



US 38



Urban Synchronous Family



US 38

US 38 is a point to point digital radio system, working in the 37 to 39.50 GHz band, STM-0 and STM-1 SDH capacity. Split mount installation Indoor (IDU) plus Outdoor (ODU) units. Access Network applications.

OUTDOOR UNIT

The ODU is a lightweight, compact, weatherproof box for easy and quick deployment

- Fully synthesised microwave unit
- Software programmable (from IDU) of RF parameters (RF Frequency, TX power, etc.)
- Automatic Transmit Power control
- Excellent interference rejection
- MMIC technology
- Weather proofing class IP65
- Excellent short and long term frequency stability
- Compact, lightweight design



INDOOR UNIT

The IDU carries all the traffic and auxiliary signals and is frequency independent

- Same IDU for any frequency band
- Capacity change via plug-in module
- Software programming of system parameters (RX thresholds, SDH functionalities, etc.)
- Availability of synchronous (electrical/optical) and plesiochronous tributary interfaces up to 63xE1
- Multiplex or Regenerator Section Termination software selectable
- Modulation schemes (with error correction encoding): 32 BCM and 128 BCM
- Use of overhead bytes in full accordance with ITU-T and ETSI Specs (no use of SOH media specific bytes for auxiliary capacity)
- Hitless/Error free 1+1 switch
- Local and remote loopback options
- Up to 2xE1 wayside traffic for 32 BCM systems, plus EOW and data service channels
- Laptop interface and built-in LCD device for setting radio link configuration, parameters, monitoring, alarms, etc.
- Network management through SNMP protocol
- 19" mechanical arrangement (ETSI compatible); compact size
- 1+0 version in 1 standard unit height



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- Transport of STM-1 or STM-0 capacity
- PDH and SDH interfaces
- Fast deployment
- Complete O&M solutions, compatible with EasyLink PDH family



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TECHNICAL SPECIFICATIONS

• Frequency range	37 to 39.5 GHz (ITU-R F.749)	
• TX/RX duplex frequency separation	1260 MHz	
• RF tuning range	336 MHz	
• Capacity	STM-1 (155.52 Mbit/s)	STM-0 (51.84 Mbit/s)
• Frequency channel spacing	• 56/28 MHz co-polar	• 14 MHz co-polar
• Frequency stability	± 5 ppm	
• Output power at point C'	+ 16 dBm	
• ATPC range	20 dB	
• Modulation scheme	• 32/128 BCM	• 32 BCM
• Receiver sensitivity for BER 10 ⁻³ at point C	• -70.5 dBm	• -75.5 dBm
• Protection scheme	1 + 1 Hot stand-by with hitless Rx switch	
• Line interfaces	<ul style="list-style-type: none"> • STM-1 electrical G.703 • STM-1 optical G.957 • 140 Mbit/s G.703 • 63xE1 G.703 	<ul style="list-style-type: none"> • STM-1 electrical G.703 • STM-1 optical G.957 • 21xE1 G.703
• Wayside channels	• 2xE1 G.703	• 1xE1 G.703
• Service channels (STM-1 version)	2 x 64 kbit/s co-directional G.703 1 x 9.6 kbit/s contra-directional V.11 2 x 9.6 kbit/s V.28	} Complementary } Radio Frame } Overhead
	1 x EOW (E1/E2 byte selectable) 3 x 64 kbit/s codirectional G.703 or contra-directional V.11 (selectable)	} SOH bytes
• IDU-ODU interconnection	One 50 Ohm coaxial cable per RT N-type connectors Maximum cable length: 300 m (Heliax LDF 1/4")	
• Environmental conditions	Weather proofing class IP65 IDU temperature range -5 °C to +45 °C ODU temperature range -33 °C to +50 °C	
• Power consumption (per terminal)	60 W in 1+0 configuration 100 W in 1+1 configuration	
• Power supply	-48 VDC -15% +20%	