Breakthrough performance and freedom of location for wireless networks



ENERGY

Fastback Wireless Solutions: Transforming Data Access, Monitoring and Security in the Energy Industry

From exploration and production to transportation and refining, the oil and gas industry is fast adopting mobility and remote monitoring solutions to improve safety, security and productivity. But in an industry characterized by challenging operating conditions, wireless solutions are only as effective as the underlying data connectivity framework. High capacity wireless Ethernet solutions, the Fastback product family brings unprecedented wireless performance and reach, providing energy organizations with:

- The ability to operate in any wireless conditions, from clear line of sight (LOS) to fully obstructed non line of sight (NLOS)
- Industry-leading capacity, rich feature set, and lowest latency of any wireless Ethernet device
- Unmatched speed and ease of deployment and portability

MORE PLACES

Proven in Tier 1 carrier deployments, Fastback solutions have broad applicability across the oil and gas industry, cost-effectively extending the reach of WANs to any location, even those previously deemed inaccessible; enhancing pipeline security and production monitoring; and boosting worker safety and efficiency. Organizations are able to deploy a single solution for handling unobstructed Line-of-Sight (LOS), partially obstructed Near-Line-of-Sight (nLOS) and totally obstructed Non-Line-of-Sight (NLOS) links with carrier-grade performance and reliability, indoors or outdoors, and across heavily metallic landscapes, water, and complicated terrains.



Fastback wireless solutions enable a wireless connection of any two locales in any operation conditions.



FASTBACK SOLUTIONS: ENERGIZING WIRELESS FOR OIL & GAS

- *Fastest install:* Up and running within an hour
- Easiest deployment: No or low level of manual alignment, LOS studies or frequency planning
- *Versatile prediction tool:* LOS and NLOS site planning
- Most versatile: Tolerant to link obstructions; high interference immunity over metallic landscapes
- *Highest Speeds:* Up to 1 Gbps full duplex
- Up to 13km range
- *Lowest latency:* Under 500 µsec
- Most economical: Significant time, labor and equipment cost savings
- Easy expansion and portability: Deployments scale quickly and economically to any size, while individual units are easily moved, or redeployed to meet changing needs
- Stringent over air security: AES-256 and TRANSSEC
- *Choice of interfaces:* Configurable with fiber or copper interfaces (SFP)
- Mounts anywhere: Compact, ruggedized units mount easily on fixed, temporary or semi-mobile infrastructure, including rigs, towers, masts, poles, buildings or hanging off a cable strand
- Set and Forget operation: No recurring manual realignments; remotely upgradable software

MORE SPEED

The only wireless Ethernet solutions to overcome the traditional barriers to wireless network performance in 5 GHz spectrum, V-band (60GHz), and E-band (70-80GHz), Fastback solutions deliver up to 1 Gbps thruput in Any-Line-of-Sight (AnyLOS^{**}) conditions, coupled with record-setting low latency (<500 µsec). In addition, using patented Fastback technology, the Fastback IBR operates in 5 GHZ unlicensed spectrum without being impacted by the severe levels of interference associated with unlicensed band, thus avoiding capacity constraints and the need for frequency planning. And if new interference is introduced into an environment, the IBR immediately auto-adjusts for that, eliminating the need to manually select new frequencies.

Whether communicating across remote exploration sites and offshore rigs, or streaming data from thousands of sensors and video cameras in real time, Fastback wireless solutions enable organizations to deliver high capacity mobile coverage wherever it is needed, quickly and economically, with dependable fiber-equivalent performance for mission-critical applications.

FAST, EASY DEPLOYMENT

Designed for rapid deployment by minimally trained personnel, self-contained Fastback units are installable on fixed or on temporary infrastructure in a matter of minutes, directly out of the box. Leveraging Fastback's integrated auto discovery and synchronization capabilities, units automatically self-align and can be fully operational in less than an hour, regardless of line of sight conditions. Moreover, deployed units stay continuously aligned, so there is need to revisit them to conduct manual realignments.



5GHz Intelligent Backhaul Radio (IBR)



V-band Ethernet Wireless Bridge



MISSION-CRITICAL ENERGY

- Exploration High capacity data sharing to and from remote locations, supporting the latest, data-intensive visualization, modeling and productivity applications
- Production Reliable data delivery to the point-of-work for more effective work order, production and incident management
- Decision support Real-time data collection for business and operational intelligence

Real-Time Monitoring and Security

- Pipeline and terminal security Scalable connectivity for monitoring and video surveillance of pipelines, storage tanks and facilities
- Production monitoring Monitoring critical aspects of production, from well to pipeline
- Asset Management Communicating timely information on the state, condition and location of dispersed assets

Communications Redundancy

Critical backup — Highly reliable backup to fiber communications links

COMPACT AND FLEXIBLE

Fastback wireless solutions integrate and utilize a variety of switch, router and native Ethernet capabilities inside a single, ruggedized (IP66), small-footprint enclosure — as small as one square foot in size. In addition to enabling faster installs, this results in fewer managed elements per site, the ability to better deal with space constrictions, and lower capital costs.

Fastback IBR also empower oil and gas companies with new levels of deployment flexibility. For example:

- With the built-in fiber interface option, the IBR is ideal for mounting on remote well heads and rigs
- Resilience to changing landscape (both over time and immediate), the IBR is perfect for construction environments and for mounting on semi-mobile infrastructure
- An integrated CE2.0 switch for multiple readers/cameras makes the IBR ideal for supporting a range of monitoring and surveillance applications



intelligent wireless transport

2460 North First Street, Suite 200, San Jose, CA 95131 | www.fastbacknetworks.com

Fastback Networks, Intelligent Backhaul Radio (IBR), AnyLOS, and XIP are registered trademarks or trademarks of Fastback Networks. Copyright 04/2015. All rights reserved.



E-band Ethernet Wireless Bridge