Due to increasingly sophisticated security threats ranging from high-tech terrorism to mundane pranks and loiterers, today’s need for cost-effective critical infrastructure protection is more pressing than ever. Critical infrastructure facilities nationwide – including utilities and public transport – are prime targets with potentially devastating vulnerabilities. Airports and railways also frequently fall victim of cargo theft and at the mercy of costly liability for area safety on a daily basis.

3eTI’s VirtualFence™ system is a self-configuring, self-healing, outdoor wireless mesh network surveillance system that can be customized to meet specific surveillance security objectives. The system components are integrated to provide an autonomous wireless visual surveillance system which is free from the constraints of hardwired cable and therefore an affordable solution for remote locations requiring critical infrastructure protection (CIP).

VirtualFence lends itself naturally to a wide range of industry facilities requiring expandable perimeter security but lacking extensive budget for manpower on the ground. Its low installation and maintenance costs allow users to strike the balance between an increasing need for critical infrastructure protection in the face of reduced budgets.

**KEY BENEFITS**

- **Customizable**: Configurable to address specific security objectives
- **DoD-security certifications**: FIPS 140-2 certified
- **Approval to Operate (ATO)**: Accredited perimeter security used by the DoD
- **Cost-effective**: uses COTS Components and no hardwiring required
- **Plug and play**: Easy implementation and management
- **Scalable**: Secure wireless mesh for remote accessibility and expansion capabilities
- **Intelligent**: Video analytics for comprehensive monitoring and rule activation
**VirtualFence System**

24-hour, fixed and portable wireless video surveillance and auto detection system that identifies threats in real-time

**DoD-Grade Security for 24 x 7 Protection**
Originally designed to help the defense sector meet federal security mandates, VirtualFence’s crypto modules are FIPS 140-2 validated for sensitive data communications. Additionally, its Approval to Operate (ATO) status with the DoD is backed by its advanced Information Assurance (IA) data encryption capabilities. These DoD-security certifications also provide an easy and affordable avenue for civilian and federal agencies to meet NERC CIP-006 compliance for remote sites. No less valuable is the peace of mind from knowing that VirtualFence's CIP reflects DoD-grade security – the highest level of protection available to the civilian marketplace at a COTS price.

**Plug-and-Play Surveillance with COTS Simplicity**
Although VirtualFence offers the advantages of customized installation, it is an out-of-the-box solution comprised of COTS (commercial off the shelf) products, which makes for manageable post-installation maintenance and upkeep. VirtualFence’s open architecture allows users to incorporate current video surveillance equipment and Ethernet resources, thereby maximizing both the existing and future technology equipment investment. In addition, the system is easily expandable to support growth without the material, time and build-out costs associated with traditional wired network perimeter security solutions.

**Integrated Video Analytics for “Intelligent” Coverage**
VirtualFence’s integrated analytics provide enhanced command, control and decision-making to eliminate the need for extra manpower for on-site monitoring. The intelligent coverage capability, delivered through a wireless mesh video network configuration, alerts personnel only when a valid threat is detected, thus reducing overhead and resource costs. Tripwires, tracking, loitering detection, counting and alerting of incorrect direction movements provide intrusion detection, people counting and left-object detection for comprehensive perimeter security. Together, VirtualFence’s disparate sensor systems and analytics provide truly “intelligent” coverage which is applicable to a wide range of CIP scenarios ranging from routine operations to crisis situations.
PRODUCT SOLUTIONS

VirtualFence Appliance *(Plug-and-Play Surveillance)*

A highly-secure defense-in-depth intelligent unit that communicates with perimeter video cameras and the data center to alert, respond to, and analyze environmental data. VirtualFence Appliance utilizes a secure wireless connection to communicate to fixed and PTZ (Pan, Tilt, Zoom) video cameras, sending live video from the perimeter feeding back to the central data center and alerting command of any abnormal activity set outside institutional parameters.

VirtualFence Video Server *(Extendable Surveillance)*

The VirtualFence Video Server ensures heightened security through real-time video capture and transmission of high-resolution digital imagery in up to 2 cameras. Packaged in a rugged IP 66 weatherproof enclosure and conforms to 802.11a/b/g/n wireless standards, the VirtualFence Video Server expands your security presence to remote and critical locations.

VirtualFence VPMS Kit *(Portable Surveillance)*

Core components of the 3eTI's VirtualFence VPMS® Kit are MIL-STD compliant making them adaptable for shipboard and port-to-port use. The VPMS Kit is housed in a heavy duty, waterproof case and is suitable for storage, transport and deployment that can be set up in less than 20 minutes, virtually anywhere while powered by any standard 110V AC power source or optional battery kit. Video sensors placed within 2,000 feet of each other can automatically establish a wireless mesh network that relays video and data to the alert console at extended distances.

VirtualFence FirstView *(Video Analytics)*

FirstView keeps cost low by leveraging existing legacy security systems to significantly expand users’ management capabilities. It offers a centralized video management solution that easily integrates all CCTV, video analytics, security sensors and access control systems, securely linking IP networks for command & control (C2) or mobile applications.

Approval to Operate (ATO) Certification

VirtualFence is a proven solution that has been deployed and operational within DoD for almost 10 years and is the first perimeter security solution to have achieved successful DoD Red Team endorsement and an Information Assurance ATO across a DoD enterprise. Given existing reciprocity agreements, this accreditation will allow other agencies within DoD to employ the VirtualFence system, saving them significant time and expenditure in deployment and IA expense associated with adopting a new solution.

APPLICATIONS

- Campus and building perimeters
- Inside corridors, rooms or entrances
- Outside enclaves, streets or access ways
- Unmanned remote substations
- Tarmacs, runways or railways
VirtualFence VPMS Kit

Key Components

(1) PTZ Camera Control Unit (3e-735CC)
- Industry IP68 grade of integrated day/night (IDN) PTZ (pan, tilt, zoom) video camera
- VirtualFence Video Server (3e-525Ve-4) wireless video server converts and streams real-time video information to a secure wireless network
- Intelligent battery and power systems (IBPS) capable of powering the VSU for >24 hours

(1) Mobile Alert Console Unit (3e-735AC)
- Ruggedized "Toughbook" notebook computer loaded with video management software, video analytics software and 3eTI's secure wireless client software
- AirGuard WiMesh Access Point (3e-525A/N?) wireless access point/bridge

(2) Heavy Duty Carrying Cases
(2) Lightweight Tripods

VirtualFence FirstView

Key Features

- Sensor management with legacy device support
- Web browser based (clientless)
- Secure using SSL with AES encryption
- Hierarchal user management for interoperable communications
- Network ready for LANs/WANs and wireless networks
- Provides real-time access to on site visual intelligence
- Reduces first responder risk and promotes public safety
- Modular design enables easy integration and customization options
- Open architecture/scalability

VirtualFence Video Server (3e-525V)

- Power: 15.4 Watts (standard unit)
- Wireless: 802.11 a/b/g, Turbo A, Super G
- Security: FIPS 140-2, Common Criteria
- Environment: -5º C to +65º C
- Interfaces: Ethernet, video, serial camera
- Size: 9.25 in x 8.25 in x 3.00 in
- Weight: 5.5 lbs

VirtualFence Appliance (3e-733A)

- Power: Input voltage 100-240 VAC, +6%, -10%
- Wireless: IEEE 802.11a/b/g for AP & bridge
- Security: FIPS 140-2, Common Criteria
- Environment: 32 - 104ºF (0 - 55ºC)
- Interfaces: Ethernet, video, serial camera
- Size: 24.00 in x 20.00 in x 10.00 in
- Weight: 45 lbs

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