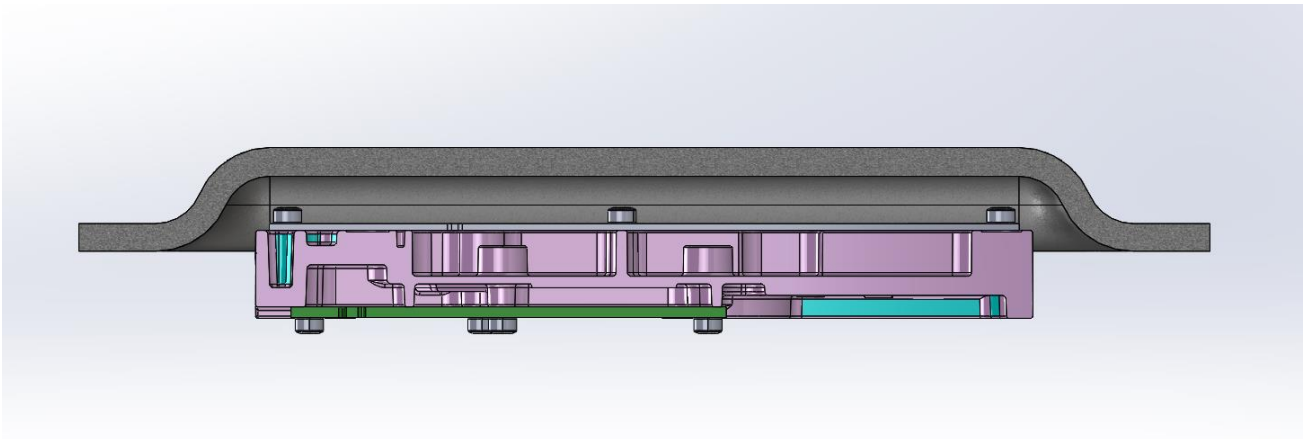


iSYS-50xx Series

InnoSenT iSYS-50xx Series Radome Application Note



Version: 1

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Written by: Barrett Lee

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1. Radome Reference Design Tips

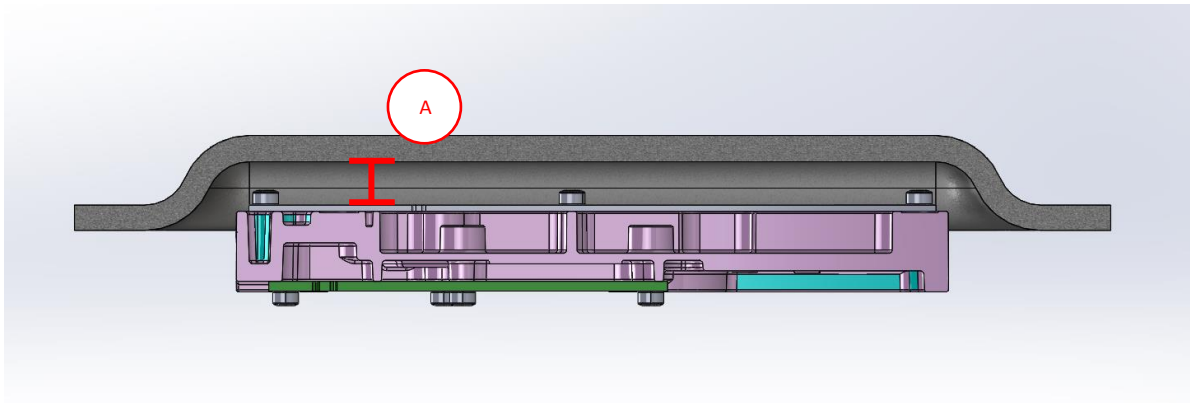


Fig 1. Cross-section view of iSYS-502x with one of its reference radomes showing the critical distance between the antennas and the radome (see below)

InnoSentT provides a radome reference design for the iSYS-50xx series that gives its customers a jump-start into effective radome design. When a few simple rules are followed, the majority of pitfalls involving the radome development process can be avoided. This is provided purely as a reference and InnoSentT is not in any way, shape or form responsible for the quality of results achieved by the customer's design. All radome designs should be thoroughly simulated to verify performance, especially if an investment in tooling for an injection made part is to be made. We offer as a service to simulate and or physically measure the customer's radome and enclosure with the iSYS-50xx product. Ultimately the radome, sensor and enclosure should be measured to verify performance.

