



dBi10 Helps Provide Low Power Monitoring for Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT).

The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) is a ministry of the Japanese Government. It is responsible for all of the laws and orders in Japan, and is the largest Japanese ministry in terms of employees.

The mountainous setting of Japan creates rivers that are generally short and have steep channel slopes, however, the rivers around Japan are essential to the economy and development of Japanese society. Japan lies in the northeast top of the Asian Monsoon Zone, and the four distinct seasons feature three periods of heavy precipitation. The rivers in Japan are prone to flooding because they flow rapidly as a result of the mountainous terrain, and the water levels rise and fall very quickly.

The MLIT implements a variety of flood control projects to protect life and property from floods along the Japanese Rivers. Part of these projects also includes work to improve and construct river channels, regulating basins, and underground rivers. MLIT projects also use dams for flood mitigation.

River Level Measurement

The MLIT approached Pulsar Measurement's distributor in Japan, Delairco KK, for help with low-powered level measurement. This type of measurement was required at over 5,000 locations, and Delairco KK provided them with Pulsar Measurement's IMP10 Lite and dBi10 units for more than 700 locations.

Each system consisted of a level sensor (IMP10 lite and/or dBi10 units), datalogger, solar panel, battery and LTE modem that transmitted the data to the MLIT central server which can be accessed remotely through the internet.

The Right Technology for the Right Application

The MLIT needed rapid deployment, something that they could get in the ground quickly and easily, ensuring that



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Integrator General Manager for The MLIT.

they chose the best technology for the application, and with the lowest possible power consumption due to the fact solar power was being used.

When used on battery power for intermittent (wake-up) applications, the IMP Lite features a high-speed boot-up of around 3 seconds that maximizes battery life. This all-in-one sensor and controller includes an integral display that makes programming the IMP Lite extremely straightforward.

The low-power design of the dBi HART level sensors means they are ideal for remote locations, so were the perfect solution to this application. The in-built HART communication protocols make integration with existing site systems quick and easy. These non-contacting, ultrasonic level transducers can be used as stand-alone devices or part of a complete data logging or control system, using HART protocols for data collection.

Accurate and Reliable Level Measurement

MLIT were satisfied with the dBi10 Intelligent Transducers and IMP10 Lite units, and their whole system has been designed to be compatible with the IMP10 Lite units. Commenting on the project, The Integrator General Manager for MLIT said, "dBi10 is a good level sensor and we plan to expand to not only MLIT but all local government applications."

The dBi level sensor has a very high accuracy (0.06% full scale). Although MLIT allows 0.3%, the dBi is much superior to MLIT's specification. The integrators at MLIT appreciate it's high accuracy.

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More Information

IMP Lite: www.pulsarmeasurement.com/imp-lite

dBi HART Intelligent Transducer: www.pulsarmeasurement.com/dbi-hart



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