Flying Fox™
Wireless Intrusion Detection Sensor

Epiq Solutions’ Flying Fox™ is an innovative sensor providing real-time results for wireless intrusion detection (WIDS) with zero false positives for cellular. Sensors passively detect, identify, and locate nearby cellphones, Bluetooth® and Wi-Fi® devices 24/7. Flying Fox is compliant with AR 25-2 Information Assurance and DODD 8100.2 requirements and is on the Department of Defense’s Information Network Approved Products List (DoDIN APL) certified and accredited by the DISA DAA. Flying Fox results display on the U.S. Naval Research Laboratory’s Flying Squirrel Orb-Weaver user interface, allowing our Federal users to confidently observe and react to wireless intrusions as they happen.

Flying Fox™ sensors were developed in collaboration with the Naval Research Lab’s (NRL) Flying Squirrel* Program Office and provide unparalleled PASSIVE wireless device detection, identification, and location estimation capability.

Flying Fox leap-frogged all other cellular handset detection systems; our competition focuses on energy detection alone for detecting handsets without any verification that the detected signal is actually from a cellular device.

The Flying Fox demodulates and decodes the initial messages between a handset and tower. When Flying Fox indicates a phone is active, it is 100% sure.
Flying Fox sensors operate with NRL’s GOTS Orb-weaver software.

It provides unparalleled 24/7 passive monitoring, detection, identification, and location estimation of transmitting cellular, Bluetooth®, and Wi-Fi® devices.

Orb-Weaver is optimized for geolocation accuracy, and is available only to U.S. Government and Law Enforcement personnel.

Requirements (Why)
- AR 25-2 Information Assurance
- DODD 8100.2 Use of Commercial Wireless Devices, Services and Technologies in the Department of Defense (DOD) GIG

What
- Dedicated Orb-Weaver wireless discovery network
- Uses multiple Flying Fox sensors throughout the monitoring area
- Sensors independently scan for wireless activity
- DISA DAA certified and accredited

Capabilities
- 24/7 Passive monitoring, detection and ID
- Detects, decodes cellular devices’ Mobile Subscriber Identity
- Zero False-Positive detection
- Automatic cellular survey to determine cellular (2g/3g/4g) providers

Reliability
- Flying Fox sensors were developed in collaboration with the Naval Research Lab’s Flying Squirrel Program Office for unparalleled passive wireless device detection, ID and location estimation capability.
- The sensor demodulates and decodes initial messages between a handset and tower. When Flying Fox indicates a phone is active, it is 100% sure. Zero False Positives!

KEY SYSTEM DETAILS
- Detect, Identify, Locate radio transmissions from any cellular, Wi-Fi® and Bluetooth® devices
- Carrier and band agnostic (works with U.S. and international mobile providers)
- Advanced cellular processing capability supports 4G (LTE), 3G (UMTS/WCDMA), and 2G (GSM, CDMA2000)
- Future-proof software-defined radio (SDR) architecture
- Wi-Fi® capability supports 802.11 a/b/g/n for both 2.4 GHz and 5 GHz bands
- Integrated self-calibration feature for improved geolocation accuracy

KEY FLYING FOX SENSOR DETAILS
- Typical cellular detection sensitivity: -95 dBm
- Single RJ45 ethernet interface supporting IEEE (PoE+) for power and network connectivity
- Separate SMA interfaces for cellular and Wi-Fi® / Bluetooth® antennas
- Compact size: 6.5” x 4.2” x 1.5”
- Typical power consumption: 22W
- Internal fan for active cooling

*Flying Squirrel, a DoD wireless discovery and mapping application, is Government OffThe Shelf (GOTS) software developed by the Naval Research Laboratory, and is for use by US Government organizations for Official Use Only, including DoD, law enforcement and the Federal community.