

Selective Cellular Jammer

Up to 50dBm output power per Band

Excellent receiver sensitivity -105dBm

All RF blocks based on fully digital technology

Model SCJ1800



General Description

The SCJ1800, Cellular Selective Jammer has been designed to provide selective jamming for cellular phones inside prison facilities.

The system based on wide band digital receiver and digital signal processors results GSM micro cell.

After processing the data, information is being sent to the CPU and the jamming exciters which generate digital white noise signal creates high speed channels blocking for short period of time.

At this stage the system returns to receive mode and search for additional threats. Once the system detects another threats it create responsive reaction that blocks thus channels again.

The user can define a list of “friendly cell phones”, called as “white list” that will never be blocked.
This feature allows the user to operate his own communication without the concern of being blocked by the selective jammer.

The system supports simultaneous jamming for up to 60 channels in each cellular band. (CDMA, GSM & UMTS)

Not like the standard wide band cellular jamming solutions, while high RF energy is being transmitted along the whole band hence create low jamming efficiency and waist of power, the selective jammer generates very high efficient peak power at the threat channels only. The result is very long jamming distance and high level protection against RCIED.

The TX block based on advanced digital technology implemented by DDS, direct digital synthesizers.

The receivers based on advanced digital technology implemented by DSP and FPGA.

Technical Specifications

Micro Cell

RF Characteristics	Min	Typical	Maximum	Units
Receivers Sensitivity	-92	-95	-105	dBm
Frequency Range				
RX Bands				
E-GSM	880		890	MHz
GSM	890		915	MHz
DCS	1710		1785	MHz
TX Bands				
E-GSM	925		935	MHz
GSM	935		960	MHz
DCS	1805		1880	MHz
Input Impedance		50		Ω
IIP3		26.3		dBm
IIP2		59.2		dBm
RF Input return loss	12.2	13		dB
SNR	141	143.5		dB/Hz
S/(N+D)	50.1	58		dB
IMD3		-67		dB
Clock Accuracy		0.1		ppm
BW	10		75	MHz
Memory SDRAM		128		MB/Band
System Power				
Power Supply	12		24	VDC
Environment of operation				
Operating Temperature	-10		+55	°C
Humidity	5		90	%

Jamming Blocks

RF Characteristics	Min	Typical	Maximum	Units
Output Power per band	10		50	dBm
Frequency Range				
RX Bands				
E-GSM	880		890	MHz
GSM	890		915	MHz
DCS	1710		1785	MHz
UMTS	1920		1980	MHz
TX Bands				
E-GSM	925		935	MHz
GSM	935		960	MHz
DCS	1805		1880	MHz
UMTS	2110		2170	MHz
Impedance		50		Ω
Signal Source	1		4	DDS
Sweeping Rate		125		KHz
Internal Modulation B/W	1		250	KHz
Internal Modulation				FM
Sweeping Channels Per Frame	1		60	CH
PA Protection	4:1		∞:1	VSWR
System Power				
Power Supply	12		24	VDC
Environment of operation				
Operating Temperature	-10		+55	°C
Humidity	5		90	%

System Additional Data

Parameter	Value	Units
Dimensions	254 x 160 x 240	mm
Weight	<10	Kg
RF Connectors	4	N-Type
Communication Port	10/100	LAN

System Special Features

- Large area protection using low RF output power due to intelligent jamming system
- Only authorized cell phone continue to communicate while others being blocked
- Up to 4,096 cell phones on “white List”
- Light Weight
- SDR – Software Define Radio enables great flexibility and future upgrades
- Easy-to-Use management system
- Using of Omni-directional antenna or directional antennas
- Can serve as IMSI Catcher
- Full list of cell phone inside the protection area
- Possibility of create Private Local GSM network – Only Group members can talk between each other
- System can be installed inside Pelican case
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