

TCS Wireless Point-to-Point Link (WPPL)



Uninterrupted communications in the field is an essential function for organizations ranging from commercial enterprises to intelligence and military operations. TeleCommunication Systems, Inc. (TCS) Wireless Point-to-Point Link (WPPL) uses best-of-breed COTS RF communications technologies to enable secure, robust transmission of data beyond conventional radio capabilities.

TCS WPPL provides secure point-to-point and point-to-multipoint, line-of-sight and non-line-of-sight transmission of voice, video and data communications. Developed to satisfy critical last mile communications for the DoD, the TCS WPPL allows communicators to extend their Local Area Network (LAN) to deployed remote locations, providing NIPR, SIPR, VoIP, Video, and DSN services over terrestrial microwave radio links.

Key Features

- Simultaneous Point-to-Point and Point-to-Multipoint capabilities
- User Selectable Dual Frequency Bands (4.4-5.0 GHz and 5.4-5.7 GHz)
- Flexible Network Topologies and Easy to Use
- Interoperable with existing fielded data communication systems
- Provides support for voice (VoIP) and IP telephony, video (VTC, live or streaming), and data

See TCS' complete line of products and services at www.telecomsys.com.

Your Established Partner

TCS brings proven, technology problem-solving expertise to its professional service offerings for the public sector. From continuity of operations and information assurance, to cyber security and integrated logistics support, TCS solves the toughest technical challenges, under conditions that demand the highest level of reliability, availability, and security. As an ISO 9000-certified provider with many consultants holding active security clearances, TCS has an established track record over the past decade as a trusted partner providing mission continuity for the Department of Defense, Special Operations and intelligence communities, the Department of Homeland Security and the Department of State.

TeleCommunication Systems, Inc.
275 West Street
Annapolis, MD 21401 USA
Toll Free: 1.888.728.8797
Outside US: +1.410.263.7616
www.telecomsys.com

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TCS TeleCommunication Systems
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Extending your Local Area Network

The TCS WPPL is a cost-effective addition to a traditional VSAT solution, and enables long-range, remote communications between the hub and deployed personnel, and eliminates the need to have a VSAT terminal deployed or installed at each remote site. Redline and Harris radios mounted on the 35 ft. adjustable mast allow for Internet Protocol (IP) data transmission within a WPPL network through a line-of-sight / non-line-of-sight transmission extending up to 35 miles point-to-point or 15 miles point-to-multipoint.

The TCS WPPL provides easy installation, operation, and maintenance by deployed field units to extend LAN services over an expanded perimeter while maintaining secure, remote connectivity to the hub and other remote units that are outfitted with WPPL systems. Communications between the home base and all field units will maintain full transmission security without being compromised, with TRANSEC and COMSEC capabilities in keeping with current military standards that maintain the security of tactical data communications.

State-of-the-Art Field Communications

TCS' WPPL solution supersedes conventional two-way or land mobile radio systems by allowing the transmission of more diverse types of data. The TCS WPPL comes in six standard cases, as well as a spares block, and is comprised of a Network Equipment Case, UPS Equipment Case, RF Equipment Case, Phone/Accessory Equipment Case, Mast Assembly Case, Rotator/Tilter Assembly Case

Operating Characteristics

Frequency Range: Redline RedCONNEX AN-80i: (5.470 – 5.725 GHz); Harris RF-7800W (4.4 – 5.0 GHz)
Channel Size: 10, 20, 40 MHz
Transmission: OFDM, Time Division Duplex (TDD)
Data Rate: Up to 108 Mbps (uncoded burst rate)
Ethernet Rate: Up to 80 Mbps
Power: 110/220/240 VAC auto sensing; 50/60 Hz; 22-28 VDC

Mechanical and Environmental Specifications

Standard mid-range 10 M telescoping antenna with antenna rotator/tilter
PTP/PMP Capable
DSN/Long Local Extension Supported by FXS/FXO Ports
EIA-530 Serial data ports for integration into existing networks
Operational Temperature:
1) Indoors: 32° – 104°F (0 – 40C)
2) Outdoors: 0° – 120° F (0 – 49C)
Operational Wind Loading: gusting over 100 mph
Humidity: 95% non-condensing
Altitude: 100 ft BMSL – 10,000 ft AMSL

Proven Field Applications

TCS products are proven and in use in battlefield support and mobile command center applications worldwide. TRANSEC via Cisco 3825 NIPR router using AES 256-bit encryption
COMSEC via TACLANE KG-175D (TACLANE Micro)
Voice, data and video broadband speeds from 64 Kb/s to 80 Mb/s

