AirStar System Specifications

39 GHz (FCC)

Radio Performance Specifications

Netro's radios are based on a highly integrated design including antenna, millimeter wave, and channelization subsystems in a single low cost, compact outdoor unit.

Antenna Specifications

Integral Base Radio Unit Sectorization Options	90°, 30°
Remote Mount Packaging	Additional sectors or high gain options
Subscriber Terminal	125mm Lens Horn
Polarization Options	Vertical and Horizontal

Radio Performance Specifications

Frequency Range:	38.6 to 40 GHz
T/R Spacing:	700 MHz
Tuning Range:	350 MHz
Tuning Step Size:	1.25 MHz
Channel Bandwidth:	12.5 MHz
Transmit Power Control Dynamic Range:	47 dB

Air Interface

Netro's Industry-Leading CellMAC Air Interface is based on a TDM/TDMA multiple access system providing native ATM transport to support multiservice applications. Netro's Virtual Framer provides QoS based traffic scheduling for CBR services, while Netro's Virtual Shaper provides QoS based scheduling for VBR services.

Modulation Format	4/16QAM
Forward Error Correction	BCH
System Gain	159 dB
Capacity per Channel	12.96/25.92 Mbps
Range and Availability, 10^{-6} CLR	2.1 km, ITU-R Region K, 99.997% Availability

Base Station Specifications

Capacity per Shelf	155 Mbps
Network Interface Options	E3, DS3, OC-3c/STM-1 ATM UNI
Common Equipment Redundancy	1:1
Modem and Radio Redundancy	1:N

Subscriber Terminal Specifications

Service	Interworking Function	Physical Interface
T1/E1	ATM AAL1 UDT	G.703
Fractional T1/E1	ATM AAL1 SDT with CAS Activity Detection	G.703, X.21, V.35
ISDN PRI	AAL1 SDT with Bearer Channel Activity Detection	I.431
Frame Relay	FRF.5, FRF.8	G.703, X.21, V.35
Internet Access	RFC 1483: Routed & Bridged	10BaseT / 100BaseT

Network Management

Element Management

Embedded Management Interface	SNMP
Element Management Systems	Link Explorer, PC-based Link Navigator, CORBA/Java Client-Server

North Bound Interfaces

Management Interface	CORBA
Service Activation	Link Provisioner
Fault Management	Link Inspector
Performance Monitoring	Link Monitor
Billing Statistics	Link Collector

Environmental and Mechanical

Operating Environment

Operating Temperature
  Indoor Equipment
  Outdoor Equipment
	0°C to +40°C
	-35°C to +55°C

Relative Humidity (Indoor):	5-95%, non-condensing
Altitude (System):	0 – 4500 m

Wind Loading:
  Operational
  Survival
	145 Km/hr
	200 Km/hr

Mechanical

Subscriber Terminal	H x W x D	Weight
- Indoor unit (SAS)	4.4 cm x 21.5 cm x 28.0 cm	2.5 kg
- Outdoor unit (SRU)	30 cm x 16 cm x 20 cm	6.0 kg
Base Station:	**H x W x D**	**Weight**
- Indoor unit	44.4 cm x 48.3 cm x 50.8 cm	21.5 kg
- Outdoor unit (BRU)	41 cm x 11 cm x 17 cm	6.0 kg

Standards and Regulatory Compliance

System:	FCC Order 97-391
EMC:	FCC Part 15 Class B, Part 101
Traffic Interface:	ITU-T G.703, G.704, G.824, ANSI T1.102, T1.403
Mechanical and Safety:	UL 1459 & 1950, EN 60950, EN 41003
Environmental	BellCORE GR-1089-CORE

NOTE:
The content and availability of any release's features is subject to change at any time without express notification. The features are dependent upon developmental and field experience, as well as customer requirements and market demands.