INGICS TECHNOLOGY

|	
AP NOTE V1	# Beacon Gateway Deployment

Introduction

This note is a suggestion for deploying INGICS beacon and gateway. It also collects all models' antenna radiation patterns into one place to help the deployment.

Antenna Radiation Pattern

Generally, the antennas used in our product are all omnidirectional. The radiation pattern is just like a "donut" shape. Below is a pattern example of the BLE antenna of iGS03M.
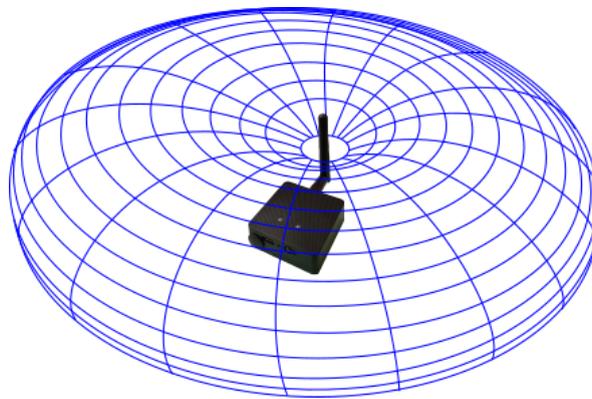
The following is the pattern summary of our products. For convenience, the "donut" is simplified by circles.

