

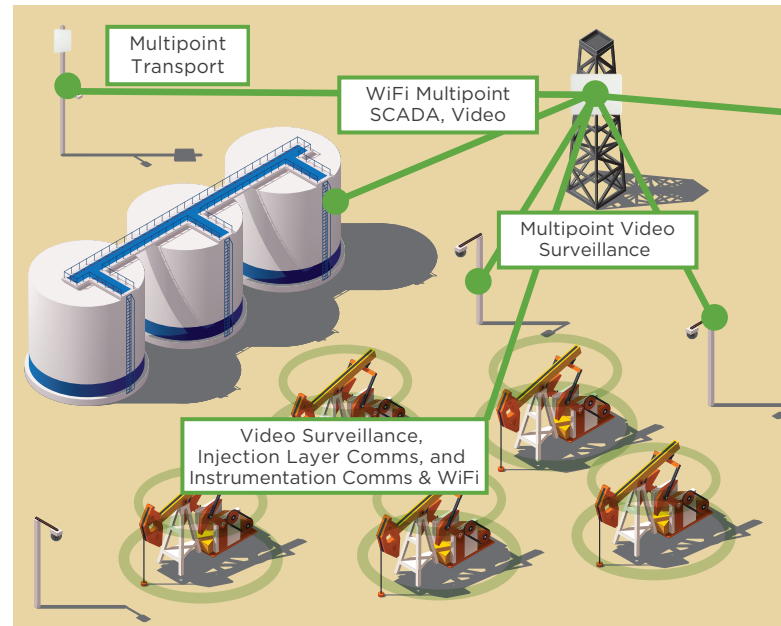


Wireless Connectivity Solutions for Oil and Gas

OIL AND GAS INDUSTRY OPERATIONS NEED TO DELIVER REAL TIME MONITORING, MEASUREMENT, AND ANALYTICS THAT OPTIMIZE PERFORMANCE AND EFFICIENCY

while establishing a sustainable competitive advantage. The real value of IIoT will be unleashed when accumulated and real-time data turns into insightful knowledge and critical actions. To achieve this, the underlying communications infrastructure must be a highly reliable and resilient system that interconnects sensors and controls across a large-scale field area network.

Cambium wireless solutions enable applications in exploration, drilling, field area networks, pipelines and throughout the digital oil field. Cambium technology integrates video, voice, email, and data traffic alongside SCADA data from RTU's, sensors, and control points – on a single all-IP network featuring centralized end-to-end administration.



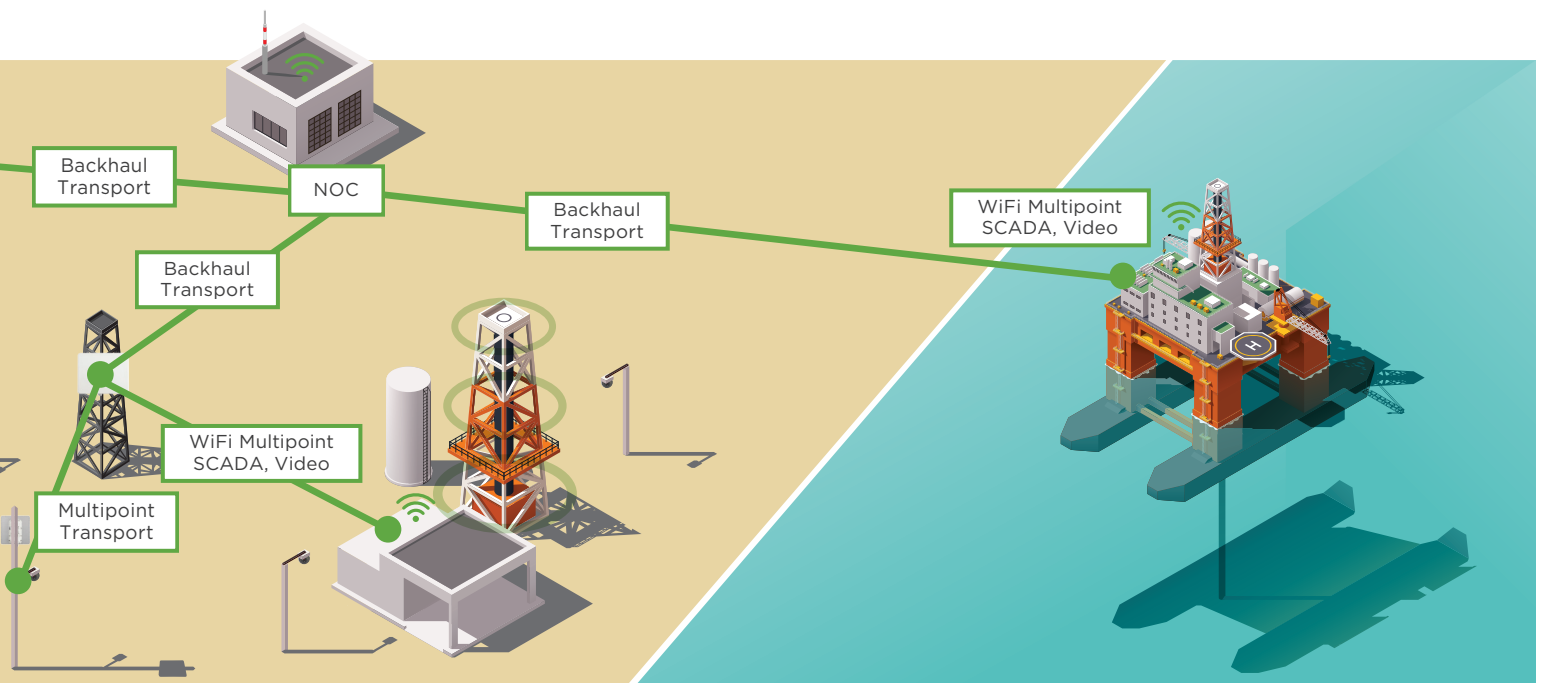
Our wireless platforms are field proven in the following applications:

