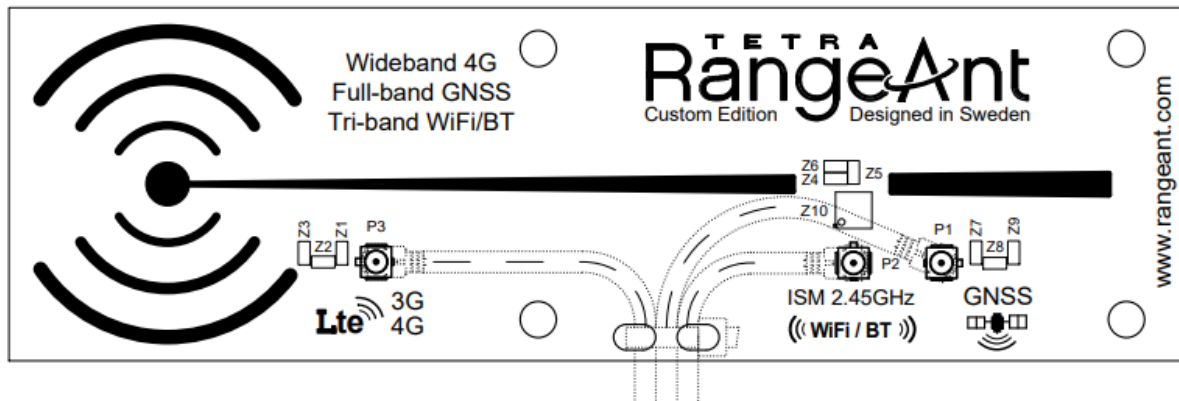




RangeAnt custom antenna RA-TETRA_VemaVenturi, for Peri Insite construction

Antenna model and revisions covered by this datasheet:

RA-TETRA_VemaVenturi_220909-900

The RA-TETRA_VemaVenturi is a combi antenna consisting of three individual antennas on one PCB. Below a short description of each antenna and the frequency bands they cover:

LTE antenna

Intended for the mobile telephony bands, 2G, 3G, 4G for voice and data transmission via connected connection. For this purpose, three different frequency ranges are covered, 700-960 MHz, 1680-2200 MHz, 2600-2700 MHz.

WiFi & BT antenna

This part of the antenna is intended for Bluetooth and WiFi, both available within 2400-2480 MHz. However, this customized version of the antenna has an integrated SAW filter to protect the BT radio module of the customers **Carrion product** from the other radio communication signals generated in the product (i.e. primarily the LTE communication). The SAW filter that is now used in this antenna was specifically selected/decided by the customer. Note that this specific SAW filter has relatively high "insertion loss" and that's the reason why this version of the WiFi/BT antenna has lower antenna efficiency than its predecessor. But thanks to the SAW filter, the antenna also has good blocking capability of strong neighboring radio communication signals.

GNSS antenna

Intended for determining your own position and time via various networks of satellites. GPS, Galileo, GLONASS & BeiDou are 4 different such networks, which often come together under the name GNSS. Civilian useful data information from these systems is transmitted within the frequency range 1550-1600 MHz, which is the most capable frequency range of the TETRA GNSS antenna.

Conditions

General information

The **RA-TETRA_VemaVenturi_220909-900** antenna is intended for use in the below Vema Venturi Carrion product:



Antenna Characteristics

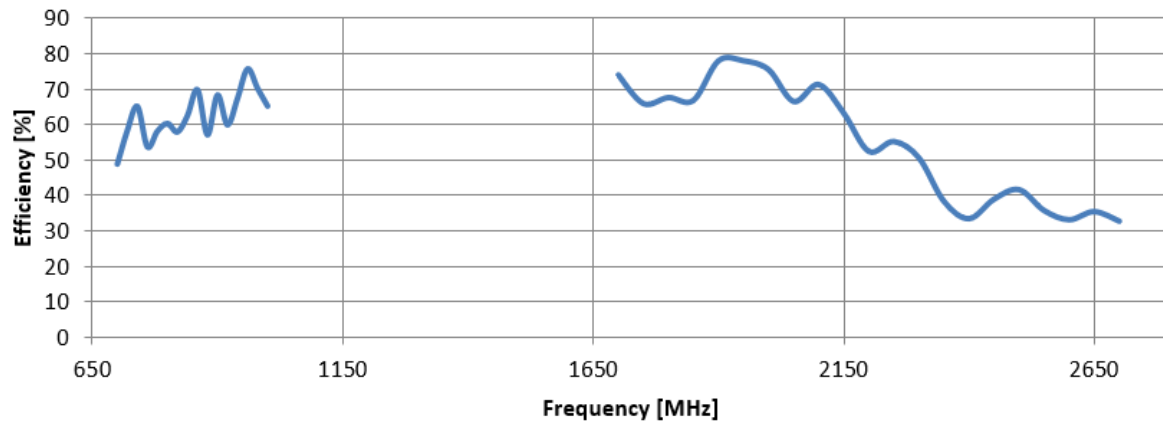
The antenna characteristics below are measured with matching components (same as in production) mounted on the antenna.

