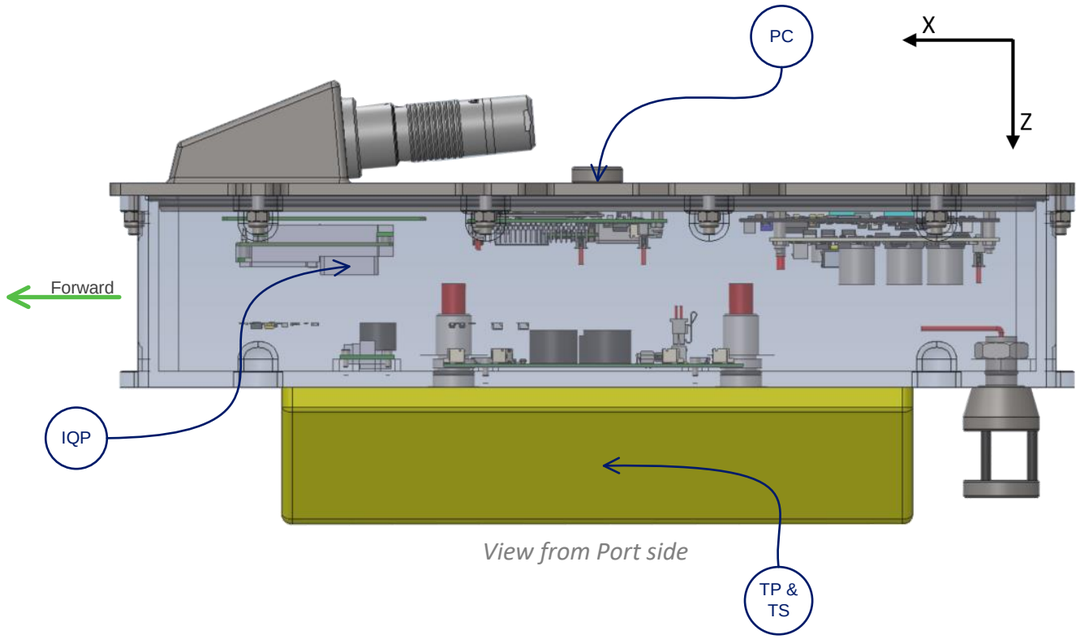
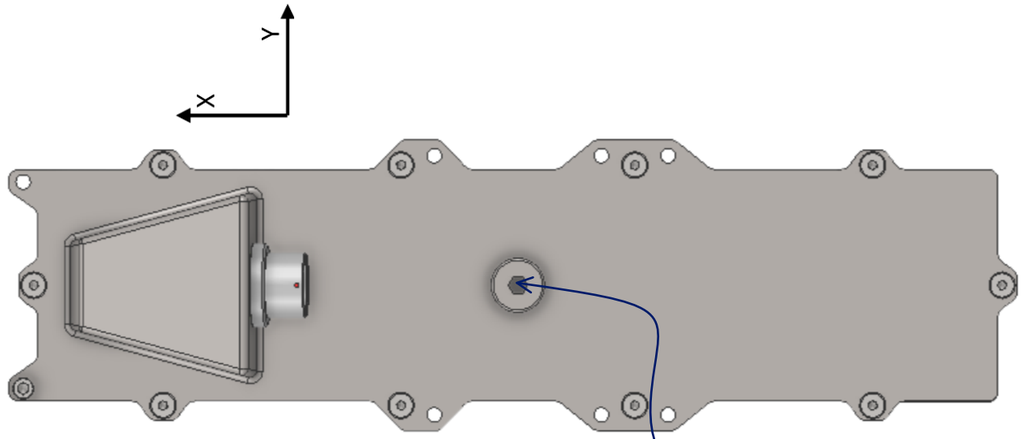
# B3 Sigma-B: Sensor Offsets

## *INS & Sonar transducers*

- Pole center (PC) reference origin point is taken on top plate level, not on top of the round cap, but centered on the round cap.




