



## PTP Microwave Links



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## UNI 100 IP/PDH Point-to-Point Microwave Link

- Operating frequencies 6 - 38GHz
- ETSI and FCC Specifications

**The UNI 100** is a point-to-point microwave radio system for IP / PDH payloads supporting software-configurable capacity of 8-100 Mbps and channel bandwidths of 7 to 28 MHz with field-replaceable plug-in modules that cover all common payload interfaces.

Common applications include: mobile backhaul infrastructure, PTT access and trunk networks, competitive local access networks, and enterprise or campus networks.

## System Features

All specifications subject to change without notice

### Reliable Operation:

- Complete IDU digital system design
- Scalable digital modem modulation (8TCM, 16TCM and 64TCM)
- 1+1 configuration with no additional switching hardware
- Hitless (errorless) Rx protection switching
- Hot-Standby, Space-Diversity, Frequency-Diversity, Tributary-Diversity

### Easy to Use:

- Rapid, simple installation with plug and play software
- Intuitive, proactive user interface includes SNMP management
- Easy ODU direct mounting installation
- ODU can be replaced without affecting antenna alignment

### Flexible Interfaces:

- One IDU for all frequencies, capacities and interface applications
- Front-loading plug-in with auto detection:
  - LAN interface: 4x10/100Base-T + 8E1
  - PDH interface: 32xE1
- Software controlled capacity (8 to 100 Mbps) providing Spectrum on Demand
- Channel bandwidth (7 MHz, 14MHz and 28 MHz)
- Optional impedance of 75 or 120 Ohms (software selectable)
- Auxiliary EOW voice and data channels
- Reduces logistics, spare parts, and product stocking

### Competitive Advantages:

- Exceptionally high link performance (receiver sensitivity and system gain)
- Full range of configurations and frequency bands
- Scalable data rates
- Common architecture
- Small, lightweight, aesthetic ODU/antenna
- Remote software upgrading
- Intuitive network management system
- Simple and economically efficient maintenance

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# Specifications

All specifications subject to change without notice

## System

Frequency <sup>1</sup>	7GHz	8GHz	11GHz	13GHz	15GHz	18GHz	23GHz	26GHz	38GHz
<b>Standards</b>	ETSI	ETSI	ETSI/FCC	ETSI	ETSI	ETSI/FCC	ETSI/FCC	ETSI/FCC	ETSI/FCC
<b>Operating Frequency [GHz]</b>	7.1-8.2	8.2-8.5	10.7-11.7	12.7-13.3	14.4-15.4	17.7-19.7	21.2-23.6	24.2-26.4	37.0-40.0
<b>Channel BW and modulation</b>	4 E1 (8Mbps) 8 E1 (16 Mbps) E3+E1 or 16 E1 (37 Mbps) 32 E1 (66 Mbps) 4 10/100BaseT + 8 E1 (100 MBPS)				7 MHz (8TCM) 14 MHz (8TCM) / 7 MHz (16TCM) 28 MHz (8TCM) / 14 MHz (16TCM) 28 MHz (16TCM) 28 MHz (64TCM)				
<b>ODU Tx Power [dBm]</b>	8TCM 16TCM / 64TCM	+25 +20	+25 +20	+24 +19	+24 +19	+24 +19	+24 +19	+23 +18	+22 +16
<b>Rx Sensitivity [dBm]</b> @ BER=10 <sup>-6</sup>	4 E1 (8Mbps) 8 E1 (16 Mbps) E3+E1 or 16 E1 (37 Mbps) 32 E1 (66 Mbps) 4 10/100BaseT + 8 E1 (100 Mbps)			-93.0 -90.0 / -88.0 -86.5 / -84.5 -82.0 -76.0 / -80.0			-93.0 -90.0 / -88.0 -86.5 / -84.5 -82.0 -75.5 / -80.0	-92.5 -89.5 / -88.0 -86.0 / -84.0 -81.5 -75.0 / -79.5	-90.5 -87.5 / -85.5 -84.0 / -82.0 -79.5 -73.0 / -77.5
<b>ATPC Range</b>	≤25 dB								
<b>Background BER</b>	< 10 <sup>-13</sup>								
<b>Standards Compliance</b>	ETSI EN 302 217-2, ETSI EN 301 489, ETSI EN 302 300 132-2, IEC EN 60950								

<sup>1</sup> Contact a factory representative for a detailed list of supported frequency plans and t/r spacing

## Payload

<b>IP Payload</b>	Interfaces	10/100BaseT RJ-45 connector
	Standards Compliance	IEEE 802.3u, 802.1Q
<b>PDH Payload</b>	Line Rate	E1: 2.048 Mbps; E3: 34.768 Mbps
	Interfaces	E1: 120 Ω or 75 Ω (software selectable) DB-37 connector; E3: BNC connectors
	Standards Compliance	ITU-T G.703
<b>Auxiliary Payload</b>	Voice EOW Interface	64Kbps Standard handset interface
	Data EOW Interface	64Kbps V.11, DB-15 connector

## Configuration

<b>Radio Configurations</b>	1+0, 1+1 and East-West Ring (with no additional switching unit)
<b>Radio Protection</b>	Hitless (errorless) switching with hot-standby, frequency and space diversity
<b>Tributary Protection</b>	Single or Dual tributary

## Mechanical / Environmental

<b>Dimensions</b>	IDU: 44.5 cm W x 24.0 cm D x 4.4 cm H (1 RU) ODU: 26.7 cm Diameter x 8.9 cm H
<b>Weight</b>	IDU: 4 Kg; ODU: 4.6 Kg
<b>Operating Temperature</b>	IDU: -5° to +45°C; ODU: -33° to +55°C, up to 4500 meters
<b>Humidity</b>	IDU: 95% non-condensing; ODU: 100% all-weather
<b>Power Input</b>	-48V DC (-40.5 V to -57 V DC), 2-pin terminal block
<b>Power Consumption</b>	1+0; ≤65 W; 1+1; ≤130 W
<b>Cooling</b>	Natural convection (no fans used)
<b>ODU-IDU Interface</b>	Coaxial N-type connector
<b>Antenna Interface</b>	Wave guide output with direct antenna mount
<b>Standards Compliance</b>	ETSI ETS 300 019

## Management

<b>Protocol</b>	SNMPv1
<b>Local Access</b>	Ethernet 10Base-T, RJ-45
<b>Remote Access</b>	Integrated routing across link and interconnecting LANs
<b>Craft Interface</b>	VT-100, via local craft RS-232/DB-9 port or via remote Telnet client
<b>External Alarms</b>	4 inputs and 3 form-C relay outputs, DB-15 connector