

# Connect to the Largest and Fastest Growing LoRaWAN™ Network

For application providers, solution providers and system integrators, connecting to Senet's Network-as-a-Service (NaaS) is the easiest way to deliver data from Internet of Things (IoT) end devices to applications.

Senet's Network-as-a-Service is powered by our LoRaWAN™ Network Operating System and provides a unique set of deployment options, processes and onboarding tools. These features create the perfect balance between scalability, functionality and cost, supporting Senet's LPWA Virtual Network (LVN™) and innovative go-to-market models that are changing the way companies and partners across the loT ecosystem consume and provide connectivity services.



#### **Application Providers**

Application providers with vertical solutions use Senet's NaaS to deliver data from End Devices (sensors and actuators) to their customers. Application providers use Senet network where available and partner with Senet to deploy Radio Access Network (RAN) in support of additional applications as required.



#### **System Integrators**

System Integrators use Senet's NaaS to offer multiple services derived from a variety of LoRaWAN End Devices (sensors and actuators). These End Devices can be purchased from OEM manufactures or may be engineered by the System Integrator. System Integrators use Senet's public network where available and partner with Senet to deploy Radio Access Network (RAN) in support of additional applications as required.

#### **Senet NaaS Services**



#### Connectivity

- LVN Radio Access Network
- Standards based for interoperability
- Enables seamless inter-and intra-network end node roaming
- Rapid expansion capabilities



#### **Data Streaming**

- Network Operating System connecting data to applications
- Simple bi-directional REST streaming APIs
- Optional data aggregation service and visualization tool



#### **Device Management**

- Centralized device control and reporting
- Customer-specific network mapping and system health tools
- Integrated device tracking and RF reporting



#### The Foundry

- Training, development tools and hands-on hardware labs
- Product ideation and full product development consulting
- · Certification readiness

## Senet LoRaWAN Network Advantages

#### Longest deployment lifecycles

Low cost LoRa® modems in End Devices and standardsbased infrastructure are designed to support low data rate and long battery life applications, delivering a low total cost of ownership and superior CAPEX and OPEX savings.

#### Global provisioning at the time of manufacturing

Single global provisioning of End Devices supports security, redundancy, and mobility requirements. One-time provisioning at the manufacturer removes the need for user to configure credentials at time of deployment, and "zero-touch over the air deployment" simplifies deployment at scale.

#### Secure end-to-end encryption

Built in end-to-end LoRaWAN security augmented by optional integrations with security solutions from world-leading security solution providers such as Atos, Gemalto and G+D Mobile Security.

#### **Bi-Directional communications**

Ability to stream data and configure and/or manage End Devices with uplink transmissions and downlink communications.

# Scalable gateway deployments with flexible coverage options

Supports rapid expansion of network capacity and coverage with less physical network infrastructure. Both indoor and outdoor coverage options are available.

### Radio Access Network Management and Deployment Services

Our Low Power Wide Area Virtual Network (LVN™) architecture allows Application Providers and System Integrators using Senet's Network-as-a-Service to contribute to the network buildout by becoming a Radio Access Network provider. As your network coverage needs expand, Senet partners with you to build out the network when and where it is required. Senet's LVN offers several strategic advantages, including revenue share opportunities. RAN Provider services offered by Senet include:

#### **Network Design and RF Planning**

- End Node coverage simulation with anticipated performance characteristics
- Redundancy strategies and planning

#### **RAN Site Acquisition**

Where should I put the gateways?

- Municipality, owned, donated or leased locations
- Permitting
- Power AC, PoE, Solar
- Internet Protocol backhaul connectivity – Ethernet, Fiber, Cellular

#### **RAN Deployment**

- Gateway hardware acquisition
- Provisioning and staging
- Installation Tower climb, rooftop, billboards, light poles

#### **RAN Management & Operations**

- Monitoring (uptime, backhaul, capacity)
- Escalations and alerting
- Trouble calls and truck rolls

#### Why Partner with Senet?

A Founding and Contributing member of the LoRa Alliance™, Senet is leading the IoT revolution with pioneering experience and expertise in building and operating Low Power, Wide Area Networks (LPWANs). We are working with hundreds of businesses to revolutionize their products and operations by delivering standardized low-cost network connectivity exactly where it's needed, when it's needed and at the right cost.



LoRaWAN™ is the open global standard for carrier-grade LPWAN connectivity, designed to connect low-cost, battery-operated sensors over long distances and offers unique benefits in terms of bi-directionality, security, mobility, and geolocation.

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