



OIL AND GAS

Reliable Communications on Land and Sea



BENEFITS

- **Provide rigs, platforms, vessels, pipelines and offices with integrated communications**
- **Cloud based unified management**
- **Flexible network topology**
- **Uncompromised security**
- **Quality of Service without compromise**
- **High Link availability**
- **Video surveillance for monitoring and security**

COMPLEX REQUIREMENTS

The oil and gas industry has some of the world's most demanding communications needs. While many businesses have a global presence that requires reliable communications between offices, oil and gas companies' communication systems must also support exploration and production facilities in challenging remote locations.

It is also an absolute necessity to maintain business continuity and disaster recovery. Oil and gas are both critical drivers in modern economies and highly volatile commodities. Any lack of communications, whether a short-term network malfunction or a natural disaster, could have major consequences. While solutions exist for each specific need, separate systems are expensive and create a management nightmare for information services teams. What is needed is a powerful, flexible, reliable and scalable system.

HIGHLY FLEXIBLE DISTRIBUTED ARCHITECTURE

Gilat's SkyEdge II-c single platform for multiple applications is well suited for the Oil & Gas industry. The SkyEdge II-c platform has a broad portfolio of VSATs supporting applications from IoT and SCADA to very high trunk links reaching hundreds of megabits per second.

Fixed and mobility applications are supported as well, with on-the-pause and on-the-move terminals to address land, maritime and avionic needs, all managed by Gilat's global and centralized network management system, TotalNMS.

The software-defined distributed X-Architecture enables network flexibility and efficient data processing and operations. The ground infrastructure can be located in multiple sites to best fit specific network designs. The servers can be located at the gateway location or in separate data centers, depending on terrestrial network availability and operational costs. TotalNMS enables full configuration, control and monitoring of all hub elements and remote terminals, regardless of their physical location.

Gilat's architecture supports high security capabilities including end-to-end IPsec encryption, certification, authentication and management. Security is provided for the highest level of transmission to protect all user traffic.



SkyEdge II-c supports video surveillance to help secure remote facilities and to support visual inspection of pipeline gauges or other indicators to save on expensive maintenance trips triggered by false alarms.

HIGH AVAILABILITY

Regardless of how strong any system is, outside events can always intrude. SkyEdge II-c provides high performance solutions for business continuity. The SkyEdge II-c system is designed for high availability and reliability. Gilat's distributed architecture lends itself to a high availability portfolio to ensure disaster recovery and fade mitigation. Gilat's diversity solutions ensure business continuity with a wide set of redundancy schemes including seamless gateway diversity for fade mitigation and data center diversity.

In addition, SkyEdge II-c supports transportable and quick-deploy solutions for disaster recovery, re-establishing communications for disaster-hit areas.

ADVANCED SERVICE ASSURANCE

To ensure fast running of applications, web browsing and a high-quality user experience, Gilat's platform contains a full set of protocol optimization and application acceleration features. In addition, Advanced Quality of Service (QoS) guarantees the performance of real-time applications such as VoIP and video streaming while simultaneously enabling additional data applications.

Each application gets the appropriate resources to perform as required to support applications as variable as offshore communications and SCADA while providing appropriate service levels for each.



A reliable, high quality and high performance, yet cost effective network is available for complex requirements. SkyEdge II-c, the answer for oil and gas industry communications.

MAXIMUM SPECTRAL EFFICIENCY

Gilat's innovative transmission technologies deliver exceptional performance and space segment efficiencies. Wideband DVB-S2X carriers in the forward direction, as well as adaptive transmission in the return direction, enable high on-the-move service availability and maximum bandwidth efficiency at any condition – at beam peak, beam edge, at fade and at different traffic demands. This is achieved by adaptive power control, changes to the carrier symbol rate, ModCod and spread-spectrum factor per VSAT on a per time-slot basis.

SUMMARY

The oil and gas industry requires complex business communications. SkyEdge II-c, Gilat's multi-service platform, answers all industry needs with advanced QoS and access schemes to support all necessary applications as needed.