

Westel CTS-10 powerful, low cost Cellular Telephone System

The CTS-10 Cellular Telephone System is a powerful, low cost system that provides wireless telephone and data services.

The CTS-10 System is ideal for:

- Small communities in rural regions where the cost of laying cables would normally prohibit a telephone service.
- Industries where private communication between the office, site and plant is essential.
- Emergency services where a temporary communications network is needed.

The CTS-10 Cellular Telephone System offers proven reliability and requires little maintenance. With built-in diagnostics and single point local or remote administration, managing and maintaining the system is simple.

CTS-10 Applications

The versatility of the CTS-10 allows the system to be used to:

- Introduce a telephone network into developing countries or regions.
- Add a wireless cellular network to an existing public switched network.
- Provide a private communication network between head office and various remote locations for the Oil, Mining and Gas industries. (Remote locations can be up to several hundred kilometres away).
- Extend existing wired networks where the cost of laying cable is prohibitive.
- Provide emergency or temporary communication services.

CTS-10 Benefits

The cost saving benefits you can look forward to are:

- Low cost per subscriber.
- High reliability and low maintenance.
- Independent billing system that can output call details to other systems.
- Flexible dial and number plans.
- Low cost, easy system expansion.
- Compatibility with the latest digital technology.
- Support for Mobile Cellular, Fixed Cellular and Fixed subscribers.

CTS-10 System Elements

The CTS-10 System comprises of the following network elements:

- Mobile Switching Centre.
- Base Station.
- Cellular or wired subscribers.

System Architecture

The CTS-10 Cellular Telephone System is similar to other major analogue cellular radio networks. Based on a star network, all Base Station activity is controlled by a central Mobile Switching Centre (MSC) comprised of a Digital Switching Platform and a System Manager. Several MSC's can be networked together to expand the wireless network.



The Base Station is comprised of the Base Station Controller and Radio Frequency sub-system which provides the air interface to the cellular handsets. Each Base Station is connected to the MSC in a star configuration resulting in either a "Multi-drop" or "Omnibus" system depending on the bearer trunk configuration chosen.

CTS-10 Standard Features

- Complies to the AMPS and TACS cellular standards.
- Fully compatible with ISDN Digital voice and data networks (CEPT1, DS1, ISDN or packet switched). The CTS-10 is capable of interconnecting via microwave, fibre, satellite and copper cable.
- Supports all AMPS and ETACS mobile equipment.
- Supports analogue, digital and ISDN fixed subscribers.
- SMDR output for call detail recording (CDR).
- Recorded voice announcements (RVA).
- Temporary roaming directory.
- Basic call management system.
- Remote maintenance and diagnostics capability.
- Seamless Hand-off.

