REVEAL™

Radar Intrusion Detection Solutions

Early warning and tracking of potential threats is increasingly necessary to electrical substations, oil refineries, and petrochemical plants. These are just a few of the applications benefiting from compact surveillance and intrusion detection with Reveal radar sensors.

The **Reveal™ Radar Intrusion Detection** solutions provide early notification of intruders in a large area. The systems identify multiple simultaneous targets and provide a trail indicating the intruders' paths.
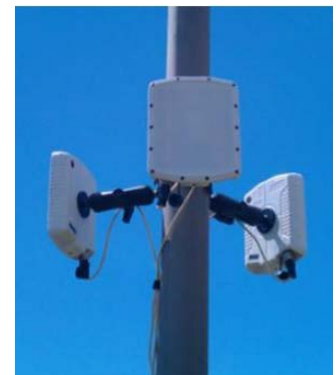
Reveal Radar Intrusion Systems

- **Detection**
- **Assessment**
- **Tracking**

A complete **Reveal** system includes one or more of the **Reveal** sensor heads. These radar units are field-deployed on a variety of structures. Each unit "sees" what is going on in their field of view, transferring the data from the unit into the **Reveal Processing Unit (RPU)**. The **RPU** provides the graphical visual indication, user interface, and a high-level computer integration for video, access control, and security management systems.

ADVANTAGES

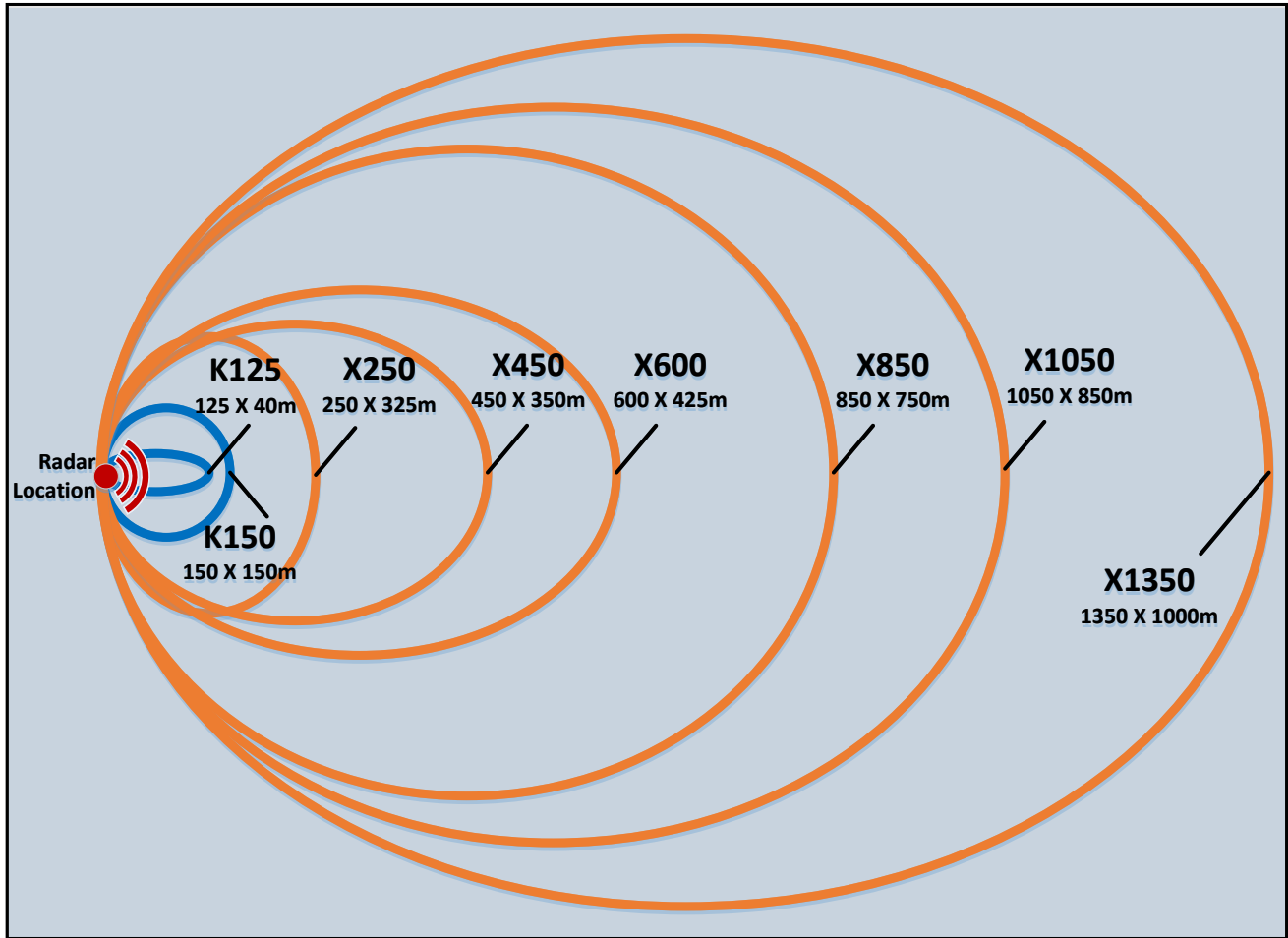| |
|---|
| **Detects:** determines location of intruders |
| **Assesses**: how many intruders and their movement from the displayed breadcrumb trail |
| **Environment:** 24-hour, high-performance in all weather conditions – sees through rain, snow, fog, smoke, and sandstorms |
| **Installation**: cost-saving, easy installation – also allows for quick tactical set-up in emergency or temporary situations |
| **Video:** slews cameras to target point to capture potential threat |
| **Deployment:** works where there is no physical barrier or the barrier is unsuitable for a fiber optic sensor |

