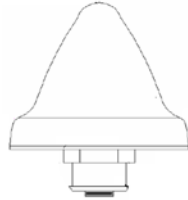# GPS Antenna Installation Guidelines & Specs

Feb 19, 2013

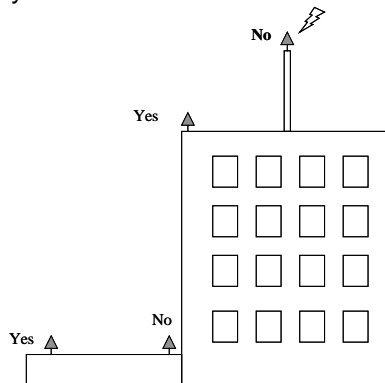## Safe GPS Rooftop and Patch Antenna Installation Guidelines & Specifications

Introduction

This application note describes where and how to safely install a GPS Rooftop Antenna, the RA option of our related Spectratime products, and provides the specifications and supplier information of the RA and PA (Patch Antenna) options.

Recommended GPS rooftop antenna location & installation (RA option)

The antenna must be located on a place with a direct, constant and line-of-sight view of the satellites. Usually the best place is on the roof with no critical obstructions, such as other buildings surrounding the antenna location. However, to avoid lightning, it is critical that the antenna is not located at the highest point of its surrounding. See some recommended "yes-and-no" antenna location scenarios below.
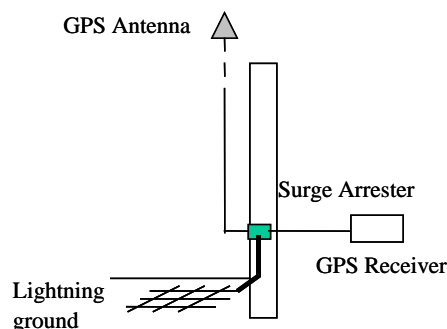
Rooftop GPS antenna mounting bracket (BRA option)

If the antenna mounting bracket (or the BRA option of our related products) is ordered, it allows the user to seamlessly mount the GPS antenna to the fix structure of the recommended location.

Lightning protection installation

A lightning surge arrestor must be installed at the entrance of the building. It must be grounded to a lightning ground that is separated to the instrument ground. Please consult with your local regulation about this question. The surge arrestor will not protect the GPS receiver against high voltage destruction from lightning, thus precautionary handling is strictly required for human safety during lightning conditions.

©SpectraTime
sales@spectratime.com
spectratime.com

Europe Headquarters
+41.32.732.16.66

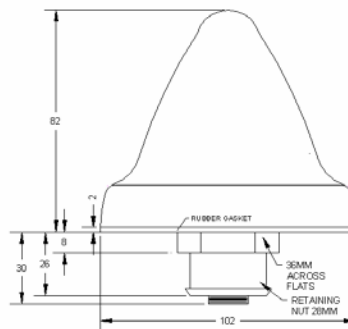**North America Sales Offices**
+1.512.470.3980

Patch antenna spec (PA option)

The spec of the standard Patch Antenna (PA option), type ANN-MS-0-005-0 from u-blox, delivered with the related Spectratime products is available at
http://www.u-blox.com/images/downloads/Product_Docs/ANN_Data_Sheet%28GPS-X-02021%29.pdf

Rooftop antenna spec (RA option)

The spec of the optional Rooftop Antenna (RA option), type Timing 3000 from CNS Systems, delivered with the related Spectratime products is available at http://www.cnssys.com/cnsclock/T3000_Antenna.pdf.

Fast Q&A support

For any Q&A support, please feel free to contact us at fastsupport@spectratime.com.

©Spectratime
sales@spectratime.com
www.spectratime.com

Europe Headquarters
+41.32.732.16.66

North America Sales Offices
+1.512.470.3980

Page 2 of 2