Available enhancements

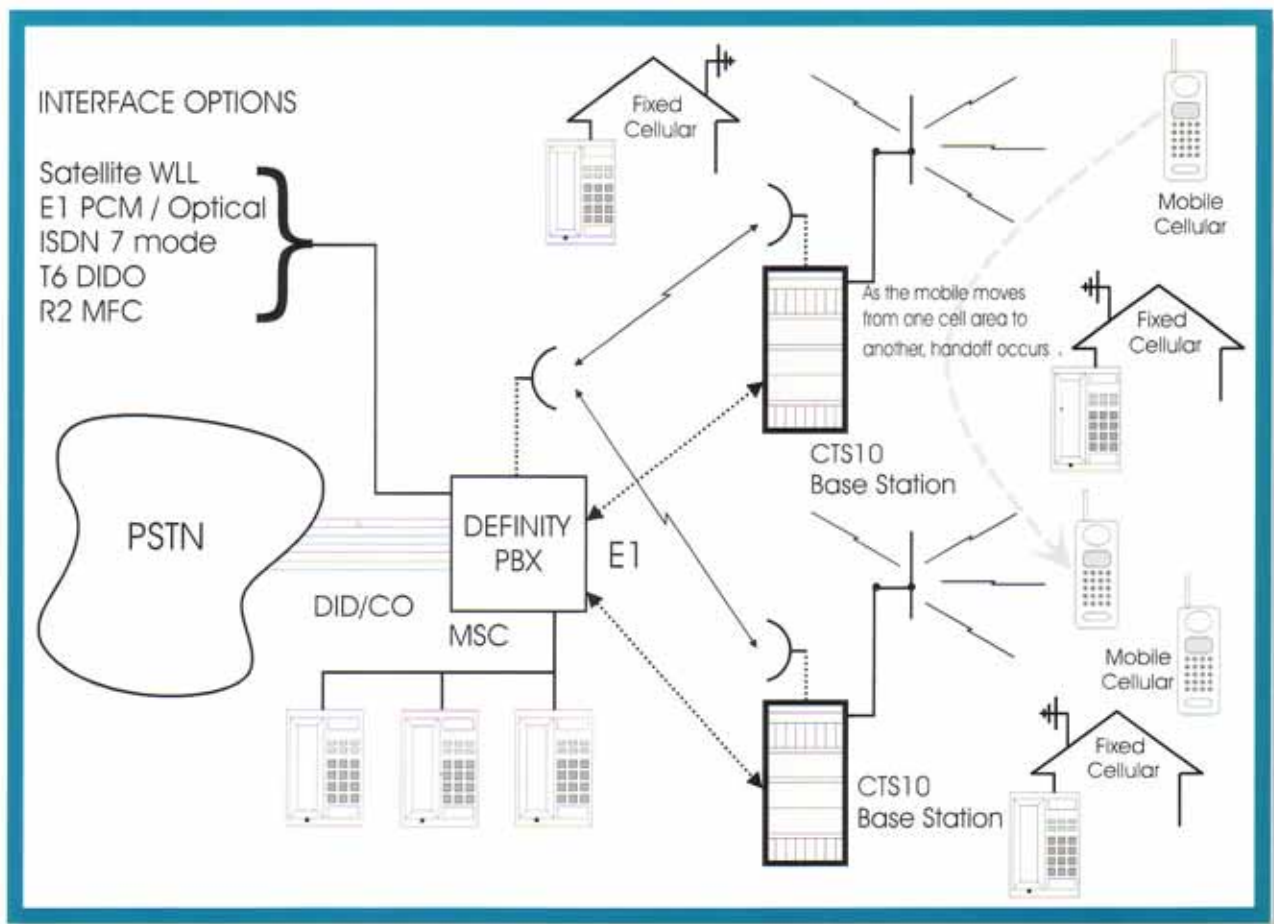
- Stand alone billing management system.*
- BS and MSC redundancy.*
- RISC based digital switching centre.*
- Receiver diversity.*

*Optional

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Specifications

Digital Switching Platform

Supports packet switched networks with performance capabilities based on the Main Processor.

Type:	No blocking fully digital and high speed data
Configuration:	Local exchange, Tandem, Transient
Main Processor:	Intel 80386 or MIPS RISC 3000
Reliability:	Standard, High (RISC) and critical
Call Completions:	BHCC: 15,000 or 100,000
Trunk Capacity:	400 or 4000
Fixed Voice Terminals:	Analogue/Digital/ISDN 2400 or 10,000
Recorded Voice Message:	128 or 256
Trunk Types:	Global-Software Selected on a per country basis
Central Office - Exchange:	Analogue or Digital
DID:	Analogue or Digital
TIE:	Analogue (4WE&M) or Digital
Digital:	A-Law (-Law E1 or T1 or ISDN
Signalling:	Support MFC, R2
Satellite:	C5 signalling
Auxiliary:	Music, Paging, Malicious call trace, Announcements
Data connection:	Asynchronous EIA, E1, T1 or ISDN BRI or PRI

System Manager

Simultaneous call setups:	128
No of CBS:	16
Subscribers:	10,000 mobile subscribers @30mE<<0.05GOS

Base Station

Number of channels:	1-31 Channel cells, Omnidirectional
Sectors:	3 or 6 per CBS BHCA >3600
Air Interface:	Amps Cellular to EIA 553 and EIA IS-20-A TACS and international ETACS cellular to Issue 4 standard

Base Station Transceiver

AMPS Rc:	824-849MHz
AMPS Tx:	869-894MHz
AMPS Channel Spacing:	30kHz
ETACS Rc:	872-905MHz
ETACS Tx:	917-950mhz
ETACS Channel Spacing:	25kHz
Transmit Power:	1W to 40W

Mechanical

Base Station

Dimensions:	1410H x 610W x 62D 19" Cabinets per eight channels
Weight:	250 Kg average
Power supply:	110/240V AC In/12V DC Out 13A
Environmental:	0 to +50°C, 30%-90% humidity, non-condensing

Digital Switch

Dimensions:	510H x 690W x 560D (mm) per 16 max circuit cards
Weight:	56 Kg average
Power supply:	230V AC 25A max
Environmental:	4 to +49°C, 10%-95% humidity, non-condensing