- **Transport for SCADA and Process Control data**
- **Digital Meter Aggregation backhaul**
- **Offshore and over-water communications**
- **Video surveillance and voice services**
- **Remote facility connectivity**
- **Migration from serial to IP networks**
- **IT/OT Convergence**

Benefits

- **Complete Coverage** – Connect the entire Field Area Network (FAN) and reach remote locations including over-water connections to offshore facilities.
- **Capacity** – Deploy narrowband solutions to connect the digital well-field, aggregate data with broadband, and connect control facilities with long-range high-speed backhaul.
- **Secure** – With positive authentication and AES 128/256-bit encryption, communications are secure.
- **Scalable** – Efficient use of spectrum to build densely packed networks.
- **Reliable** – With more than 6 million modules deployed in 150 countries, our solutions are proven in any environment for almost any application.





Proven Solutions in Oil and Gas

- **Wide-Area licensed and unlicensed Narrowband connectivity for SCADA communications including: video surveillance, injection layer communications, instrumentation data & Wi-Fi**
 - 220 MHz • 450 MHz • 700 MHz • 900 MHz
- **Wide-Area Point-to-Multipoint for Video Surveillance and Backhaul**
 - Video Surveillance for physical security
 - SCADA master aggregation and backhaul
- **High Capacity licensed microwave**
- **Long Range Point-to-Point Wireless Backhaul**
 - Licensed Microwave and Unlicensed Backhaul
- **Ruggedized Wi-Fi Access for Remote Field Operations**
 - Outdoor hotspot and Wi-Fi networks
- **Single Pane of Glass Network Management**
 - Bird's eye view of Field Area Network
 - Rapid on-boarding and provisioning of new nodes
 - End-to-end performance and fault management
 - Centralized password management and firmware updates

The Cambium Difference

- **Scalability** – Connect thousands of individual locations with a synchronized network that enables RF frequencies to be re-used throughout the network to provide the highest level of connectivity in the least total amount of spectrum.
- **Reliability** – Deploy wireless broadband with confidence that it will work right the first time and continue to work 24/7 over the long haul.
- **Planning Software** – end-to-end network design using LINKPlanner.
- **Total Cost of Ownership** – Minimize the total cost of network ownership with one IP-based wireless network comprised of licensed and unlicensed backhaul and access components that can be rapidly deployed and perform reliably with minimum maintenance cost.
- **Sustainability** – Solutions designed to operate for years from a supplier with a proven track record of stability and sustainable product evolution.
- **Spectral Efficiency** – Provide the highest amount of information transfer in the least amount of scarce spectrum with industry award winning throughput.



ABOUT CAMBIUM NETWORKS

Cambium Networks is a leading global provider of wireless broadband solutions that connect the unconnected. Through its extensive portfolio of reliable, scalable and secure narrowband SCADA, Wi-Fi and wireless broadband point-to-point (PTP) and point-to-multipoint (PMP) platforms managed by cloud-based software, Cambium Networks makes it possible for all service providers; enterprises; government and military agencies; oil, gas and utility companies; Internet service providers; and public safety networks to build powerful communications networks, reach users from 250 kilometers across mountain tops down to the last meter to their devices and intelligently manage their infrastructure through end-to-end network visibility and actionable analytics. Headquartered outside Chicago and with R&D centers in the U.S., Ashburton, U.K., and Bangalore, India, Cambium Networks sells through a range of trusted global distributors.

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