Dragon**Link**™ 1002

Broadband 17.7 – 33.4 GHz Radio

High performance solutions ready to go the distance

The Dragon**Link**™ 1002 Series radio solution provides high performance, cost effective building block functionality to the Multi-Point (MPT) Broadband Wireless Access (BWA) Network and Point-to-Point (PtP) integrator community. The Dragon**Link** 1002 series radio building blocks employ the latest high performance MMIC ASIC and packaging technology coupled with a low-cost focused topology in order to provide a fully optimized solution. The series includes both Base Terminal Station (BTS) and Customer Premise Equipment (CPE) radios for Multi-Point applications and ODUs for Point-to-Point applications.

The Dragon**Link** 1002 Series radio set employs a novel, rapidly configurable architecture combined with ASIC-based MMIC implementation technology to realize a very low cost, yet flexible ODU solution for broadband multipoint applications. The Dragon**Link** 1002 series is intended to operate with the integrator-customers' IDU equipment using IF interfacing across coaxial mast or rooftop cable runs.

Key Features of the DragonLink 1002 Series are:

- Very high system gain
- Configurable to new bandplans with minimal design changes
- Designed for high volume, *"no touch"* manufacturing
- High reliability
- Network Manageable (proxies SNMP)
- Compensation for IF cable run lengths
- Operation in harsh, outdoor environmental conditions
- Co or X-pol go/return linking available
- TDD and FDD variants available

82-000012-01
Rev 2.7
March 2002

The key performance features of the Dragon**Link** 1002 Series radio system are:

Transceiver

RF Frequency Range	17.7 – 33.4 GHz Accommodates various ETSI, FCC, ARIB, IC frequency plans	
Network Polarization Plans Supported	Horizontal or Vertical, Supports block or channelized licensing with minimum 250 MHz TX / RX separation	
Air Interfaces Supported	FDD, TDD, FDM, TDMA, TDM	
Max Downlink / Uplink Bandwidth	250 MHz max. Other bandwidths available	
Tuning configuration	Block converting or narrow band selective tuning available	
Noise Figure	< 7 dB, 5 dB typical	
Gain, and gain adjustment	20 - 40 dB; Programmable in 1 dB increments, cable compensation and AGC functionality also supported	
Transmit Power, per RF carrier, Typical	+17 dBm (MPT BTS is multi carrier with optional 6 carrier functionality, MPT CPE and PTP ODUs are mono-carrier)	
Optional Transmit Power	Up to +33 dBm P1dB available with/without integral linearizers	
Modulation supported	Up to 128 QAM	
External Connections	MPT BTS: IF/DC, IF Auxiliary, control/management (can be integrated onto IF I/F); MPT CPE & PTP ODUs: IF/DC, IF Rx Auxiliary, RS-232 (DB), inband control/management also available	
Power Supply	Powered via IF coax cable	
Power Supply Voltage	24 - 36 VDC (32 VDC nominal) & -40 to -72 VDC (-48 VDC nominal)	
Power Consumption	< 10 Watts	
Local Control/Management S/W	PC interface S/W runs on Windows 9xtm, Windows MEtm, Windows 2000tm	
Local Control/Management interface:	Local control, standby, BIT reports, all status, RX & TX gain, TX mute, T/R mode select (TDD variants only)	
Status, Alarms & Indicators	ODU ID, Overtemp, Output Power (relative), DC Power, PLL Lock, RSSI, local configuration, S/W ID/rev	
Mounts	3-dimensionally adjustable antenna, pole mount	
PTP ODU and MPT CPE Antenna	+36 dBi typical gain (12.5" diameter); +42 dBi typical gain (24" diameter)	
MPT BTS Antenna	90° (baseline), 30°, 45°, 180° sectors optionally available, +21 dBi typ (90° variant). TX/RX pole mounted, co-located with sector antenna (dual antennas when X-pol),	
Mechanical	**MPT BTS Radio with Antenna**	**PTP ODU & MPT CPE Radio with Antenna**
Height	14.5" / 368.3 mm	12.5" / 317.5 mm
Width	8 7/8" / 223.01mm	12.5" / 317.5 mm
Depth	4" / 101.6 mm	9.4" / 238.76 mm
Weight	11.5 lbs / 5.22 kg	7.2 lbs / 3.27 kg
Operating Temperature	-40 - + 50°C plus solar load of approx 1kW / m2	

Approvals

The following approvals are in process.

Safety Compliance	UL 1950; CSA 22.2 950
RFI	FCC Part 15
RF Output Signal Compliant	FCC 101.111
Thermal Compliance	Bellcore GR 487
Reliability Compliance	BellCore TR-NWT-332
Transmit Mask	FCC, ETSI, IC & ARIB variants available
Emissions (EMI)	FCC Class A & ETS 300 385
ESD	GR1089-CORE, 2.2.1
MTBF	> 100,000 hours MIL-217-F
Replacement	MTTR < 15 minutes using conventional hand tools

Options

Antenna, high gain	Optional antenna sizes and radiation patterns to meet stringent FCC, ETSI and other global requirements
Dragonware™ on PDA	PDA for site installation, configuration, network administration and maintenance
IF Port Impedance	50 ohm (N) , 75 ohm (N) or 75 ohm (F)
RF Monitor	A second coupled IF port to monitor IF power w/o service interruption
Alignment Aids	RSSI Indicators / Optional audio or visual meter
Installation Kit	Mounting System engineered for rapid installation

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