Important points when applying the radome reference design:

1. There are unique reference radomes for iSYS-501x and iSYS-502x sensors
 - a. Each of these have two variations, one with Ultem-2000 and the other with Valox VX 5022 materials. You must select the reference radome that matches your chosen sensor and material, they are not the same.
2. Placement of the radome should be that the distance between the antennas and the inner surface of the radome are as close as possible to 6.2mm. (Shown above in red A)
3. From the view of the sensor's antennas there should only be radome visible in all directions.
4. Do not add stickers, paint, or any other material to the radome, doing so could effect radome performance.
5. You may add screw holes for your enclosure on the outer lip as you choose to mount to your enclosure. The screw heads however should be as short as possible as to not obstruct the antennas' view. (Seen on next page in blue B)
6. Radome should be centered around the center of the antennas.
7. Do not modify the thickness of the radome above the antennas. You can however modify the thickness of the mounting lip where the screws mount to the enclosure.
8. Consider a concept for protection against fluids, such as a rubber O-ring under the radome or other.

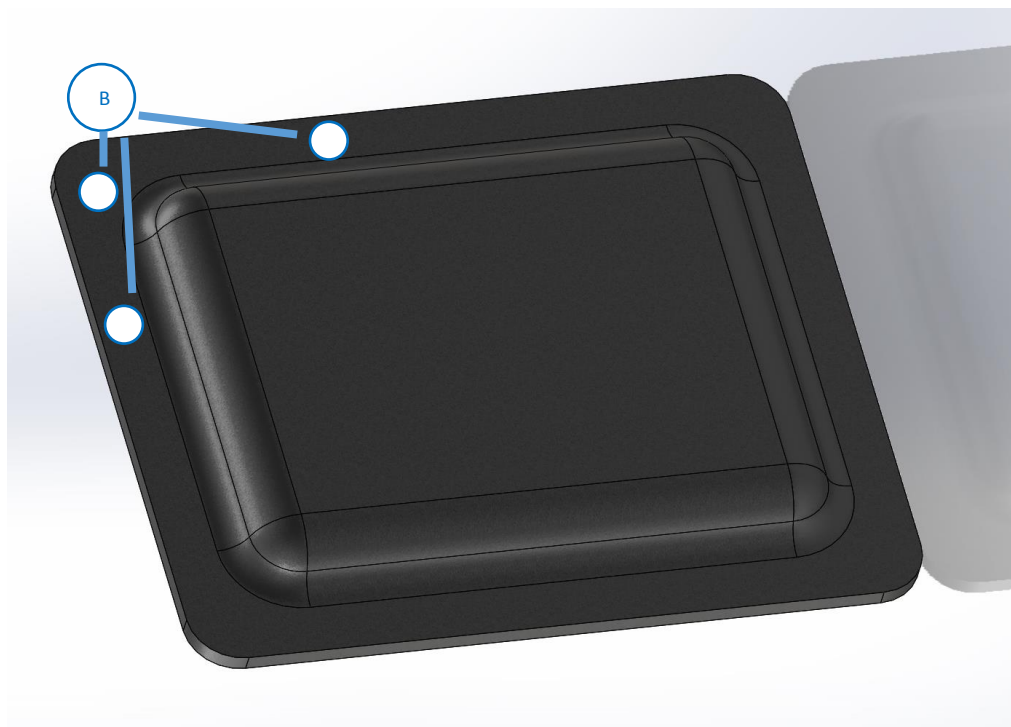


Fig 2. View of reference radome showing the outer lip where you may place your mounting screws for your enclosure.

If you have any questions, comments, or issues, please contact your InnoSenT representative and we will be glad to help.



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