

# ACS Wireless All-in-One Digital Wireless Switch / BSC / BTS

## Configurations

Maximum Number of TRXs	2 Internal, 8 Total
Maximum Number of BTSs	1 Internal, 4 Total
Transmission	Star and Daisy Chain
Trunk Ports	4
Traffic Capacity	35 Erlangs @ 2% GOS <sup>1</sup>
Busy Hour Call Attempts	1000 @ 2% GOS <sup>1</sup>
Max Full Rate Simultaneous Connections	Up to 100 (non-blocking)

## Interfaces

MSC/BSC	GSM-compliant Virtual A Interface
PSTN	ITU PRI ISDN, R2, R2 Variants <sup>2</sup>
BTS	GSM-complaint Abis Interface
RF	GSM-complaint Air Interface, supports Phase 1, 2 or 2+ GSM- and PCS-compliant Mobile Stations
Transmission	Dual Port G.703-compliant E1 75/120 Ohm Dual Port T1.403-compliant T1 100 Ohm
Ethernet	IEEE802.3, 10baseT
Serial	DB9 male connector supporting DCE interface

## Radio

GSM RF Interfaces	GSM 900, DCS 1800, PCS 1900
Power Control	Static: 12dB in 2dB steps Dynamic: 12dB in 2dB steps
Rx Sensitivity	-106dBm -110dBm (TurboWAVE option)
Maximum Tx Output Power	2 watts

## GSM Vocoding

Integrated TRAU	Abis Interface supporting EFR or standard vocoding
Transcoding Capacity	Up to 64 traffic channels

## Electrical

Power Options	110/220 volts 50-60 Hz AC -48 volts DC Optional redundant power supply
Power Consumption	4.10 Amperes @ 115 VAC <sup>3</sup> 2.00 Amperes @ 230 VAC <sup>3</sup> 8.20 Amperes @ 48 VDC <sup>3</sup>

## Mechanical

Dimensions	61 x 28 x 41 centimeters (24 x 11 x 16 inches)
Weight	20 kg (44 lbs)

## Environmental

Operating Environment	Temperature: -5° to 45° C Humidity: 10° to 90° noncondensing
Regulatory	GSM 900 & DCS 1800: CB Report, EN550022, IEC 1000-4, PCS 1900: FCC Part 15 Class A, NTRL/C, Telecom E1: 120 Ohm CTR12/13, 75 Ohm NTR-4/10/11, IEC 950 Part 6, FCC Part 15 & Part 68, Industry Canada ICES-003 & CP-03

<sup>1</sup> Grade of Service

<sup>2</sup> List of Variants upon request

<sup>3</sup> Standard Configuration of Two E1/T1 and Two TRX cards



# **A C S   W i r e l e s s   A l l - i n - O n e** **D i g i t a l   W i r e l e s s   s w i t c h / B S C / B T S**

The Global System for Mobile Communications (GSM) All-in-One combines the Network Subsystem (NSS) and Base Station System (BSS) functions in one platform. Thus, the All-in-One can support a stand-alone GSM network or it can integrate with most private or government communications networks to provide wireless GSM interoperability with a wireline network. The patented Private A-Link Intelligent Multiplexor (PALIM<sup>TM</sup>) feature allows a single All-in-One to act as a wireless extension to a private communications network and as an extension to a public wireless network on a call-by-call basis. The All-in-One supports up to two transmitter cards (TRX) that provide the radio links for Mobile Station (MS, *i.e.*, cellphone) traffic while one of two processor modules performs Base Station Controller (BSC) and Base Transceiver Station (BTS) functionality. A second processor module provides the NSS switching and full Home Location Register (HLR) capabilities. A dual-port E1 or T1 card supports NSS interconnection to both private A link and Public Switched telephone Network (PSTN) interfaces. A second dual-port E1 or T1 card supports BSS interconnection to external BTSs using a standard Abis interface. The All-in-One can also accommodate receive antenna diversity. Increased coverage for macrocellular operations is also available by using the optional Radio Frequency (RF) Distribution card.



## **ACS Wireless**

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