Software Defined IDU™

Key Features
- 1RU Standalone
- Flexible Tx and Rx IF to ODU
- Standard Interfaces
- SDH Option
- Supports Customized NMS, SNMP

Benefits
- Low Cost Means Better Margins
- Quick Time to Market
- Network Option Cards for Easy Upgrade and Expansion
- Easily Deployed and Activated

Applications
- PDH or SDH Radio Networks
- Cellular Backhaul
- Trunking or Access Networks

CarrierComm Overview

CarrierComm is a leading provider of point-to-point voice and data transmission technology that enables microwave products with speeds from 16 Mbps to 311 Mbps and covering the 3.5 - 38 GHz frequency bands. Its end-user customers include major telecommunications service providers and OEMs delivering equipment to these providers. The company's in-house ASIC expertise sets it apart from all other competitors and allows CarrierComm to offer spectrum-scalable, rapidly deployable and transparently connected wireless and fiber optic solutions.

Software Defined IDU™ Overview

This Software Defined IDU™ is a flexible, low-cost, feature-rich IDU solution for microwave radios in the global telecommunications market. It incorporates a unique, single-chip ASIC modem featuring integrated FEC with selectable coding rates. Modulation and data throughput rates are BPSK-256 QAM and 1-311 Mbps respectively, Standard interfaces include 16x E1/T1 and 100BaseTX. Plug-in options allow for E3/DS3/STS-1, STM-1, or 2xSTM-1. The IDU also incorporates digital filtering for the various data bandwidths. The IDU is designed to support protected and east/west repeater configurations in a single 1RU chassis.

Reasons to Buy the Software Defined IDU™

The Software Defined IDU™ offers volume capacity and proven performance for applications worldwide. It represents a new generation of PDH and SDH IDUs at the lowest prices in the market today. The Software Defined IDU™ is designed to simplify product logistics and overall product life cycle costs. The field upgradeable architecture reduces capital and operating expenditures for field installation, maintenance, training, and spares while maximizing product reliability. The Software Defined IDU™ includes advanced features such as support for ring/consecutive point configurations. This creates a self-healing redundancy that is more reliable than traditional point-to-point networks.

CarrierComm

By creating such innovations as the world's first single-chip modem, which allows for smaller, smarter wireless devices, CarrierComm is bringing the benefits of Moore's Law to network communications.

Network Interface	Network Processor	Modem	Intermediate Frequency
Standard Configuration Scalable Ethernet 16x E1/T1 Wayside or Traffic In-band Control Channel **Options** Additional 16x E1/T1 1 or 2xSTM-1/OC-3 Multi-channel E3/DS3/STS-1	**Standard Configuration** Flexible Platform Processor OAM&P Security Built-in Web Server	**Standard Configuration** Flexible modulation: BPSK - 256QAM Selectable Error Correction Coding Equalization Pre-distortion Built-in Link Support: BER **Option** Second plug-in modem for protected or east/west mode	**Standard Configuration** Transmit: 350 MHz Receive: 140 MHz **Options** Variable Digital IF for various bandwidths Second IF for plug-in modem for protected or east/west mode

SPECIFICATION SUMMARY

Outdoor Unit (ODU) Interface

Intermediate Freq. Range	Tx: 350 MHz, Rx: 140 MHz
Emissions Bandwidths	ETSI, FCC
ODU Command Interface	ODU specific

Modem Capability

Capacity Options	Throughput from 1 - 311 Mbps
Modulation	Programmable: BPSK, QPSK, 16-QAM, 32-QAM, 64-QAM, 128-QAM, 256-QAM
FEC	Trellis Coded Modulation concatenated with Reed-Solomon Coding

Network Management

Support	SNMP
Connector	10/100BaseTX

Environmental

Temperature	-5° to +55°C
Relative Humidity	0 to 95%, non-condensing
Power	50-75 Watts (depending on Network Data Interface and ODU type)

Mechanical

Dimensions	1RU, ETSI compliant

Customer Network Data Interface

Physical

- Ethernet	Full duplex 100BaseTX
- E3/DS3/STS-1	Full duplex E3, DS3, STS-1
- SDH/STM-1	Full duplex STM-1, Single Mode 1310 nm
- SONET/OC-3	Full duplex OC-3
-NxE1/T1	Full Duplex E1/T1

Connector

- Ethernet	RJ-45
- E3/DS3/STS-1	BNC Female 75 Ohm
-SDH/STM-1	BNC
- SONET/OC-3	Type fiber SC
- NxE1/T1	2xRJ-48C, HD60

Compliance

- Ethernet	IEEE 802.3
- E3/DS3/STS-1	ITU-T, Telcordia
- SDH/STM-1	ITU-T
- SONET/OC-3	Telcordia
- NxE1/T1	ITU-T

Auxiliary Connections

Voice Service Channel	6 Wire, PTT Handset
Data Service Channel	64kbps
Alarm Port	Two Form C relay alarm outputs

Options

- Additional Modem/IF for single chassis protected or east/west mode
- Switching Fabric for drop-and-insert between SDH/TDM/IP traffic
- E1/T1 High Density Cable

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