Translation

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News Release

KOHOKU

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To whom it may concern

KOHOKU KOGYO CO., LTD.
1623, Takatsuki, Takatsuki-cho, Nagahama-shi, Shiga, 529-0241, Japan
(Code: 6524, TSE Standard Market)

Kohoku Kogyo Co., Ltd. and WARPSPACE Inc. form a capital and business alliance to develop optical systems for the space communications field

Kohoku Kogyo Co., Ltd. (Head office: Nagahama City, Shiga Prefecture; President and CEO: Futoshi Ishii) is pleased to announce that it has reached an agreement with WARPSPACE Inc. (Tsukuba City, Ibaraki Prefecture; Representative Director, and CEO: Hiromitsu Azuma) on a business alliance concerning research and development of optical components, optical devices, modules, equipment, and systems for space communications, and that Kohoku Kogyo will invest approximately 300 million yen in WARPSPACE (an 8.9% stake).

WARPSPACE is a venture company that provides inter-satellite optical communication network services for low-Earth orbit commercial earth observation satellites. It is working on the practical application of satellite communications technology, which is expected to grow in a wide range of fields, including not only earth observation for disaster preparedness and prevention, but also the agriculture, forestry and fisheries industries, the construction of public infrastructure such as transportation and logistics systems that take environmental impacts into consideration, and urban planning. It has strengths in satellite communications network systems, the market for which is expected to expand significantly in the future, such as “WarpHub InterSat,” the world’s first network that enables real-time, high-capacity communications. More specifically, it has strengths in technology for interconnecting low- and medium-Earth orbit space communication terminals that use different communication protocols.

The Kohoku Kogyo Group, on the other hand, has a high market share in the markets for optical isolators, optical filters for submarine cables, and more. In addition to optical isolators for submarine cables, the Company is engaged in the development, manufacture, and sale of various optical components and devices, including optical devices such as optical circulators, Faraday rotators, which are crystal elements, high-purity silica glass components, and fiber/fiber array processed products using silica glass capillaries.

Submarine cables in particular are required to operate stably in harsh environments, such as requiring 25 years of maintenance-free operation at a maximum depth of 8,000 meters, and the Company’s highly reliable devices are highly regarded.

Furthermore, in order to generate synergies with the material technology (crystal growth technology) and precision assembly technology of the Kohoku Kogyo Group for optical components and devices, the Company is strengthening the product lineup and expanding the sales network for next-generation information and communications infrastructure through measures such as the acquisition of EpiPhotonics Co., Ltd., which has PLZT thin film technology, and the technology introduction from Ariel Photonics Assembly Limited, which has high-power laser system technology. The Company aims to expand the market share in the optical information and communications related market, where capacity is increasing.

With this alliance for the development of optical devices and systems for the space communications field, Kohoku Kogyo will accelerate the application of its highly reliable optical passive devices, which have a proven track record with undersea cables, to satellite communications, by advancing certification procedures at related organizations and the development of products for use in outer space, where they are exposed to harsh operating conditions such as radiation, extreme temperature changes, and thermal vacuum.

In addition, the Company will strengthen the product lineup for the next-generation satellite communications market in conjunction with WARPSPACE's development of products for the space communications field. Furthermore, by leveraging synergies with technologies from EpiPhotonics and Ariel, the Company will continue to develop subsystems such as optical switches, which require high-speed response, as well as satellite-satellite and satellite-ground station laser communication modules, with the aim of providing the high-quality solutions required in the satellite communications field.

＜Overview of Kohoku Kogyo Co., Ltd.＞

Kohoku Kogyo Co., Ltd. was founded in 1959 as a manufacturer of lead terminals for aluminum electrolytic capacitors and went on to enter the optical components and devices business in 2000. Today, 55% of the sales are in the lead terminal business and 45% are in the optical components and devices business. In the optical components and devices business, the Company has a market share of over 50% for optical isolators for submarine cables that can operate maintenance-free for 25 years at a depth of 8,000 meters, making us a leading company in this field.

＜Overview of WARPSPACE Inc.＞

Items	Contents
Company name	WARPSPACE Inc.
Location	Tsukuba Center Building 1F, 1-10-1, Azuma, Tsukuba, Ibaraki
Representative's title and name	Representative Director, and CEO　Hiromitsu Azuma
Business content	Space communication module manufacturing and sales and optical communication integration services
Capital	334,989,225 yen
History	2016　Founded by Toshihiro Kameda, a professor of the Institute of Systems and Information Engineering at the University of Tsukuba, who is a leading researcher in aerospace engineering at the University of Tsukuba. 2022　Selected for JAXA R&D Project to Study the Design of Optical Cislunar Comm Architecture 2022　Announced the 1st Satellite for WarpHub InterSat "LEIHO" 2023　Completed the PDR of the First Satellite
Key Technologies	・Development of optical translator for interconnecting optical communication terminals with different communication standards (HOCSAI) ・Development of digital twin emulator for satellite constellations specializing in optical communications (DTS) ・Development of medium orbit optical repeater system

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