*View from Port side*

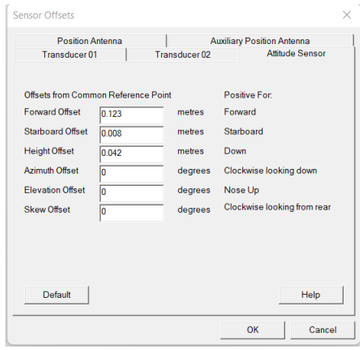



*View from Top*

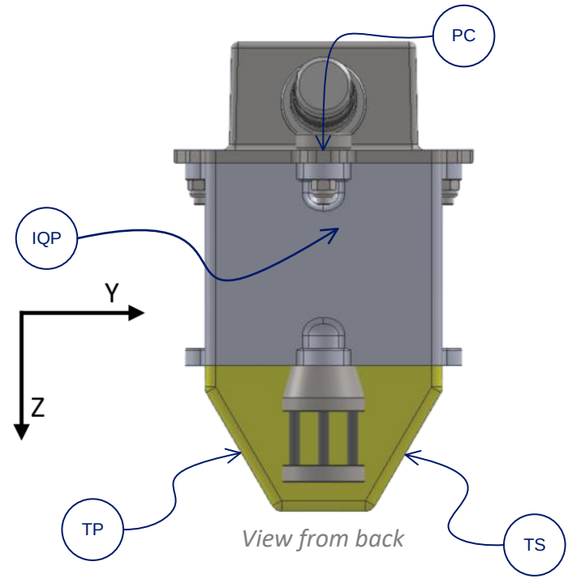
### Table-1: Offset with PC (dimensions in mm)

| Item # | Designation | X | Y | Z |
|---|---|---|---|---|
| *PC* | *Pole center* | *0* | *0* | *0* |
| *TP* | *Portside transducer acoustic center* | *0* | *-35.4* | *141.6* |
| *TS* | *Starboardside transducer acoustic center* | *0* | *35.4* | *141.6* |
| *IQP* | *QuantaPlus Measurement center* | *123,25* | *8,55* | *42,22* |

Apply values from Table-1 in Bathyswath Processor.
- Open *Menu bar -> Configuration -> Sensor Offsets…*
- Apply TP offset values in Transducer 01 tab
- Apply TS offset values in Transducer 02 tab
- Apply IQP offset values in Attitude Sensor tab.
- Don't apply position antenna offsets in Bathyswath Processor, see Page-3




*Bathyswath Processor -> Configuration -> Sensor Offsets -> Attitude Sensor*




*View from back*

*support@iter-systems.com*

| ISSUE | DATE | MODIFICATION | WRITER | CHECKER |
|---|---|---|---|---|
| - | - | - | - | - |
| - | - | - | - | - |
| - | - | - | - | - |
| - | - | - | - | - |
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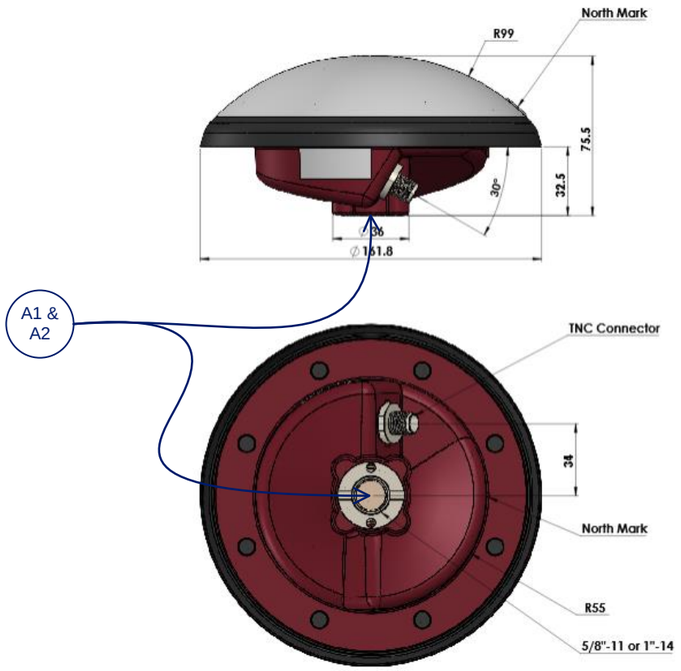
| | | |
|---|---|---|
| **DESCRIPTION**<br>Bathyswath-3 Sigma-B Sensor Offsets | | **DOCUMENT NUMBER**<br>2045 |
| **PROJECT:**<br>B3S-B | | **CLASSIFICATION**<br>Unclassified |
| *All dimensions in mm – Original frame size: 400x280*<br>*www.iter-systems.com - info@iter-systems.com* | **A3** | **PAGE NUMBER**<br>1 OF 3 |

