

## Why LoRa is Playing Dominant Role in IOT....?



If you have read some news about latest technology trends in the world than you have heard about the IOT it is known as **Internet of Thing**. It is Billion dollar industry and the market is expected to reach **USD 724.2 Billion** by 2023.

Internet of Things (IOT) is an ecosystem of connected physical devices that are accessible through the internet. The 'thing' in IOT could be a person with a heart monitor or an automobile with built-in-sensors, remotely controlling any device with the help of internet.

There must be an efficient way to communicate with other devices through internet and should has many gateway so more number of devices can be connected. Thus new communication network is required which should be efficient therefore the LoRa is developed for IOT industry.

### LoRa

LoRa is developed by Semtech. It is low power wide area networks developed specifically for Internet of Things applications. It promises long range and low battery usage, and it's aiming to power the next generation of Internet of Things applications as a worldwide standard for IOT communication. It is often referred to as LoRaWAN.

LoRaWAN is an open communications protocol, managed by the LoRa Alliance, a non-profit organization with members such as Cisco and IBM and many more. The technology itself promises to be able to communicate wirelessly over a distance of up to 15 kilometer with a standard gateway, even though in ideal circumstances it should be possible to make up to 45 kilometers. Each gateway can handle a large number of nodes. The battery

architecture is typically laid out in a star-of-stars topology. Transmission of LoRa is secure by a symmetric encryption algorithm and it is one of the most secure algorithm. The reason behind LoRa is gaining in popularity because mainly thanks to its open source protocol which can be use by anyone for development.

The main disadvantage of LoRa however is exactly what enables its strengths, namely the low bandwidth. Furthermore, the protocol doesn't allow continuous sending, due to rules on the frequency band it utilizes. Because of this LoRa is only suited for short and periodical communications. And while the protocol supports bidirectional communication, actually using this has a direct consequence on battery life.

LoRa is an extremely promising technology. Whether LoRa will truly be a game-changer remains to be seen, but it opens up a lot of innovative and new possibilities that could transform the Internet of Things.

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