COVERAGE COMPARISON

Radar Location

K125
125 X 40m

K150
150 X 150m

X250
250 X 325m

X450
450 X 350m

X600
600 X 425m

X850
850 X 750m

X1050
1050 X 850m

X1350
1350 X 1000m

TYPICAL SYSTEM CONFIGURATION

Reveal radar sensors

PoE
Power over Ethernet

Reveal Processing Unit

Relay outputs for Alarm, RJ45(IP) to cameras and high level interface
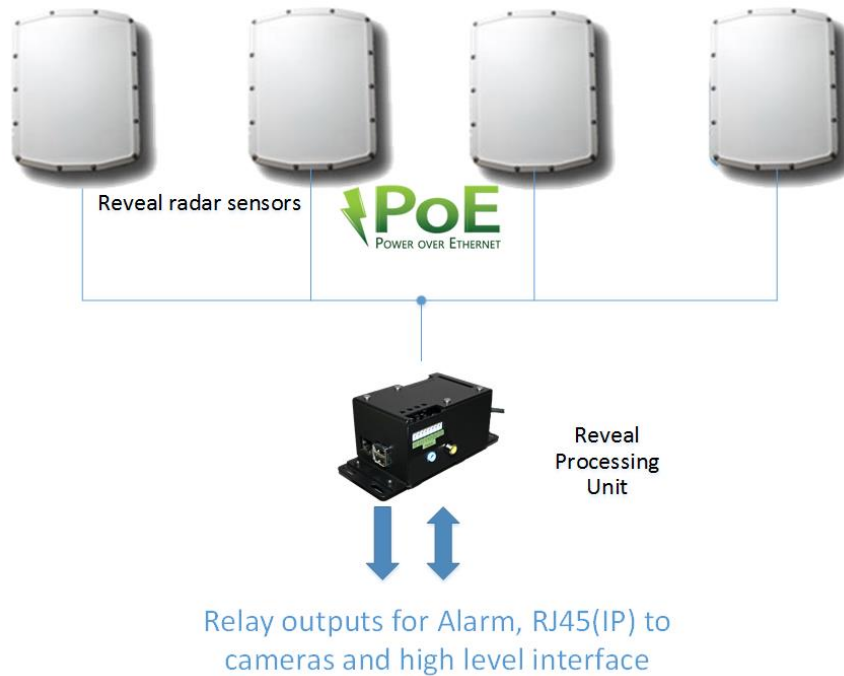
REVEAL PROCESSING UNITS

The **Reveal Processing Units (RPU)** provide intelligent processing to ensure high-performance alarm discrimination. The user interface allows for monitoring and interacting with the radar system and integration with camera systems as well as other high-level interfaces.

ADVANTAGES

| |
|---|
| Converts tracks from Reveal radars to alerts |
| Interfaces with existing system through two (2) dry contacts six (6) digital outputs |
| Cue cameras using presets |
| Optional camera slew to target functionality |
| Create alert zones using web UI |
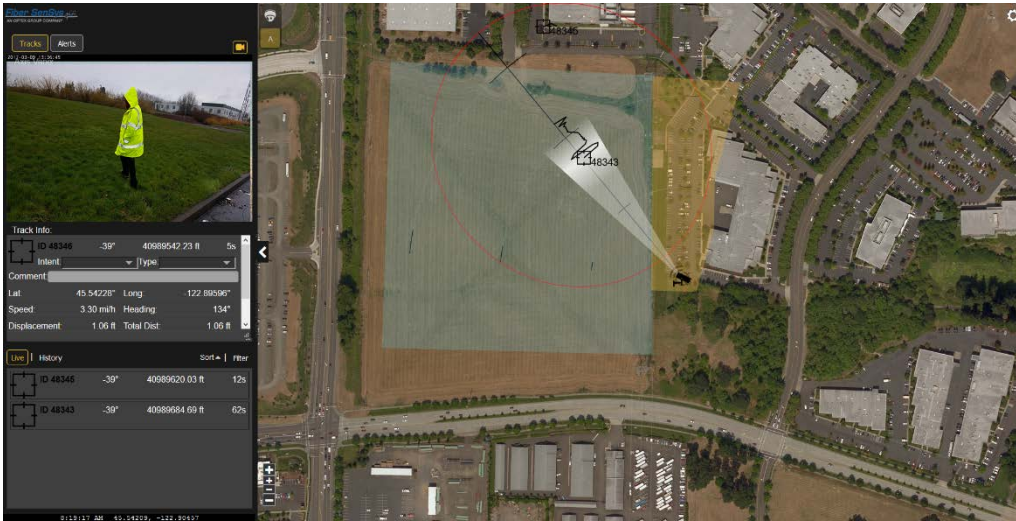
Reveal Processing Units use a standard web browser to interface: iOS or Android devices can view display without added software.

