ANTARES ODU– HCRR IP Radio

ANTARES ODU is an HCRR IP Radio with Software Defined Radio Architecture supporting high data rate secure wireless backhaul.

There is a constant growing demand for wireless technology in defence networks for tactical communications, industrial IoT, public safety networks, where secure point to point or point to multi-point links are to be established for data communication. Indigenously built Lekha IP Radio fulfils the need for most of such data communication demands. The systems can be used in both Licensed and Un-Licensed band of operations.

Most of these applications require a technology which is proven and affordable. The HW and enclosure are built to cater to the deployment and environmental requirements for such application. Lekha's ODU IP Radio is built with better understanding of the end customer requirements of such applications and has seen several successful trials.

The architecture supports easy application interface (integration with data link layer) via a packet interface. The radio card supports wide band RF with tuneable front end filters. The system uses flexible design and it provides fast turnaround time for any customization. The system also provides user interface application for programmability of the system parameters for the required configuration.

Antares ODU IP Radio roadmap features includes multi-channel and MIMO features to enhance capacity and performance.

ODU IP Radio

Applications

1. PTP & PTMP Networks

2. TRANSEC and COMMSEC Layers

3. Mission Critical and High Availability Communication

4. Defence Networks

5. Industrial IOT Networks

6. Disaster Management

7. Streaming of High-quality Video, Audio, Sensor Control Data Payloads.

System

Waveforms	COFDM
Network Topology	Point to Point, Point to Multi-point
Data Rates	100 Mbps Bi-directional
Modulation and Coding Schemes	Modulation: QPSK, QAM16, QAM32 and QAM64 FEC Coding: Rate 1/3, 1/2, 3/4, 5/6, 7/8, 9/10
Link Adaptation	Fixed MCS and Dynamic MCS Adaptation
Duplex Method	TDD and FDD
QoS	Best Effort, UGS, Real Time Services for Video and Audio Streaming
Data Protocols	Unicast, Multicast and Broadcast
Network Routing	Single Hop and Multi-Hop Modes
Positioning	Integrated GPS Supports GPS and Non-GPS Modes
Positioning	Onboard GPS Receiver

RF

Frequency Bands	C-Band (4.4 GHz to 5 GHz)
No of Frequency Channels	Programmable with step size of 1 KHz
Channel Bandwidths	2 MHz to 30 MHz (Wide Band Mode)
RF Output Power	0.5W, 1W, 2W and 4W
No of RF Channels	1 Tx and 1 Rx

Security / ECCM

Data Security	AES128 / 256, Serpent
Signal Security	FF and FH Modes FH of 100 hops to 1000 Hops/sec

General

Power Input	24V
Digital Interfaces	Ethernet and RS232
Dimensions	Available in different form factors
Enclosure	Aluminium alloy, IP65 Grade Environmental sealing Housing
Weight	< 12 Kg Customizable for Specific Use Cases and RF Power/Range Requirements
Connectors	Rugged circular connector interfaces
Mounting Option	Mounting provision for Vehicular and pole
Environmental	MIL STD 810 G compliance for Vibration, shock, and thermal stress

For further information or a demonstration, please send a request to business@lekhawireless.com.
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