

PolyEdge™ Product Information



OPERATING PRINCIPLES

PolyEdge™ delivers advanced, layered UAS detection through two complementary sensing modes:

- *Mode 1*: Passive radar using ambient 5G/4G signals
- *Mode 2*: RF signal detection of drone command-and-control links

Together, these modes provide a layered approach to drone awareness—detecting airborne targets through both physical presence and active communication signals, without generating active emissions.

Specifications

Detection Accuracy	> 90%
Typical Range	2 km using Mode 1 (RF-silent UAS) 10 km for Mode 2 (RF-active UAS)
Supported Technology	5G (SA, NSA)
Frequency Range	FR1 (600-6000 MHz)
Height	475mm (18.7 in)
Width	305mm (12.0 in)
Depth	239mm (9.4 in)
Max Power Consumption	150W
Avg Power Consumption	45W
IP Rating	IP65

FEATURES & FUNCTIONS

- Detects both RF-Active and RF-Silent UAS
- Dual-Mode Detection
- No Emissions
- All-Weather Operation
- Stealth Deployment
- Scalable Architecture

CONNECT WITH THE TIAMI NETWORKS TEAM:

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Mode 1

In Mode 1 PolyEdge operates passively using nearby 5G/4G signals. Its detections are delivered via API or visualization platforms such as TAK.

Note the "ISAC-Target" in the center right of the screen.



Mode 2

In Mode 2 PolyEdge monitors RF command and control links between the operator and drone.

Its output tracks and plots the location of the UAS over time on this display.



About Tiami Networks Inc

Founded by seasoned professionals from industry leaders such as Ericsson, Verizon, Qualcomm, and Meta, Tiami Networks is a visionary startup based in California. With deep-rooted expertise in telecommunications, its team is dedicated to revolutionizing the global 5G landscape. Its mission is to transform the 5G system into the world's largest distributed radar network, harnessing this technology for consumer and commercial applications. By integrating advanced AI and radar technology with 5G networks, Tiami Networks aims to create smarter, safer, and more efficient environments, enhancing connectivity and data analysis capabilities across various sectors. Our commitment to innovation positions us at the forefront of the next wave of technological advancements, poised to redefine the future of communication and environmental intelligence.

Connect

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