All values are typical values unless otherwise specified.

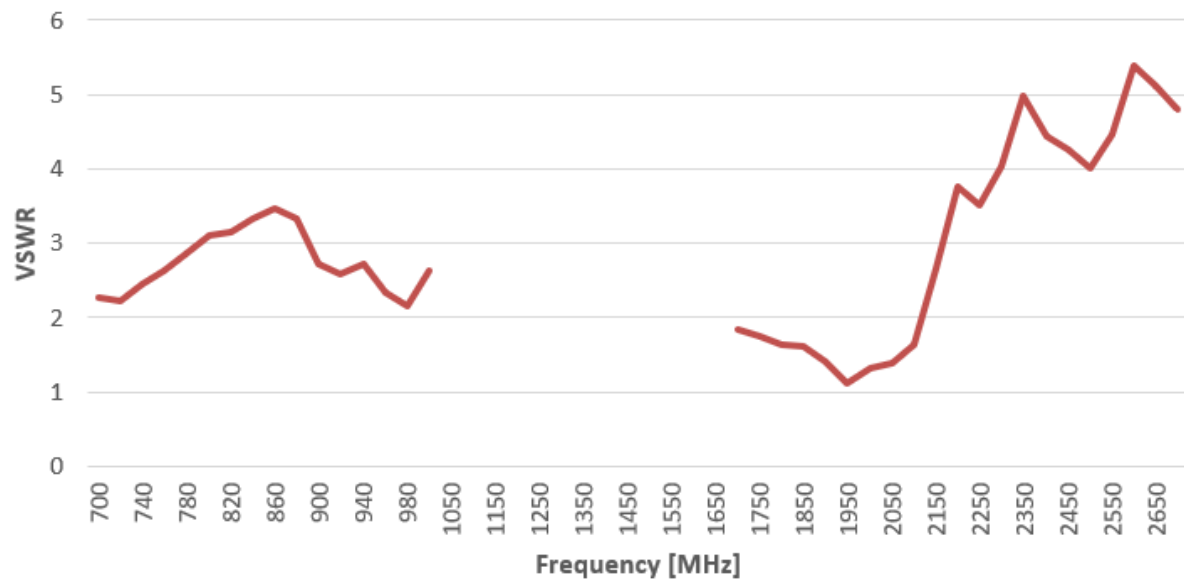
Antenna gain (dBi):

Antenna	Frequency range	Antenna gain
LTE	700-960 MHz, 1680-2200 MHz, 2600-2800 MHz	Max 2 dBi
WiFi & BT	2400-2480 MHz	Max -4 dBi
GNSS	1550-1600 MHz	Max 2 dBi