# B3 Sigma-B: Sensor Offsets

## *GNSS Antennas offset calculation*



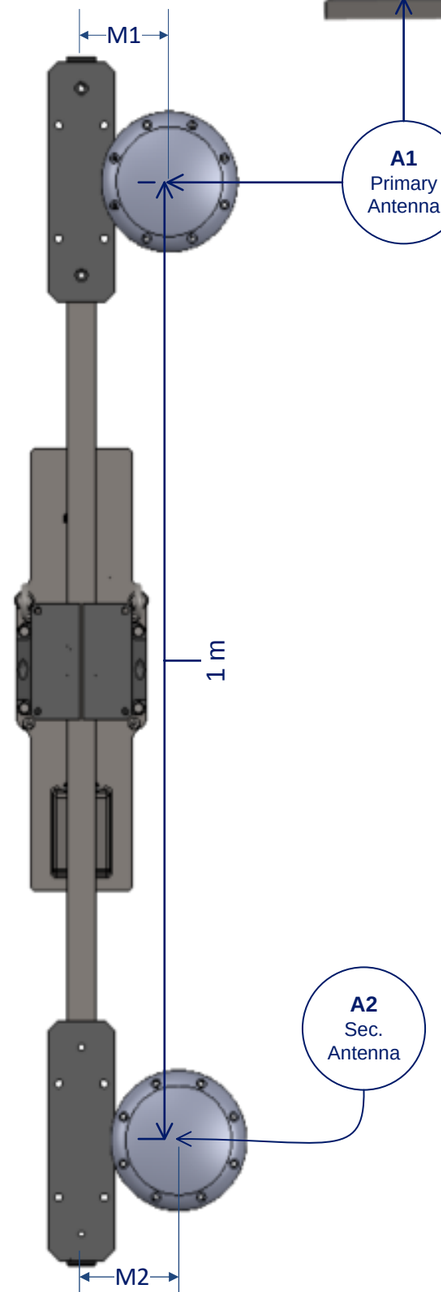

*GNSS Antennas Reference Point (ARP)*

- Offset of GNSS antennas depends on customer mount. Measurement is needed.
- ARP (Antenna Reference Point) of antenna is at center of the antenna (X & Y), and from bottom of screw thread (Z)
- When Offset are measured, you will need to add those offset information in SBG QuantaPlus system
- When measuring offset of antennas, don't forget to put the positive or negative sign in front of values (Corresponding to the axe. Useful for Offset calculation)

