Features

- 1, 2, 4, 6 or 8 line field terminals
- Maximum of 1024 subscribers
- Integral local and remote system monitoring
- Range up to 96 Km
- Full fax and 56kbps V.90 modem support
- 10BaseT interconnectivity to PC at the field station
- E1 or T1 Central Office Switch interface
- Field stations mounted in NEMA weatherproof cabinet
- Low power consumption
- Licence free 2.4/5.8 GHz systems in many countries
- Sector panel and hi-gain parabolic antenna options
- Separate antenna for ease of installation
- Extensive central management system for monitoring and service provisioning
- Dual power supply in base station
- Supports CLASS features

System Parameters

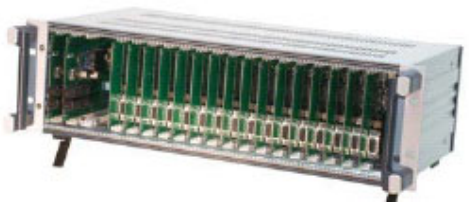
Frequency bands (MHz)	
900 MHz Band	902 to 928 MHz
2.4 GHz ISM Band	2400 to 2483.5 MHz
3.5 GHz Band	3400 to 3600 MHz
5.8 GHz Band	5725 to 5850 MHz
RF Channels	10 Operating plus one for Administration
Channel Spacing	
900 MHz, 2.4 & 5.8 GHz	12 MHz
3.5 GHz	1.75/3.5 MHz @ 256/512kbps
Modulation Type	Direct Sequence Spread Spectrum QPSK CDMA with proprietary Time Division Duplex
Radio Access Method	TDMA FDD
Spreading Codes	4 Auto-selectable Orthoginal codes
Overall Data Throughput	512, 384, 256, 128 or 64kbps selectable
System Range @2.4 GHz (with 24dBi antenna option, 12 dB fade margin & line of sight interference free spectrum)	Up to 96 Km @ 256kbps Up to 48 Km @ 512kbps

Remote Line Interface

Telephone Lines (DS0)	1, 2, 4, 6 or 8
Total subscriber capacity	1024 (depending on traffic)
Voice Coding	64kbps PM, ITU G.711, A or u-Law
Fax/Modem Data	Full G3 Fax and V.90 modem support (max speed supported is 33.4kbps due to the analogue/digital conversion)
Impedance	Both resistive and reactive are factory selectable, 600Ω typical,
Max DC loop resistance	1200Ω, including instrument
Line current	20mA min. to 24mA max.
Open line voltage	36V to 48V
Nominal transmit level	0dBm0, factory programable, -12 to 6dB
Nominal receive level	-2dBm0, factory programable, -12 to 6dB
Frequency response	300 to 3400Hz
Return loss	24dB
Ringing	
Waveform	Balanced sinusoidal
Ring frequency	Factory programable
Ring voltage	60VAC RMS.
Ring power	3 REN
Ring detect threshold	24-110V_{RMS}, 17-34Hz

Maintenance Data Interface

Command Console Port	RS232 or 10BaseT



EX8100 19" Rackmount Base Station

Remote Line Interface CONTD

Payphone Signalling	12 or 16kHz meter pulse, typically set for 200 mA
Payphone Compatibility	Soft loop reversal and optional 12 or 16 kHz signal pulse metering
Regulatory	LSSGR, TR57, ITU Q.552, G.712

User Data Interface

Data Port Interface	10BaseT Ethernet or V.35 synchronous (other synchronous interfaces available)
Synchronous Data Rate	64-512kbps selectable from configuration GUI
Digital Latency	<4.5mSec end-to-end
Baseband Cable Distance	Up to 100 m on 10BaseT Ethernet link

RF Specifications

RX Sensitivity @ 10^{-6} BER	-93dBm @ 256kbps -90dBm @ 512kbps
Transmitter Power	-20 to +20dBm, auto set for CDMA operation
Duty Cycle	100% at 60°C ambient
Antenna Connector	N-Type Female
Antenna	Various external antennas
Maximum ERP	45dBi (20dBm TX+25dBi antenna)

PSTN Network Interface

Interface Options	E1 or T1
Interface	E1
Number of interfaces	4 X E1
Standards supported	G.703, G.704
Frame structure	ITU-T G.711
Bit rate and coding	2048kbps +/-2.5ppm, HDB3
Nominal impedance	75/120Ω balanced
Pulse mask	ITU G.703
Output jitter & tolerance	<0.05 UI, G.823
Permissable attenuation	6dB (1 MHz), >14dB (2.048-3.072 MHz)
Supported Signaling	CAS, V5.1, V5.2
Interface	T1
Number of interfaces	4 X T1
Standard supported	AT&T TR 62411, TR-TSY-000499
Frame structure	Superframe , Extended Superframe
Bit rate and coding	1544kbps +/-2ppm, B8ZS or AMI
Nominal impedance	100Ω balanced
Pulse mask	AT&T TR 62411
Output jitter & tolerance	AT&T TR 62411
Permissible attenuation	6dB (1 MHz), 14dB (1.544-2.048 MHz)
Supported Signalling	Channelised D4, GR-303, TR08

