



## eGate Wireless Products Security Overview

eGate's wireless measurement products leverage the Nokeval Sky radio communication technology, which is based on LoRa radio modulation. This technology is integral to several of eGate's offerings, ensuring robust and secure communication for IoT devices.

The Sky technology utilized in eGate products employs the widely recognized and effective LoRa radio modulation. It operates in the license-free 433 MHz ISM band with a maximum transmission power of +10 dBm.

All communications between eGate's Sky-enabled devices are secured using strong AES encryption within the Sky protocol. Encryption keys are assigned locally to each device through secure electronic programming and are never transmitted externally.

Messages from eGate's Sky transmitters are received and processed using Sky base station devices. The Cell2-Sky base station device, equipped with the same encryption key as the transmitters, receives, decrypts, and forwards the messages to the target system via an internet connection—either through Ethernet and the local network or via 2/4G mobile data. The Cell2-Sky base station devices operate on a simple embedded system based on FreeRTOS, without a conventional operating system like Linux. This design ensures that the devices do not listen to TCP ports or respond to external internet connection attempts. Instead, the base station device always initiates connections to the cloud service.

The encryption keys, as well as the address and port for base station connections, are set exclusively through local programming. This approach minimizes the attack surface for eGate's Sky-based systems, ensuring high security for all wireless measurement applications.

The service and its data is completely hosted at AWS EU Region (EU-WEST-1 in Ireland). The data centers are located in the metro of Dublin and within Republic of Ireland.