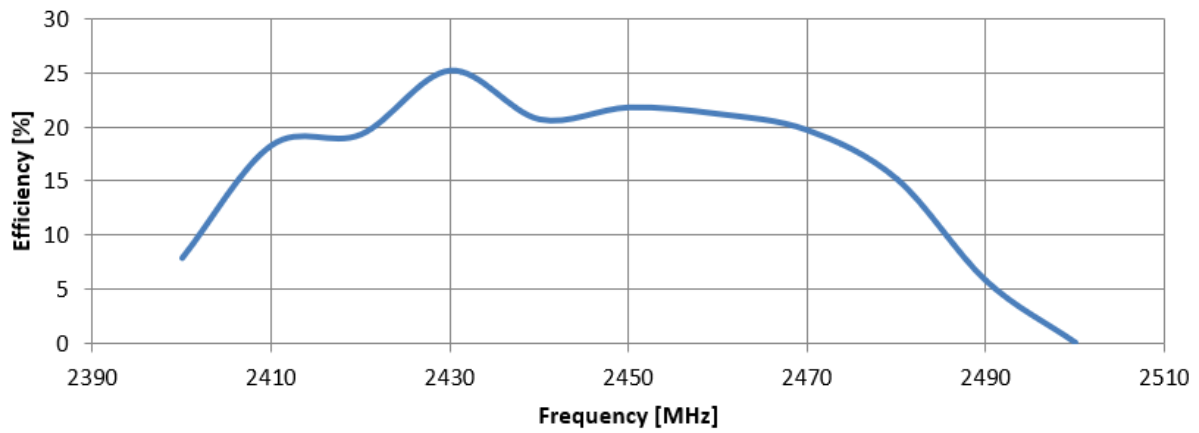
LTE antenna efficiency



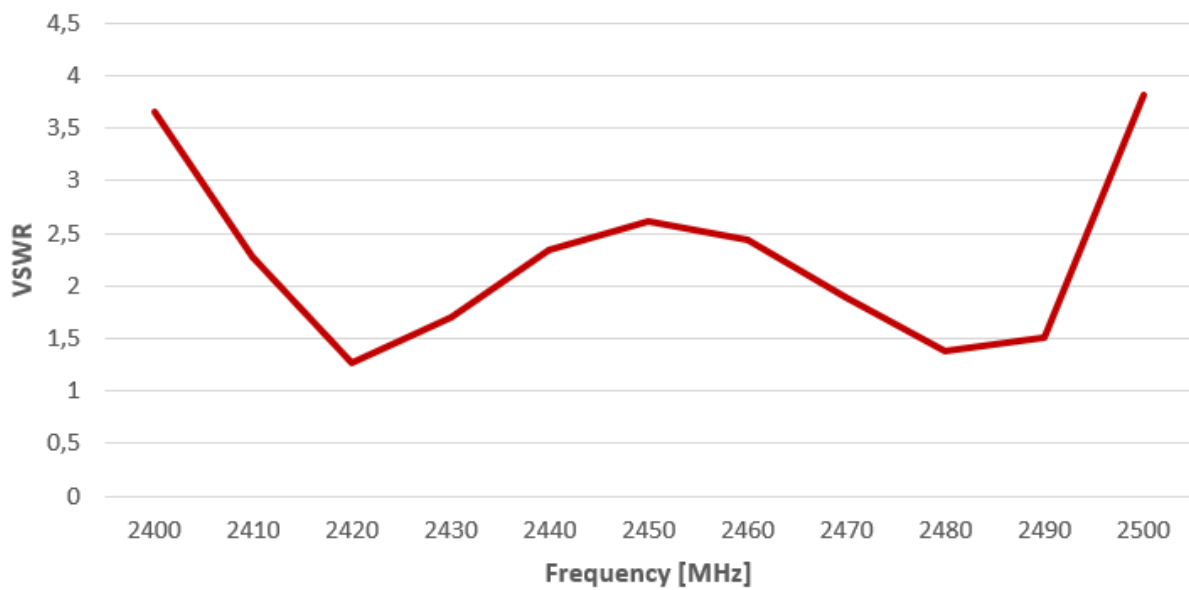
LTE antenna VSWR



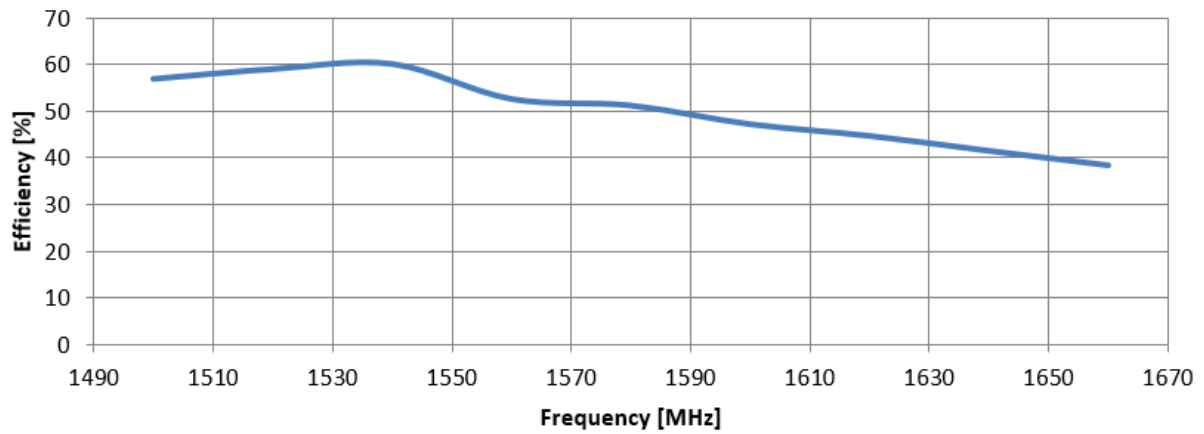
WiFi & BT antenna efficiency