Gateway

iGS01S	iGS02E	iGS03M

INGICS TECHNOLOGY

Beacon

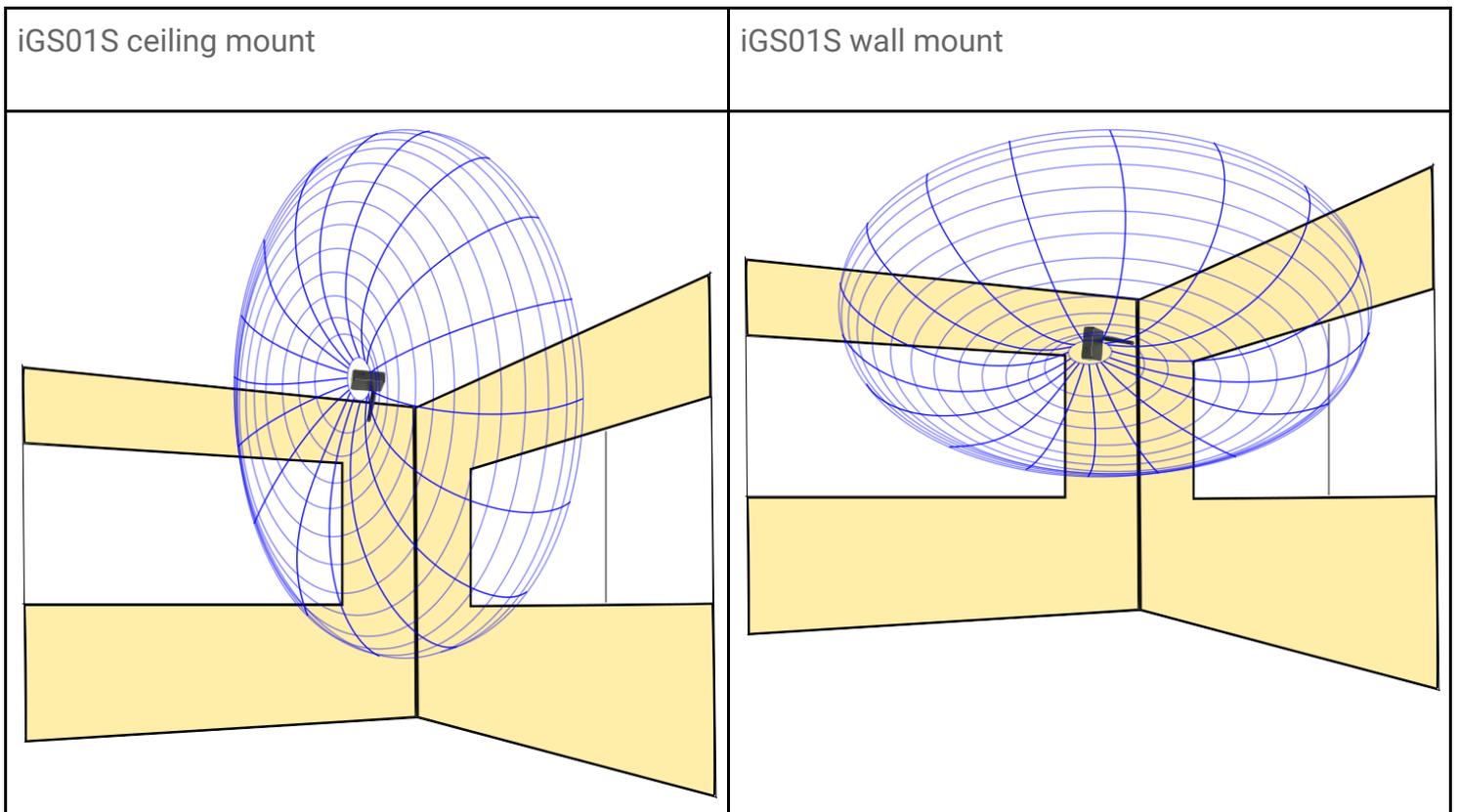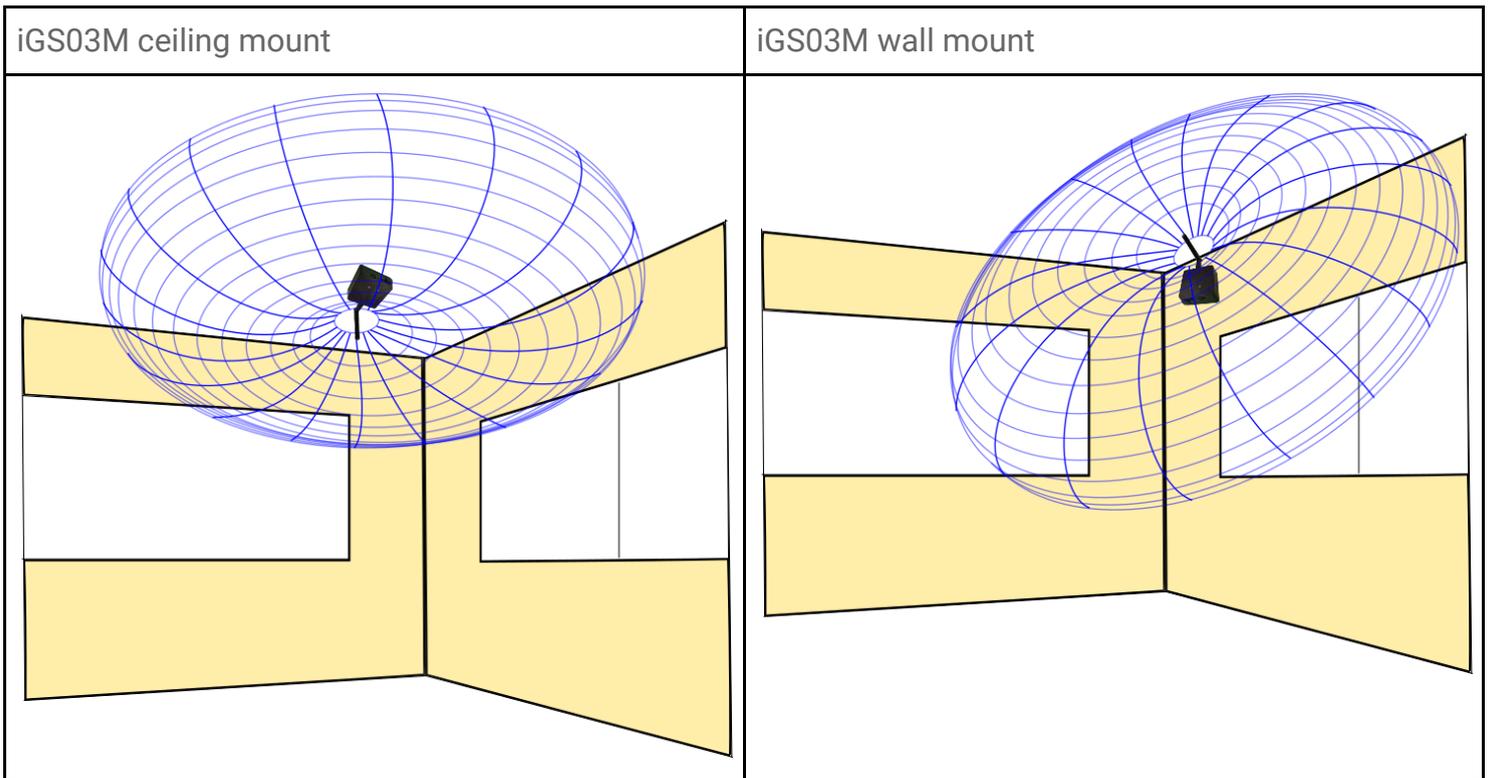| iBS01	iBS02	iBS03	iBS04

Deployment Example For BLE

Gateway

The BLE antenna of the gateway should face to the space the beacons are located. For the gateway, it is a BLE receiver and the receiving range is typically over 100M in open space but it is dominated by the transmitter (the beacon). For indoor usage, the range is seriously impacted by the environment. In general, 20M-30M is recognized as an effective range. Anyway, field try is necessary to determine the effective range.

