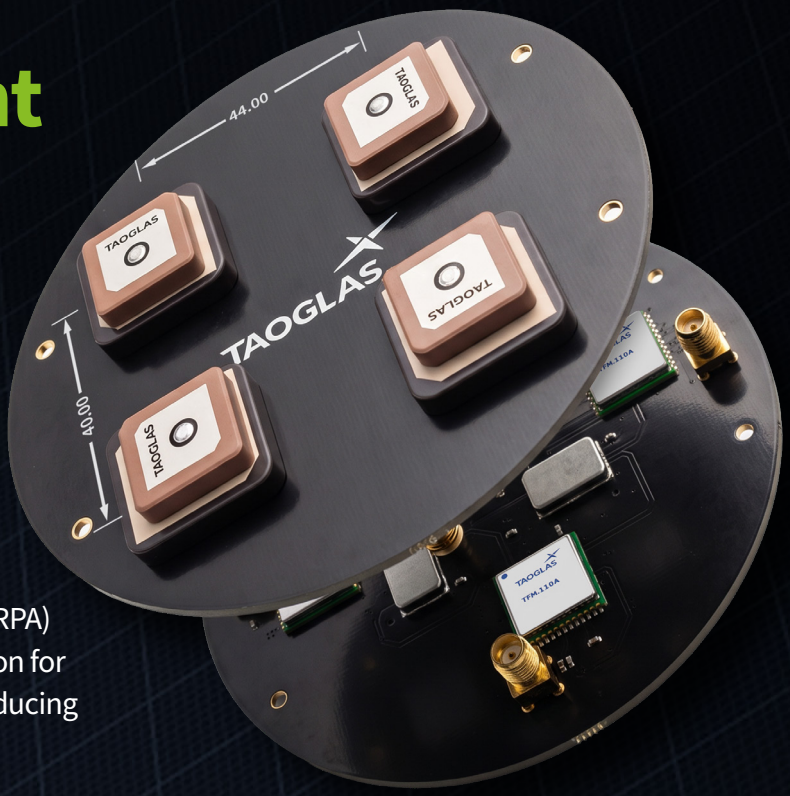
Build More Resilient GNSS Systems with CRPA



A practical reference design for evaluating GNSS architectures designed to mitigate jamming, spoofing, interference and multipath. GNSS signals arrive at extremely low power, making positioning and timing systems vulnerable to interference.
The Taoglas Controlled Reception Pattern Antenna (CRPA) Reference Design gives engineers a practical foundation for evaluating more resilient GNSS architectures while reducing development risk.

When Conventional GNSS Isn't Enough

A conventional GNSS antenna uses a fixed reception pattern, limiting its ability to spatially distinguish wanted satellite signals from interference or reflections.

CRPA uses multiple antenna elements and spatial signal processing to dynamically control reception, enhancing wanted GNSS signals while reducing sensitivity in the direction of unwanted signals.

Beamforming

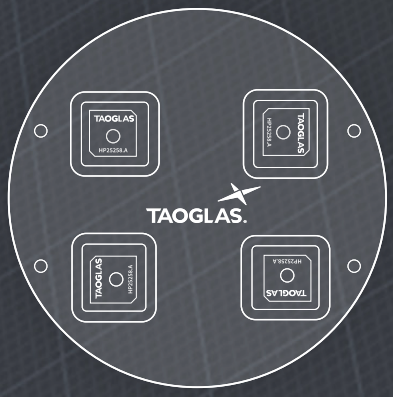
Enhances reception in the direction of wanted GNSS signals.

Null Steering

Creates directional nulls to reduce sensitivity toward interference sources.

Multipath Suppression

Helps reduce reflected and low-elevation signals that can degrade positioning accuracy.



4 Elements. Up to 3 Theoretical Nulls

A four-element CRPA can theoretically address up to three simultaneous interference sources, depending on the overall RF design, processing platform and operating environment. unwanted signals.

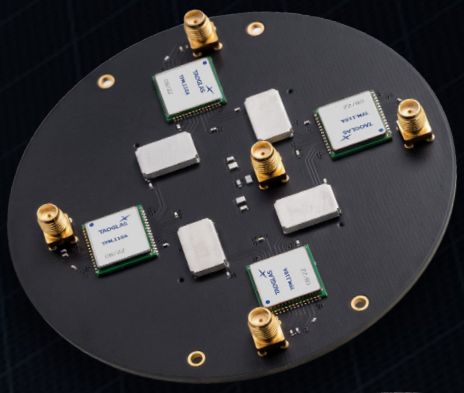
Together, there's nothing we can't build

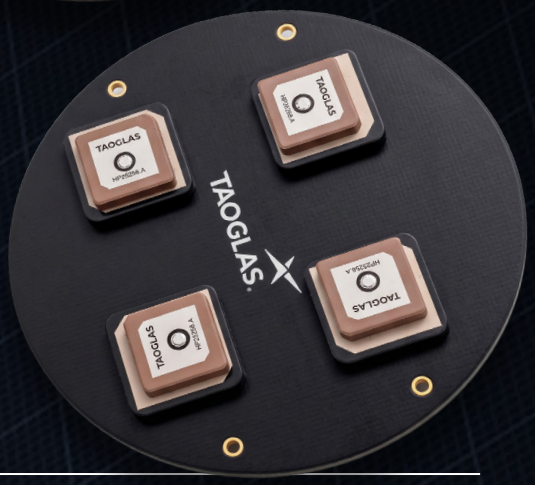
Get in touch! Visit taoglas.com and follow-us on social.

TAOGLAS

A Practical Starting Point for CRPA Development

The Taoglas CRPA Reference Design provides a flexible starting point built around commercial off-the-shelf Taoglas components, helping engineers evaluate different multi-band and PCB configurations without starting from scratch.





3 GNSS Configurations

L1/L5 | L1/L2 | L1/L2/L5

3 PCB Sizes

110 mm | 150 mm | 170 mm

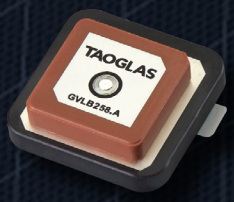
4-Element Architecture

Supports spatial processing and directional null steering

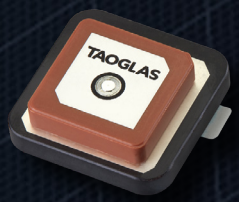
Multi-Constellation GNSS

GPS | Galileo | GLONASS | BeiDou

Built Around Proven Taoglas GNSS Technology



Accura GVLB258.A
L1/L5 Antenna



Accura HP2258.A
L1/L2 Antenna



Accura HP25258.A
L1/L2/L5 Antenna



TFM.110A
GNSS Front End

Ready to Start Your CRPA Design?

Don't start from scratch. Choose the Taoglas CRPA Reference Design configuration that matches your GNSS requirements and start evaluating your architecture.



Choose from:

L1/L2/L5 | L1/L2 | L1/L5

Download the complete design package for your chosen configuration, including files for all three PCB sizes, 3D models, Altium-format PCB design files and 2D PCB drawings.

Download the CRPA Reference Design

https://www.taoglas.com/crpa-reference-design-for-resilient-gnss-development/

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