	RPU10	RPU25
Maximum Capacity (radar sensors or cameras)	10	25
Relay Outputs	2/External expandable	External expandable
Digital Outputs	6	0
Mounting	In an outdoor enclosure, wall mount, or DIN rail	19-inch rack mount, 1U
Power	5 VDC	120–240 VAC

GENERAL SPECIFICATIONS

Scan Rate	Up to 8 times/second
Update Rate	Up to 2 time/second
Output Data	GPS coordinates, velocity, RCS, range, angle, time and duration of moving targets
Output Protocol/ Platform	JSON, XML, KML, Google Earth
Interface	TCP/IP (Web UI or API)
Enclosure	IP67/NEMA 6P compliant
Physical Interface	Passive PoE through RJ45 connector, 10/100 Mbps
Setup	Web-based
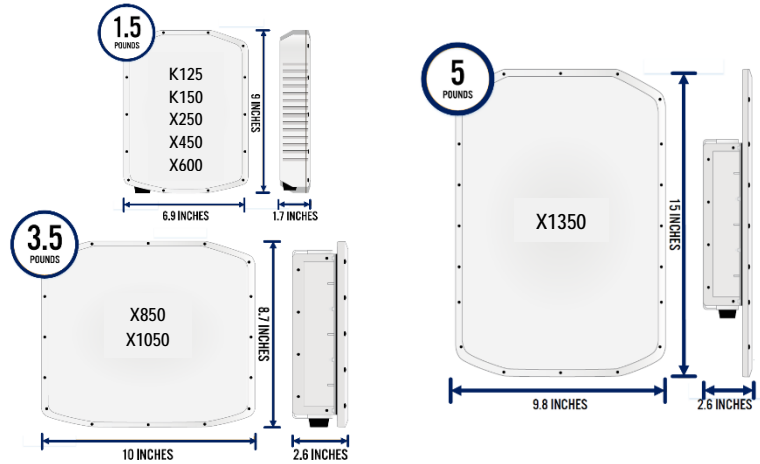
X SERIES: 10–10.6 GHz, FCC certified, -30° C to 65° C, -22° F to 149° F

	X250	X450	X600	X850	X1050	X1350
Detection Range	People: 10-250m Vehicles: 10-400m	People: 20-450m Vehicles: 20-600m	People: 20-600m Vehicles: 20-850m	People: 30-850m Vehicles: 30-1250m	People: 30-1050m Vehicles: 30-1500m	People: 35-1350m Vehicles: 35-2000m
Coverage Area	250m x 325m	450m x 350m	600m x 425m	850m x 750m	1050m x 850m	1350m x 1000m
Effective Field of View	Horizontal: 120° Vertical: 20°	Horizontal: 90° Vertical: 20°	Horizontal: 90° Vertical: 20°	Horizontal: 90° Vertical: 20°	Horizontal: 90° Vertical: 20°	Horizontal: 90° Vertical: 20°
Angular Accuracy	90° FOV: ± 3° 120° FOV: ±10°	±3 degrees	±3 degrees	±3 degrees	±3 degrees	±3 degrees
Range Solution	1.5 meters	3 meters	3 meters	3 meters	3 meters	4 meters
Simultaneous Tracks	20	20	20	30	30	30
System Power	9 W	9 W	9 W	9 W	9 W	9 W
Input Voltage	12-30 VDC	12-30 VDC	12-30 VDC	12-30 VDC	12-30 VDC	12-30 VDC

K SERIES: 24.0 to 24.25 GHz FCC & ETSI Unlicensed Band -30° C to 65° C, -22° F to 149° F

	K125	K150
Detection Range	People: 5-125m Vehicles: 5-175m	People: 5-150m Vehicles: 5-200m
Coverage Area	125m x 40m	150m x 150m
Effective Field of View	Horizontal: 40m Vertical: 15°	Horizontal: 90m Vertical: 15°
Angular Accuracy	±3 degrees	±3 degrees
Range Solution	1 meter	1 meter
Simultaneous Tracks	10	20
System Power	8.5 W	8.5 W
Input Voltage	12-30 VDC	12-30 VDC

DX SERIES: 10–10.6 GHz, FCC certified -30° C to 55° C, -22° F to 131° F

	DX1000
Detection Range	Small Quadcopter: 40-1,000 m
Coverage Area	1000m x 500m
Effective Field of View	Horizontal: 45m Vertical: 15°
Angular Accuracy	±3 degrees
Range Solution	3 meters
Simultaneous Tracks	20
System Power	28 W
Input Voltage	12-30 VDC

Fiber SenSys ®