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Power

Power Supply Voltage

Base/FXO	Nominal -48VDC (-40 to -56VDC), isolated earth
Subscriber/FXS	Filtered 12 to 24VDC (32VDC max.), protective ground/earth required

Power Consumption

Base/FXO	9-54W depending on no. channels
Subscriber/FXS	
Idle	3W typical
All Lines Active	>9W typical

Environmental

Operating Temperature	**-3**0°C to +60°C
Humidity (at ambient)	Up to 90% RH, non-condensing
Shock and Vibration	Mil 810D

Mechanical

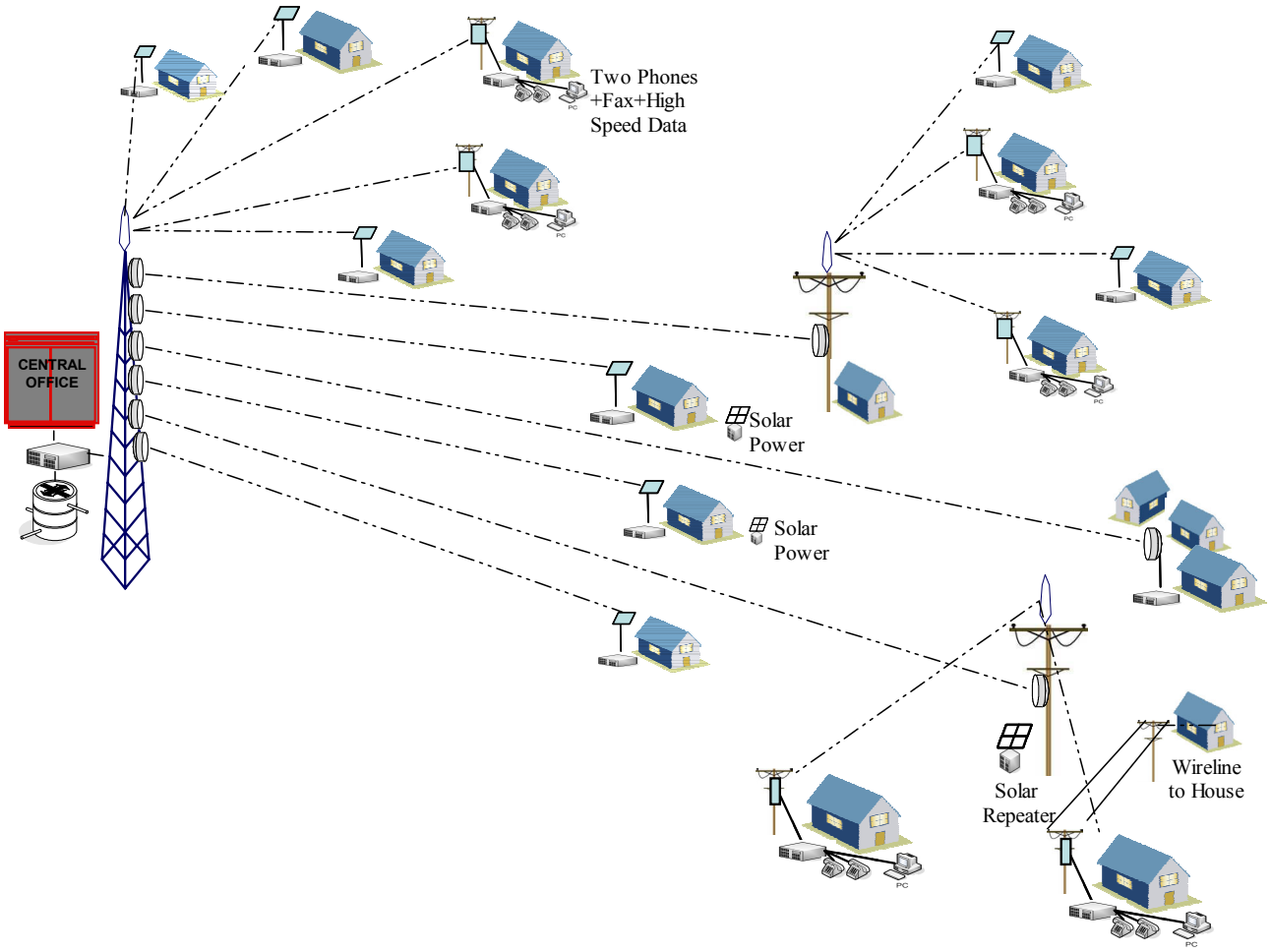
Base Station Card Cage	Aluminium
Subscriber/FXS Terminal	Extruded Fiberglass with neoprene gasket, NEMA 4X, rain, wind and ice protected
Mounting	Remote/FXS/Subscriber – Pipe/pole 25.4 to 57mm diameter
Size (mm)	
Base/FXO	134(h) x 483(w) x 235(d) – 3RU high
Subs/FXS	330(h) x 280(w) x 150(d)
Weight	
Base/FXO	8.1 kg per terminal (typical)
Subscriber/FXS	3.6 kg per terminal (typical)

Options

- 110/240 VAC for field units and base stations
- Full duplex repeater
- Solar power kits
- Ethernet 10BaseT
- Analogue connectivity to PSTN network switch

Quality Endorsed Company QEC 14037

Version 1.0 March 2006



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