

## UNIRAC TECHNICAL BULLETIN

**Bulletin Number:** TB-110928-1540-0

**Theme:** Applicability of a reverse tilt installation

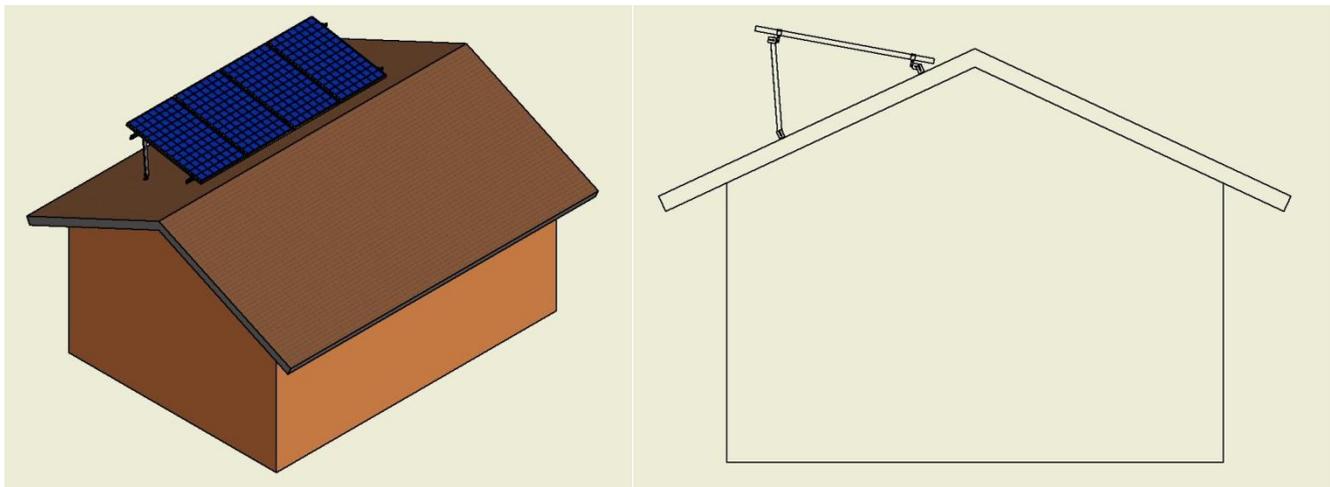
**Background:**

There have been instances where a south facing tilted application is installed on a north facing roof. This is often referred to as a “reverse tilt”. The product that is most commonly used for this type of installation is the low-profile SolarMount Tilt.

This type of installation may have special wind considerations that have to be factored in and are not necessarily covered by the prescriptive engineering that Unirac typically provides.

**Description:**

“Reverse” tilt refers to the tilting solar panels south on a north facing roof. An example of a reverse tilt installation can be seen in the following figure for clarity.



**Figure 1: Example of Reverse Tilt Installation**

Unirac does not recommend this type of installation as there may be unique wind conditions to consider due to the configuration. This configuration may produce wind loads in excess of what is calculated through ASCE 7-05/10. The volume of air that is displaced by the building is accelerated up the roof slope and then focused through the small inlet opening at the lower end of the reverse tilt of the solar modules. This array configuration is undefined in ASCE 7-05/10 and International Building Code. Unirac does not provide engineering analysis for a reverse tilt configuration due to the aforementioned reasons.

If this is the only option for a customer we recommend consulting a local engineer or design professional that can take into account this special configuration and any unique wind conditions that may apply. They can then design using the allowable load values for our products.

The information contained in this bulletin serves as reference information only. In no event shall Unirac, Inc. be liable or responsible for errors, omissions, inaccuracies or misuse of any material contained herein. We recommend the user validate the accuracy and appropriateness of this information from a third party and to exercise their own skill and care with respect to its use.