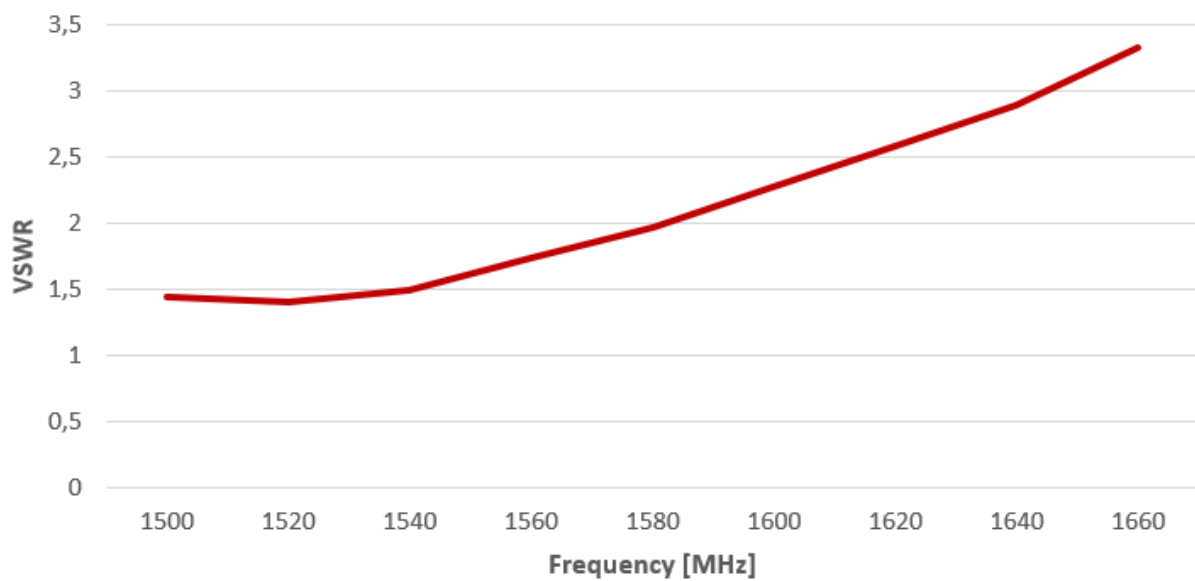
WiFi & BT antenna VSWR



GNSS antenna efficiency

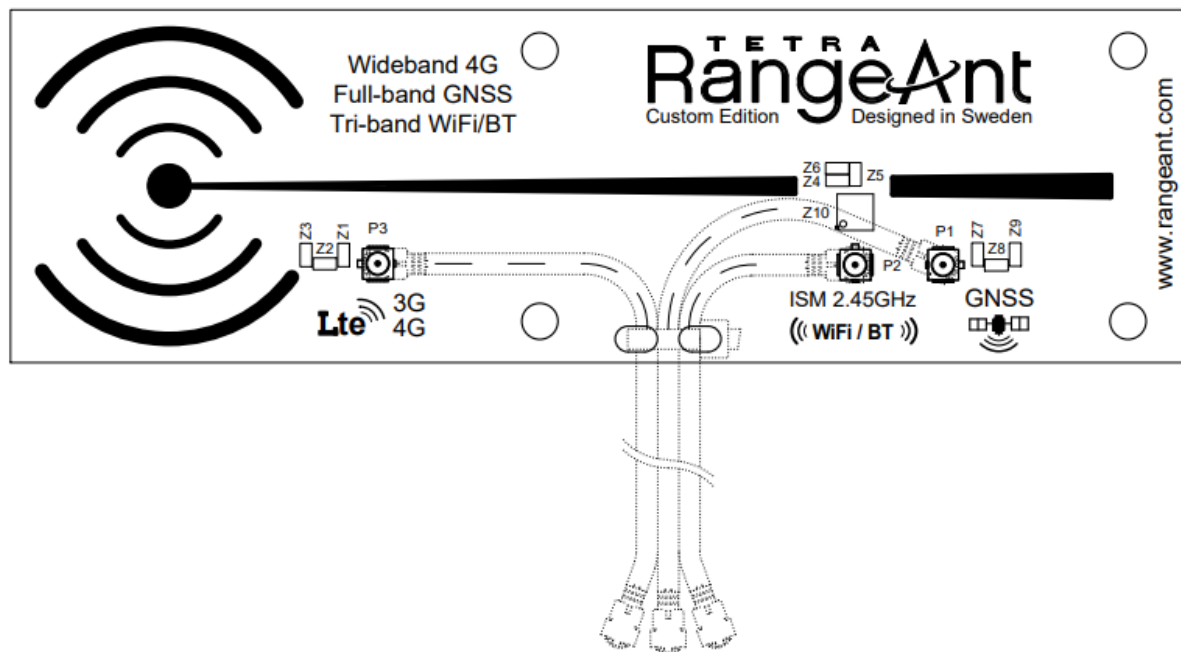
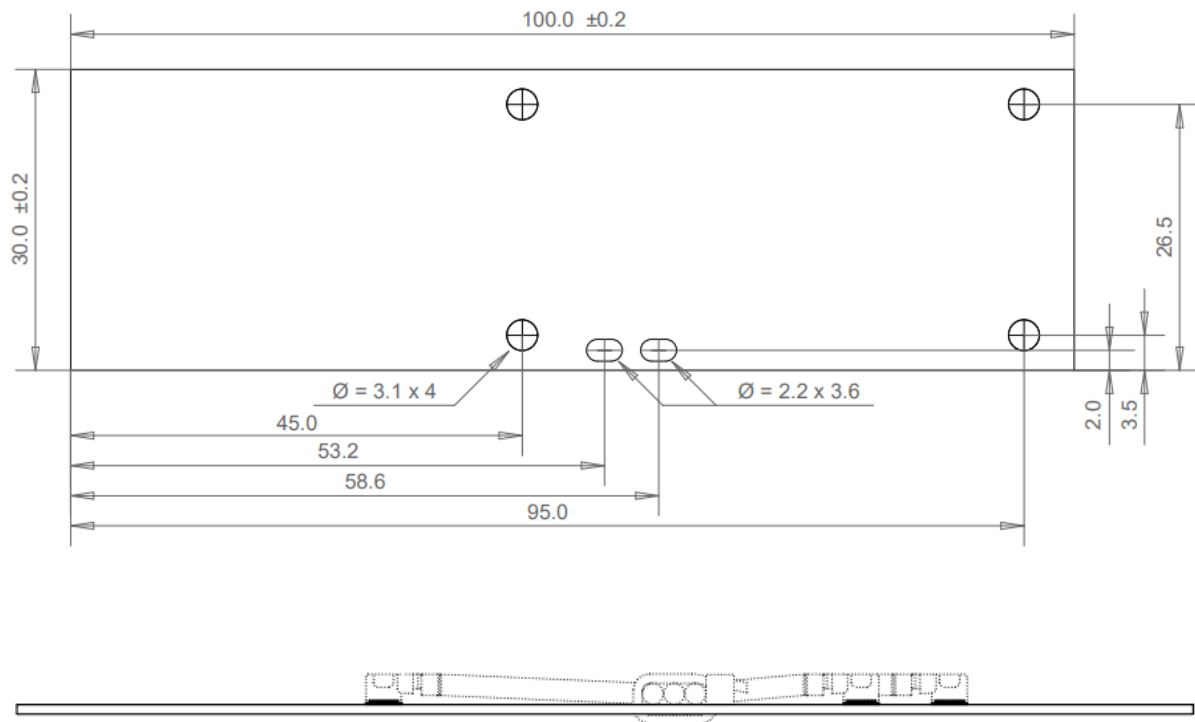


GNSS antenna VSWR



Mechanical Data and Dimensions

RA-TETRA_VemaVenturi



Model and Ordering Code

RA-TETRA_VemaVenturi_220909-900

Contact

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