

CDMA Fixed Wireless Phone

SC500 Technical Specification

SUNCOMM INDUSTRIAL

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2 PRODUCT INTRODUCTION

SC500 fixed wireless terminals are CDMA2000 1X products brought to you by SUNCOMM. Based on IS-2000 series protocol, SC500 is compatible with IS-95 network environment. SC500 works at 450MHz and provides Voice, Data service, SMS function.

Based on SUNCOMM's 15 years' experiences in developing professional communication products, SC500 aims at telecom-level communication equipment standards, and provides users with higher reliability and quality to better meet users' requirements.

Model	Frequency	Remark
SC500	450MHz	Support Data Function

3 APPEARANCE AND STRUCTURE

Item	WP560CD	Remark
Dimensions	206mm×167mm×74mm	Put antenna horizontal
Weight	350g	Including battery
Lifespan of keys	0.5 million cycles	
Material	ABS	
Display	128 × 64dots LCD, with backlight	
Power input	DC 12V	
Data interface	USB A Type	
Handset interface	616E, 4-pin	

4 FUNCTIONS

4.1 Voice Function

4.1Voice Function		
Item	Description	Remark
Voice	Voice call origination	
	Voice call termination	

	Emergency call	
	Hotline mode	
	CNIP	
	Redial	
	Delay dial	
	Hands-free talk	
	Mute	MIC or Ring
	Phone book	100 records
	Incoming call history	25 records
	Missed call history	25 records
	Outgoing call history	25 records
	Outgoing Call restriction	
	Incoming Call restriction	
	Call forwarding	System support required
	Three-way call	System support required
	Call waiting	System support required
Sound	Ringtone optional, volume adjustable	
	Key tone volume adjustable	
	Handset volume adjustable	
	Handsfree volume adjustable	
	Low battery alert	
	New message alert	

4.2 Display Function

4.2Display Function		
Item	Description	Remark
Display	Power on/off animation	
	Signal strength indication	
	Battery power indication	
	Charging indication	
	Call duration display	
	Short message indication	
	Time and date display	

	Alarm clock indication	
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4.3 SMS Function

SMS Function		
Item	Description	Remark
SMS	Sending/receiving messages	
	Sending messages to multiple recipients	Max.10
	Message reply or callback	
	Message storage	Can save 70 messages, 20 sent messages and 50 received messages

4.4 Data Function

Data Function	
Item	Description
High speed Internet access	Up to 153.6kbps data rate
Async data service	14.4kbps

4.5 Other Function

Other Function		
Item	Description	Remark
Alarm clock	Once alarm, daily alarm or weekdays	
MP3	Support MP3	Support setting as ringtongs
Calculator	Standard calculator	
Stop Watch		
Scheduler		
R-UIM function	R-UIM or Built-in UIM	
FM	Optional	
UTK	Support UTK	System support required

5 TECHNICAL SPECIFICATION

5.1 Communication Protocols and Technical Parameters

Item	Description
Access mode	CDMA
CDMA protocol	IS-95A/B,IS-98A,IS-126,IS-637A,IS683,IS-707A,IS-2000
Interval between transmitting and receiving frequency	10MHz
Voice codec	EVRC, 13k QCELP

5.2 RF Receiving

Item	Description
Frequency range	Block A: 462.5 MHz ~467.475MHz Block B: 462.0 MHz ~466.475MHz Block C: 460 MHz ~454.8MHz
System designator: A	Valid CDMA channel number range: 146-275 Preferred set channel numbers: 160,210,260
System designator: B	Valid CDMA channel number range: 106-235; Preferred set channel numbers: 120,170,220
System designator: C	Valid CDMA channel number range: 26-168; Preferred set channel numbers: 47,97,147
RX sensitivity	-104dBm (FER≤0.5%)
Range of receiving signal	-25dBm ~ -104dBm (FER≤0.5%)
Single-tone interference resistance	FER≤1.0% (-101dBm/BW, -30dBm@)
Two-tone intermodulation spurious	FER≤1.0% (TEST1: -101dBm/BW, +900/+1700KHz, -43dBm)
	FER≤1.0% (TEST2: -101dBm/BW, -900/-1700KHz, -43dBm)
Conductive spurious emission	<-76dBm/1MHz (462.5 MHz ~467.475MHz)
	<-61dBm/1MHz (452.5 MHz ~ 457.475MHz)
	<-47dBm/30KHz (Other frequencies)
Demodulation of forward	FER≤3.0% (Test 1: Rate Group 1(9600bps))

	FER≤1.0% (Test 2: Rate Group 1(9600bps)
	FER≤0.5% (Test 3: Rate Group 1(9600bps)
	FER≤1.0% (Test4: Rate Group 1(4800bps)
	FER≤1.0% (Test5: Rate Group 1(2400bps)
	FER≤1.0% (Test6: Rate Group 1(1200bps)
	FER≤3.0% (Test7: Rate Group 2(14400bps)
	FER≤1.0% (Test 8: Rate Group 2(14400bps)
	FER≤0.5% (Test 9: Rate Group 2(14400bps)
	FER≤1.0% (Test 10: Rate Group 2(7200bps)
	FER≤1.0% (Test 11: Rate Group 2(3600bps)
	FER≤1.0% (Test 12: Rate Group 2(1800bps)

