To whom it may concern

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Notification of Commencement of Mass Production of GNSS(GPS) Optical Transmission Units

We at Seikoh Giken are pleased to announce that we will be starting mass production of "GNSS (GPS) Optical Transmission Units" beginning in January 2022.

Nowadays, precision time synchronization is necessary in high-speed communications such as 5G or 4K/8K video transmission, with GPS signals widely used as a time source. However, as normal GPS signals require connection via a coaxial cable from an outdoor antenna to a receiver, and therefore coaxial cable must be laid, and brings with it concerns over distance restrictions between the antenna and the receiver, as well as worries over lightning. In response, we utilized RoF (Radio over Fiber) technology, which converts radio signals into light, developed a GNSS optical transmission unit to extend GPS signals, and have made preparations for mass production.

Replacing coaxial cable with fiber optic cable has the following benefits.

1. Signal can be extended over long distances

   Fiber optic cable has lower transmission loss than coaxial cable, eliminating restrictions on the distance between the GPS antenna and receiver, and allowing the signal to be delivered over long distances.

2. Easy installation and maintenance

   Existing general-purpose fiber optic cables can be used, making large-scale installation work unnecessary. Additionally, fiber optic cable does not rust or corrode, so it can be used almost indefinitely.

3. Resistant to lightning damage

   Fiber optic cable does not conduct electricity, and is thus an extremely effective measure against lighting for GPS receivers and other equipment further downstream.

Seikoh Giken is now taking orders for this newly developed "GNSS (GPS) Optical Transmission Unit."

This product sells for 198,000 (excluding sales tax) for a set of two units; the transmitter, which converts the GPS signal into light and transmits it, and the receiver, which receives the optical signal and returns it to a GPS signal. For now, we hope to receive orders for 1,000 sets per year. Mass production will begin in January 2022, with delivery within that fiscal year at the earliest.

◆ "GNSS (GPS) Optical Transmission Unit"

End