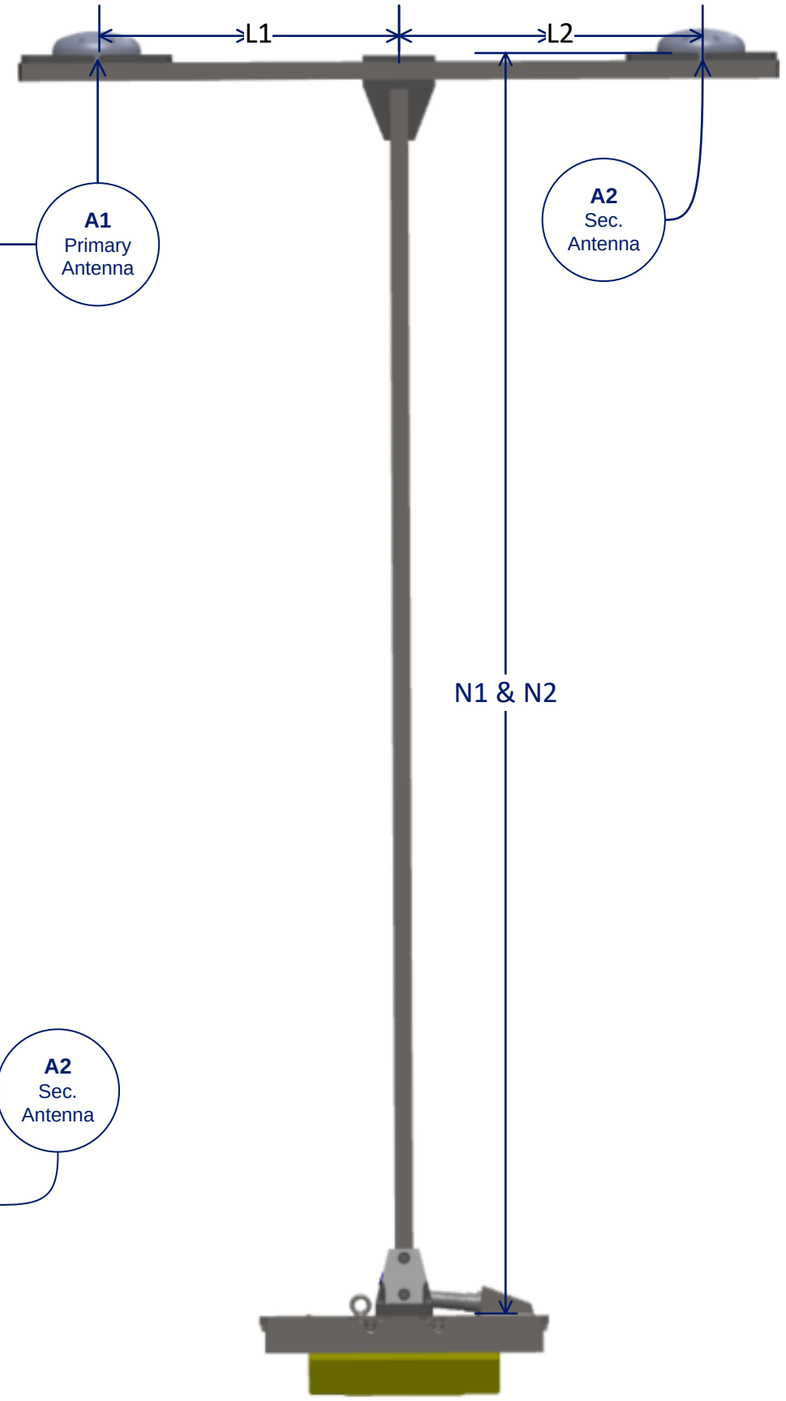
### T: able-2Offset with PC (dimensions in mm)

| Item # | Designation | X | Y | Z |
|---|---|---|---|---|
| *PC* | *Pole center* | *0* | *0* | *0* |
| *A1* | *VSP6037L-SBG1 Primary (Main) Antenna Reference Point* | *L1* | *M1* | *N1* |
| *A2* | *VSP6037L-SBG1 Secondary (Aux) Antenna Reference Point* | *L2* | *M2* | *N2* |

See Page-3 for GNSS aiding configuration in Quanta Plus INS




*Pole Mount example (Top View)*




*Pole Mount example (Side View)*

| CLASSIFICATION | PAGE TITLE | PAGE NUMBER |
|---|---|---|
| Unclassified | GNSS Antennas offset calculation | 2 OF 3 |