5.3 RF Transmitting

Item	Description
Frequency range	Block A: 452.5 MHz ~457.475MHz Block B: 452.0MHz~456.475MHz Block C: 450 MHz ~454.8MHz
System designator: A	Valid CDMA channel number range: 146-275 Preferred set channel numbers: 160,210,260
System designator: B	Valid CDMA channel number range: 106-235; Preferred set channel numbers: 120,170,220
System designator: C	Valid CDMA channel number range: 26-168; Preferred set channel numbers: 47,97,147
Max. frequency deviation	±300Hz
Rated power	24.7dBm
Max. power	23dBm ~ 30dBm@-104dBm
Min. output power	< -50dBm@-25dBm
Standby output power	<-61dBm
Code domain power	The code domain power of each unactivated sub-channel is at least 23dB lower than the total output power measured at I- and Q- channel.
TX timing error	1.0μs
Wave form quality factor	>0.944
TX phase error	0.00 ~ 90.00deg
TX amplitude error	0.00 ~ 100.00%

Open loop power	(Test 1: -25dBm/1.23MHz)-48dBm/1.23MHz±9.5dBm
	(Test 2: -65dBm/1.23MHz)-8dBm/1.23MHz±9.5dBm
	(Test 3: -93.5dBm/1.23MHz)20dBm/1.23MHz±9.5dBm
Closed loop power	±24dB (9600bps data rate)
	±24dB (4800bps data rate)
	±24dB (2400bps data rate)
	±24dB (1200bps data rate)
Conductive spurious emission	-42dBc/30KHz or -54dBm/1.23MHz (Δf : 885KHz~1.98MHz)
	-54dBc/30KHz or -54dBm/1.23MHz (Δf : 1.98MHz~4.00MHz)
	<-36dBm/1kHz (Δf > 4MHz, 9KHz < f < 150KHz,)
	<-36dBm/10kHz (Δf > 4MHz, 150kHz<f<30MHz,) <-36dBm/100kHz (Δf > 4MHz, 30MHz<f<1GHz) <-30dBm/1MHz (Δf > 4MHz, 1GHz<f<12.75GHz)

5.4 Antenna

Item	Description
Frequency bandwidth	TX: 450 MHz ~460MHz RX: 460 MHz ~470MHz
Gain	2dBi
Input resistance	50Ω
Polarization form	Vertical polarization

5.5 Power Supply

State	Max. voltage	Typical voltage	Min. voltage
Power supply by adapter	DC 12.6V	DC 12.0V	DC 11.4V
Power supply by battery	DC 4.2V	DC 3.7V	DC 3.3V

5.6 Power Consumption

Item	Spec.	Remark
Max. power consumption	2.8W	
Typical power consumption during talk	1.0W	Signal strength is -80dBm
Power consumption in idle mode	0.04W	Signal strength is -80dBm

5.7 Working Condition

Working temperature: -10 ~ + 55℃。

Storage temperature: - 20 ~ + 70℃。

Humidity: ≤95%

6 ACCESSORIES

6.1 Power Adapter

Item		Technical Spec.
Type		Linear power supply
Input	Voltage	220VAC ± 20%
	Frequency	50~60Hz
	Max. input current	85mA
Efficiency		>55% (on the condition of 220VAC ± 20% input and full-load output)
Output	Voltage	DC 12V
	Max. current	500mA
Size (L x W x H)		79mm*54mm*43mm
Weight		328g
Input plug		Can be customized
Length of power cord		1500mm
Safety certification: The power adapter should be as the international standards		

6.2 Battery

Item	Technical Spec.	Remark
Type	Li	
Capacity	1000mAh/2000mAh	
Voltage	Typical value is 3.7V	
Talk time	180~300min./120-240min	Determined by signal strength
Standby time	50~100hr/40-80hr	Determined by signal strength
Charging time	4hr.	

6.3 450M Outdoor Antenna (optional)

Item	Technical Spec.
Frequency bandwidth	400~480MHz
Gain	5~11dBi (Regardless of feeder loss)
Lobe width horizontal	32
Lobe width vertical	20
Polarization form:	Vertical polarization
Max. input power	100w
Front-back ratio	>18dB
Connector	TNC-Male
Lighting protection	GND protection
Length	Standard configure 15m
Anti-wind strength	60m/s

7 PACKING LIST

No.	Name	Q'ty	Remark
1	FWP Host	1	
2	Handset	1	
3	Power Adapter	1	
4	Battery	1	
5	Indoor Antenna	1	
6	USB Cable	1	Optional
7	User's Manual	1	Optional