M1 Edge PoE+ Sensor User Guide for REVIT

A black cylinder with a black and blue text

Description automatically generated

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Table of Contents

[Notices 2](#_Toc164801981)

[Contact 2](#_Toc164801982)

[Follow Us! 2](#_Toc164801983)

[Introduction 4](#_Toc164801984)

[Revit Version 4](#_Toc164801985)

[Family Types 4](#_Toc164801986)

# Introduction

Quanergy laser scanning family was created in and is to be operated in Autodesk® Revit®. The 3D model elements are parametric and easy for Revit users to interact with.

# Revit Version

This family is developed using Revit® 2019 and can be upgraded to the newest versions.

# Family Types

In this guide, you will find the MQ-8 sensor Revit family with types associated with 4 mounting methods.

1. Default – sensor no mount
2. Wall-mount – sensor with wall-mount bracket
3. Hinge-mount – sensor with hinge-mount bracket
4. Tripod-mount – senor with wall-mount bracket and generic tripod. The tripod is a generic Revit family and can be replaced with any other tripod.

A black cylinder with a black and blue text

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Figure 1. Sensor with no mount

A drawing of a metal device

Description automatically generated

Figure 2. Wall-mount bracket

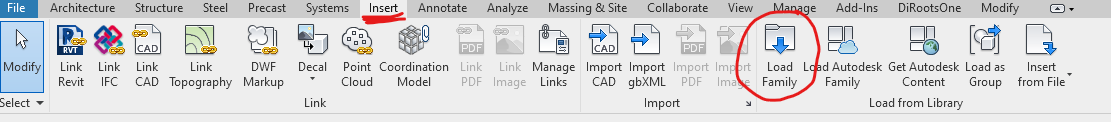
A black cylinder with black metal and black metal parts

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Figure 3. Hinge-mount bracket

# Load Family into Project

To load all the types or just specific ones desired on the project, you will need to LOAD FAMILY and select the folder containing the downloaded family file (RFA).



# Instance Hosting

The family is work plane-based, and is typically hosted on the same plane as the top of floor. It is recommended to place instances in the project using a floor plan prior to moving the instance to a desired location. Pay attention that the ‘Elevation from Level’ parameter offsets the base of the sensor.

A screenshot of a computer

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# Family Parameters

The family behavior in the project can be controlled by Instance and Type parameters.

## Instance Parameters

A screenshot of a computer

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|  |  |  |
| --- | --- | --- |
| Parameter | | Notes |
| Height | Determines the height of the sensor relative to the level. |  |
| Hinge Angle | Determines the hinge angle. Default is 90 degrees. |  |
| Pitch Angle | Determines the angle of movement around the pitch axis. | Angles noted are for graphic adjustments in Revit and imply system requirements. Installer shall make real-world adjustments for system to align with graphical intent. |
| Roll Angle | Determines the angle of movement around the roll axis. |
| Yaw Angle | Determines the angle of movement around the yaw axis. This is recommended to be adjusted at corner installations. |
| FOV Length | Determines beam length. Default values are set to the maximum length. |  |
| FOV Visibility | Turns field-of-view beam coverage on or off. |  |
| FOV Angle | Determines field-of-view coverage. Default values are set to 360 degrees. At corners, this is recommended to be set to 270. | This is intended to be used for designers to locate adequate sensors. After identifying required monitoring zones, it is recommended to reduce coverage lengths in locations where architectural clashes exist. |

A model airplane with different colored arrows

Description automatically generated

# Field-of-View (FOV)

The FOV can be activated by Instance and adjusted the desired range according to the model specifications.

A green oval object with a black and white design

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Example: 360-degree FOV

A green circular object with a black handle

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Example: 180-degree FOV

A green circular object with a square object in the middle

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Example: 180-degree FOV with roll and pitch angles.

|  |  |  |
| --- | --- | --- |
| Parameter | | Notes |
| Front Arrow | Determines front reference. | Angle noted is for noting the front face of the sensor, so that when mounting methods are turned on and off, the mounting angle does not need to change. |
| Hinge Mount | Determines visibility for hinge mounting accessory. | Types include left and right hinge orientations. Once added to floor plans, changing orientation requires adjustments to the “Roll Angle” instance parameter. |
| Pole Mount | Determines visibility for pole mounting accessories for pole-mounted installations. Wall support must be turned on. | Default settings is for all to be turned off. This is default set up. For ceiling installations, place devices on a reflected ceiling plan in Revit. |
| Rain Hood | Determines visibility for optional rain hood. Wall support must be turned on. |
| Tripod | Determines visibility for tripod. Tripods turned on will affect camera height and bring camera to height of tripod. |
| Wall Support | Determines visibility for wall support for wall-mounted installations. |
| Model | Model number |  |
| URL | Link to product page |  |

# Type Parameters