NTT and MBRYONICS will explore opportunities to expand the application of NTT's optical communications technologies in the space domain and evaluate their potential through validation activities. This initiative represents an important step toward bringing the IOWN vision into space.

Scope of Collaboration

Under the MoU, NTT and MBRYONICS will collaborate on business development initiatives in the space optical communications field and will advance studies of related technologies.

As part of this initiative, MBRYONICS will develop optical transceiver modules※2 incorporating the digital coherent technology※3 developed by NTT.

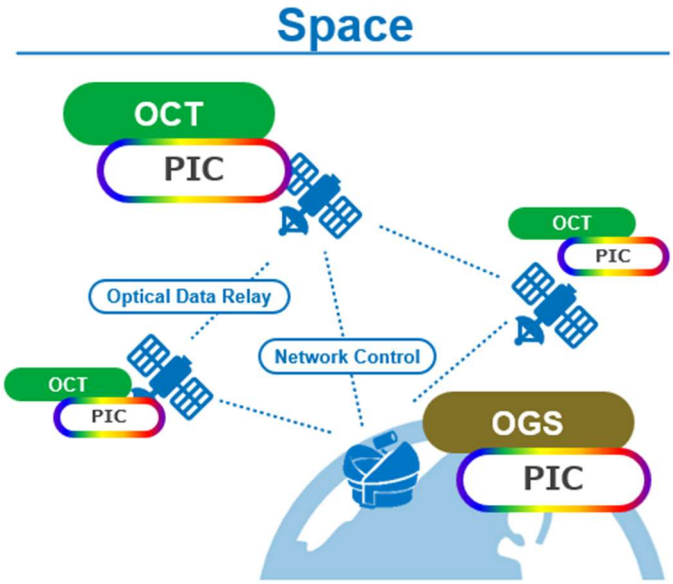
These optical transceiver modules are expected to be integrated into optical communication terminal (OCT) systems from multiple vendors for future commercial space applications.

By applying these optical transceiver modules, space communications are expected to achieve data transmission speeds more than ten times faster than those of conventional approaches.

Future Outlook

NTT and MBRYONICS will advance studies toward business development in the field of space optical communications and contribute to the realization of space infrastructure based on optical communications enabled by IOWN technologies, while also supporting the expansion of NTT Group's space business initiative, "NTT C89※4."

<Reference>
"Toward Mid- to Long-Term Profit Growth"
NTT Earnings Presentation Materials (May 2026)



【Notes】

※1 IOWN (Innovative Optical and Wireless Network)

A concept for a communications infrastructure, including terminals, that leverages innovative technologies centered on optics to provide ultra-high-speed, high-capacity communications and extensive computing resources beyond the limitations of existing infrastructure.

※2 Optical transceiver module

A device that converts electrical signals into optical signals and vice versa, enabling the transmission and reception of high-speed data over optical communication networks.

※3 Digital coherent technology

An advanced communications technology that utilizes not only the intensity (amplitude) of light but also its phase and polarization, enabling significantly higher transmission capacity and efficiency than conventional optical communications technologies.

※4 NTT C89 is a trademark of NTT, Inc.

It refers to the "NTT CONSTELLATION 89 PROJECT," an initiative aimed at expanding space-related businesses and contributing to the growth of the space industry through the provision of innovative solutions to society.

This release is part of the "NTT C89" initiatives related to space business activities within the NTT Group.

URL : https://group.ntt/en/aerospace

About NTT

NTT is a leading global technology innovator, providing a broad range of services to both consumers and businesses. As a mobile operator and provider of infrastructure, networks, and services, NTT is dedicated to promoting a sustainable future through cutting-edge innovations. Our portfolio includes business consulting, AI-powered solutions, application services, global networks, cybersecurity, data center and edge computing, all supported by our deep global industry expertise. Generating over $90 billion in revenue and employing 340,000 professionals, we allocate 30% of our annual profits to fundamental research and development. With operations spanning more than 70 countries and regions, our clients include over 75% of Fortune Global 100 companies, alongside thousands of enterprises, government organizations, and millions of consumers.

About MBRYONICS

MBRYONICS is a deep-tech company building the internet in space. Their 25-800Gbps transceiver platform is the only solution compatible with all major optical communication standards, delivering the critical interoperability layer for LEO, MEO, and GEO constellations.

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