# B3 Sigma-B: Sensor Offsets

## *Quanta Plus Configuration*

1

***Offset Calculation after measurement :***

- *Primary Antenna :* $X_1 = L_1 - IQP_X$
  $Y_1 = M_1 - IQP_y$
  $Z_1 = IQP_z + N_1$

- *Secondary Antenna :* $X_2 = L_2 - IQP_X$
  $Y_2 = M_2 - IQP_y$
  $Z_2 = IQP_z + N_2$

*(IQP = QuantaPlus coordinates offset specified in table at page 1)*

2

***Quanta Plus Web interface***

*- Access web interface in any web browser at 192.168.2.34 (default IP).*

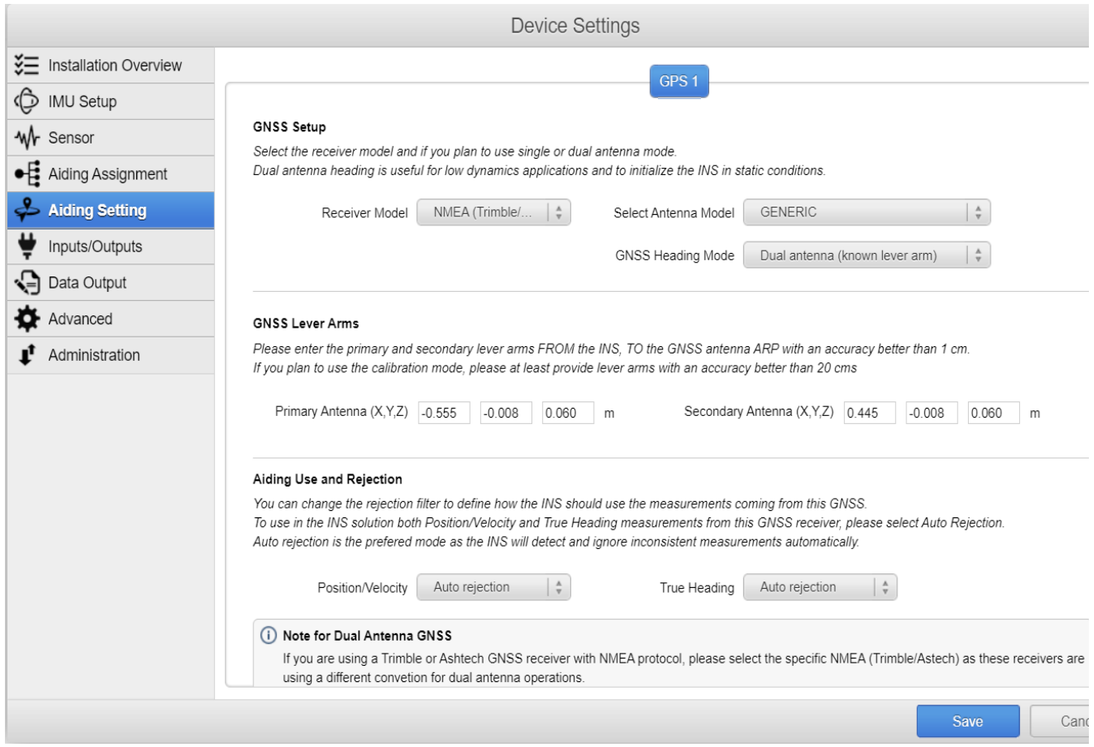
*- Go to « Configure » accessible from top right of the SBG systems window*

3

***Aiding Setting > GPS 1 :***

- Select your receiver Model to ***internal***.
- Set GNSS Lever Arms (X,Y,Z) corresponding to position of antennas based on INS origin.
- Keep rejection filters to Auto rejection.

Please contact *support@iter-systems.com* for further assistance




| CLASSIFICATION | PAGE TITLE | PAGE NUMBER |
|---|---|---|
| Unclassified | Qunta Plus GNSS lever arms configuration | 3 OF 3 |