Below is the ceiling mount and wall mount examples of iGS01S and iGS03M.

iGS01S ceiling mount	iGS01S wall mount

INGICS TECHNOLOGY

| iGS03M ceiling mount	iGS03M wall mount

Beacon

The beacon is a transmitter and hence it dominates the range of gateway-beacon. The typical range is 100M in open space. For indoor, because of multipath fading, the distance may be shrinked to 10M-30M depending on the complexity of the environment. Below is the deployment example of our beacon.

iBS01 wall mount	iBS02 wall mount

iBS03 wall mount	iBS04 keychain
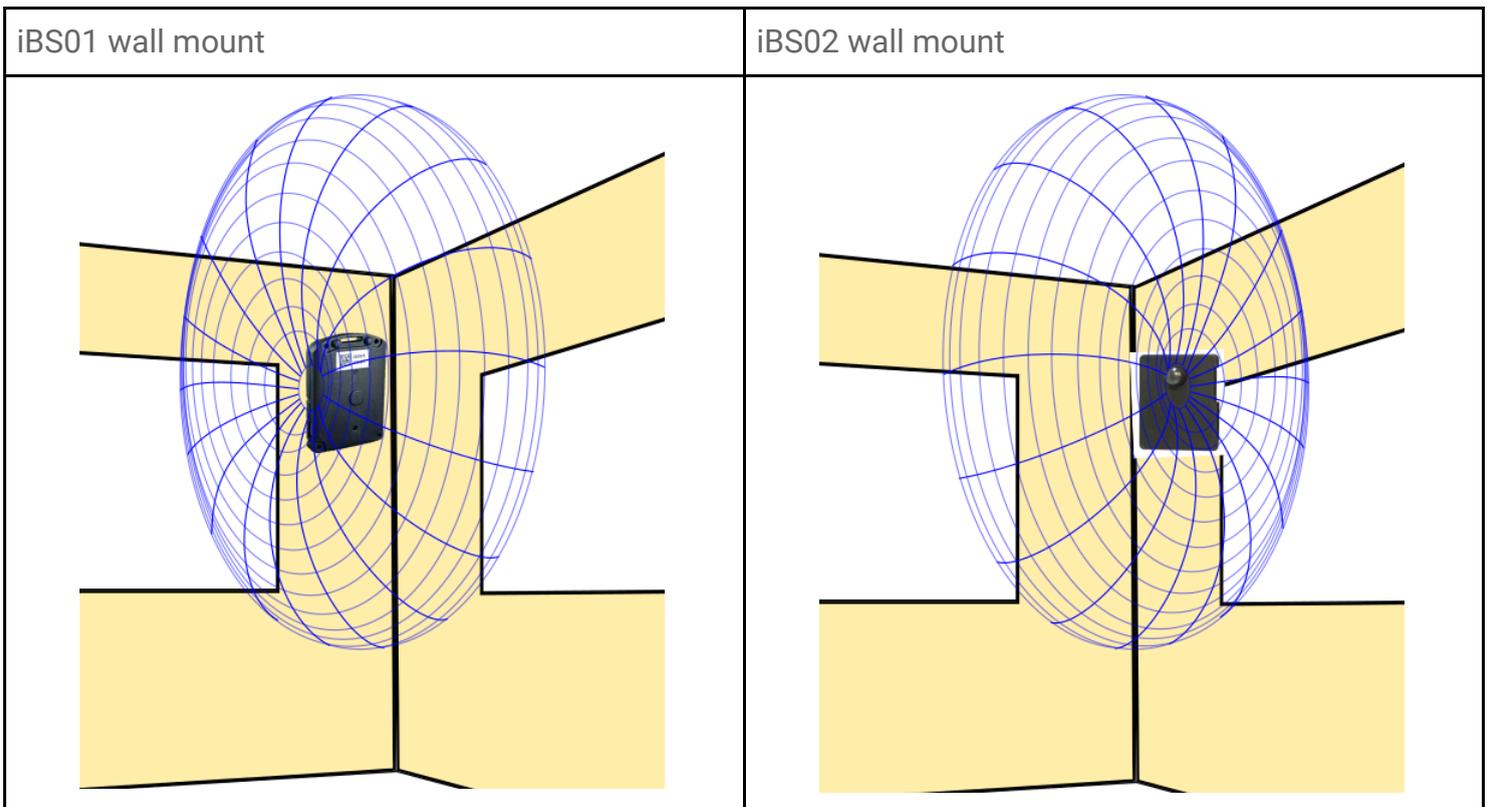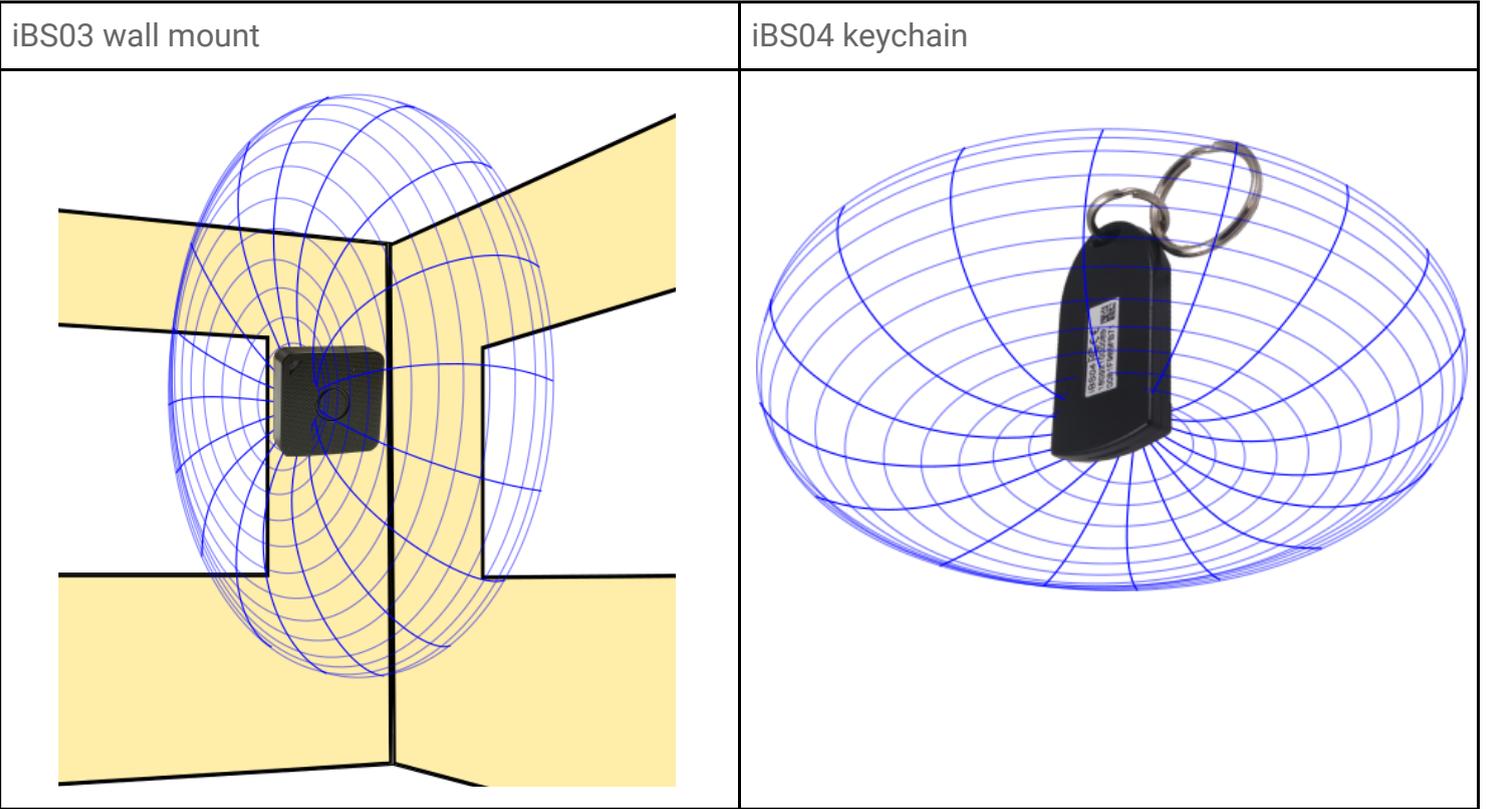
Revision History

DATE	REVISION	CHANGES
Dec 10, 2020	1	Initial release