



# ANT Module Hand Soldering Guidelines

## ABSTRACT

This document describes the procedure that will increase yield and efficiency of hand soldering ANT modules.

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## 1 INTRODUCTION

The M4 type of ANT modules, such as ANTAP1M4IB and ANT11TS33M4IB are surface mountable. Hand placement of the module using a soldering iron is straight forward if the following guidelines are followed.

## 2 Carrier Board

Alignment of the modules with the carrier board before starting the soldering process is the key to successful solder joints. Keeping the carrier board pads clean and solder free prior to the soldering process will also provide more success.

## 3 Soldering

### 3.1 Method 1

Place the tip of the soldering iron on one of the carrier board pads and apply solder to that pad. A visual queue can be observed by looking into the module topside hole to see if solder is being wicked up the multilayer-hole plating. This method is not as fast and does not give as good of a visual queue as method 2.

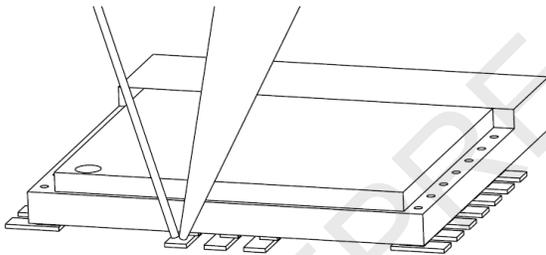


Figure 1: Method 1

### 3.2 Method 2

Place the tip of the soldering iron on the module topside pad and apply solder to that pad. Solder will run down the module multilayer-hole plating and flow onto the carrier board pad. Watch for solder to bubble on the carrier board pad as a visual queue that the pad is soldered. This is the preferred method for hand soldering.

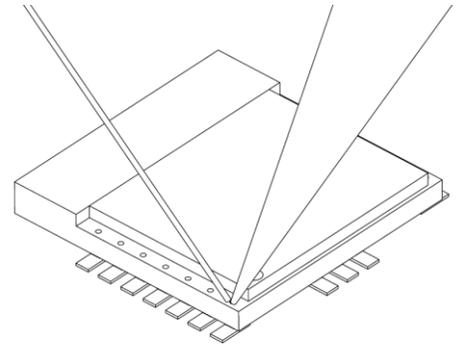


Figure 2: Method 2

### 3.3 Step-By-Step

- 1) See that the carrier board pads are clean and free of solder.
- 2) Align the module on the carrier board pads
- 3) *Optional* - Use method 1 to solder a single module pin. This will limit the contact between the module and soldering iron that could cause the module to shift and misalign. Once soldered the module should be semi-secure on the carrier board
- 4) Use method 2 to solder the rest of the pads
- 5) If step 3 was followed, redo the pad soldered with method 1 using method 2.

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