

業界初! Sigfox®とIEEE802.15.4kの2モードLPWA対応

The industry's first dual-mode LPWA support for both Sigfox® and IEEE802.15.4k

NEW

ROHM GROUP
LAPIS
SEMICONDUCTOR

IoT向けLPWA(低電力広域)無線LSI

LPWA (Low Power Wide Area) Wireless Communication LSI for IoT

ML7404

Features

■ LPWAとして業界初の2モードLPWA

Configurable for either Sigfox® or IEEE802.15.4k communication via mode setting

■ Sigfox®ハードモデム業界初搭載

Industry's first LSI with built-in Sigfox® radio modem

■ IEEE802.15.4k準拠の直接系列スペクトラム拡散技術により長距離無線通信を実現

IEEE802.15.4k-compliant Direct Sequence Spread Spectrum technology enables long range wireless communication

■ 優れた同一システム妨害波耐性により基地局収容数大

Superior resistance to system interference allows a single base station to support a larger number of devices

Applications

■ IoTネットワーク / 農業IT / 災害対策

IoT networks / Smart agriculture / Disaster management

■ ストリートライト / セキュリティ機器

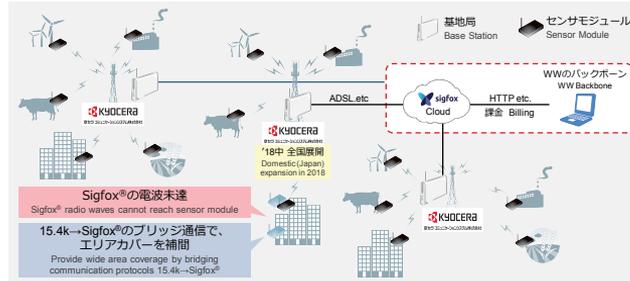
Street lights / Security devices

■ 電力 / ガス / 水道スマートメーター

Smart meters for water / electric / gas

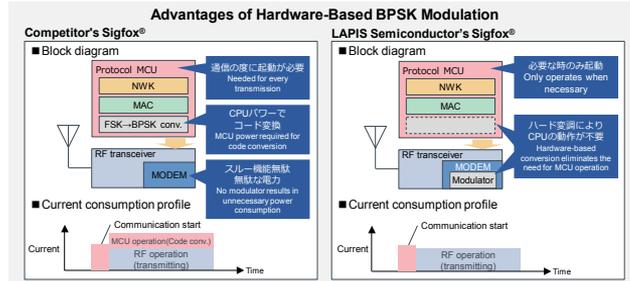
2モードLPWAの優位性

Advantages of dual-mode LPWA



BPSKハードモデムの優位性

BPSK Modem Advantages



優れた同一システム妨害波耐性により基地局収容数大

Superior immunity against system interference allows a single base station to support a larger number of devices



802.15.4k / Sigfox® / LoRaWAN™の比較

802.15.4k/Sigfox® / LoRaWAN™ Comparison

Protocol	IEEE802.15.4k	Sigfox®	LoRaWAN™
Frequency Band		Sub-GHz Band (Regional Unlicensed Band)	
Long Range Scheme	DSSS	UNB	CSS
Data Rate	Less than 12.5kbps	100bps	250 to 50kbps
Communication Distance	More than 10km	More than 10km	More than 10km
Communication Direction	Two way	One way (only UpLink)	Two way
Network Construction	No restrictions (no communication fee if configured in-house)	Restricted to licensed operators (annual fee depends on the amount used)	No restrictions (no communication fee if configured in-house)
PHY Standard	IEEE802.15.4k	Sigfox® proprietary	LoRa™ proprietary
Other Features	Superior resistance to system interference allows a single base station to support a larger number of devices	Same network and cloud service can be used in major cities in 32 countries	