



Effective Mission Communications

iDirect Government's™ (iDirectGov's) specialized satellite communications (SATCOM) solutions ensure those deployed by land, sea and air have their critical lines of communication available and ready for mission success.

The Evolution® Defense software platform is the power behind our defense satellite routers, hubs and line cards. This Defense platform incorporates iDirectGov's most advanced communication technologies, enabling our hardware and network management system to operate as they never have before.

Evolution Defense supports our complete suite of 9-Series satellite modems including our Defense Line Cards (DLCs) and hub systems— all from a single platform. Evolution Defense fuels the performance gains and innovative features that defense customers depend on for reliable and effective connectivity for all of their mission-critical needs.

Whether coordinating with ground elements, transmitting high-definition ISR video or conducting inflight mission planning, military and government users rely on Evolution Defense to deliver fast, secure and effective communications no matter where they are located around the globe – on land, sea or in the air. It is our goal to ensure our customers have the best technology at their fingertips to stay connected because their mission depends on it.

Securing Your Networks

PERFORMANCE

Evolution Defense delivers ultra-enhanced features in performance, efficiency and security. With Communication Signal Interference Removal (CSIR®) interference mitigation technology enabled on our 9-Series and DLC-R, users are protected up to 45 Msps on the downstream and 29 Msps on the upstream. These performance increases are ideal for sending video imagery, high-resolution photographs and other bandwidth-intensive content from any platform.

Building upon these performance improvements, Evolution boasts 10 times the packets per second (PPS) improvements with achievements as much as 64,000 PPS of simultaneous traffic. These PPS improvements allow for larger volumes of simultaneous voice calls as well as other bandwidth-intensive applications.

SPECTRAL EFFICIENCY

iDirectGov has built upon our existing MF-TDMA waveform and enhanced the platform with A-TDMA. This waveform provides better performance thresholds and

tolerances required for communications-on-the-move (COTM) applications. The acquisition bursts facilitate A-TDMA spread mode operation, thus removing initial power challenges. This enhancement also provides better support for smaller antennas.

SECURITY

Applying cybersecurity in a SATCOM environment requires a layered security approach, or Defense-in-Depth as it is sometimes called. As recognized by the National Security Agency (NSA), Defense-in-Depth is an effective means to protect networks by presenting multiple obstacles for would-be hackers. This approach brings together multiple strategies to mitigate threats, protecting your data and SATCOM network.

Our Evolution software embraces the Defense-in-depth approach. Our Fips 140-2 certified satellite routers meet the highest levels of transmission security (TRANSEC). With Evolution Defense, the operation and management of TRANSEC networks becomes easier with a centralized management system for certificate authority (CA)

management, global key distribution (GKD) management, acquisition cipher text channel (ACC) key retrieval, one-way TRANSEC management, zeroization of security keys, and a web user interface (WUI) for TRANSEC.

Not only is it now easier to manage a TRANSEC network, the 9-Series remotes are capable of both traditional two-way TRANSEC and one-way TRANSEC. One-way TRANSEC comes automatic over-the-air re-keying of receive-only systems in support of Global Broadcast Service (GBS). Evolution Defense also enables multi-protocol encapsulation (MPE) to ensure backward compatibility to existing GBS networks as well as multicast filtering to remove any duplicate channels.

INFORMATION ASSURANCE

Evolution Defense includes SHIELD network protection (beginning in 4.2.2.0). SHIELD is a service where IA scans are conducted to evaluate a device for vulnerabilities that hackers could use to access a system or network. The user is then provided a Remote Security Bulletin (RSB) to implement in order to mitigate these risks. This feature is available on all 9-Series remotes including airborne variants.

INTERFERENCE

Interference is a known problem in SATCOM, whether it is blue-on-blue interference or red-on-blue interference. Evolution Defense now delivers an interference mitigation solution embedded in our 9-Series satellite modems (excluding airborne variants) and DLC-R with our CSIR technology.

CSIR is a real-time streaming technology that redefines the extent to which active, noise-inducing interferers can be isolated and removed from a communications signal, thus restoring the quality and integrity of the original signal. This product is designed to effectively mitigate a wide range of interferers from CW to multiple strong interferers, without requiring any prior information on those interferers. The product can mitigate unknown interference in a variety of scenarios with zero added complexity for anyone on staff or additional bandwidth requirements.

Take Flight

With the ability to allocate 15 Msps to a single satellite router for the transmission of large video and data files and continued connectivity and performance at speeds as high as 1,000 MPH for ultra-high-speed communications-on-the-move (UHS-COTM), iDirectGov’s airborne solution truly takes flight. With beam switch API, operators have the ability to control beam switching logic by telling the satellite router which beams to use at any given time to ensure constant connectivity while in flight.

Dual Mode

Evolution Defense paired with our 9-Series remotes allows users the capability to operate on both the Evolution and Velocity networks giving them the flexibility of High Throughout Satellites (HTS). HTS networks provide both fixed and mobile capabilities in regions where capacity may be limited enabling a truly global network.

Conclusion

The capabilities and features embedded in the iDirectGov Evolution Defense platform enhance and protect critical communications. The inherent features and security in iDirectGov’s solutions protects and minimizes the attack surface from actors that may, intentionally or unintentionally, interfere with lines of communications. Customers can trust iDirectGov security measures to be battle-tested and certified to meet today’s strictest security standards.



iDirect **GOVERNMENT**

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