

## 2. Specification

### 2-1. GSM General Specification

Item		GSM850	EGSM 900	DCS1800	PCS1900
Freq. Band[MHz] Uplink/Downlink		824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range		128~251	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing		45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period		270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/ Frame Period		576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	GSM/ GPRS	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK
MS Power		33dBm ~5dBm	33dBm ~5dBm	30dBm ~0dBm	30dBm ~0dBm
Power Class		5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity		-102dBm	-102dBm	-102dBm	-102dBm
TDMA Mux		8	8	8	8
Cell Radius		35Km	35Km	2Km	2Km

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### 2-2. GSM Tx Power Class

GSM850	TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900	TX Power control level
33±2 dBm	5	33±2 dBm	5	30±3 dBm	0	30±3 dBm	0
31±2 dBm	6	31±2 dBm	6	28±3 dBm	1	28±3 dBm	1
29±2 dBm	7	29±2 dBm	7	26±3 dBm	2	26±3 dBm	2
27±2 dBm	8	27±2 dBm	8	24±3 dBm	3	24±3 dBm	3
25±2 dBm	9	25±2 dBm	9	22±3 dBm	4	22±3 dBm	4
23±2 dBm	10	23±2 dBm	10	20±3 dBm	5	20±3 dBm	5
21±2 dBm	11	21±2 dBm	11	18±3 dBm	6	18±3 dBm	6
19±2 dBm	12	19±2 dBm	12	16±3 dBm	7	16±3 dBm	7
17±2 dBm	13	17±2 dBm	13	14±3 dBm	8	14±3 dBm	8
15±2 dBm	14	15±2 dBm	14	12±4 dBm	9	12±4 dBm	9
13±2 dBm	15	13±2 dBm	15	10±4 dBm	10	10±4 dBm	10
11±3 dBm	16	11±3 dBm	16	8±4 dBm	11	8±4 dBm	11
9±3 dBm	17	9±3 dBm	17	6±4 dBm	12	6±4 dBm	12
7±3 dBm	18	7±3 dBm	18	4±4 dBm	13	4±4 dBm	13
5±3 dBm	19	5±3 dBm	19	2±5 dBm	14	2±5 dBm	14
				0±5 dBm	15	0±5 dBm	15

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### 2-3. WCDMA General Specification

	WCDMA2100	WCDMA1900	WCDMA850	WCDMA900
Freq. Band[MHz] Uplink/Downlink	1922~1977 2112~2167	1852~1907 1932~1987	824~849 869~894	880~915 925~960
ARFCN range	UL: 9612~9888 DL: 10562~10838	UL: 9262~9538 DL: 9662~9938	UL: 4132~4233 DL: 4357~4458	UL: 2712~2863 DL: 2937~3088
Tx/Rx spacing	190MHz	80MHz	45MHz	45MHz
Mod. Bit rate/ Bit Period	3.84 Mcps	3.84 Mcps	3.84 Mcps	3.84 Mcps
Time Slot Period /Frame Period	Frame Length: 10ms Slot length: 0.667ms	Frame Length: 10ms Slot length: 0.667ms	Frame Length: 10ms Slot length: 0.667ms	Frame Length: 10ms Slot length: 0.667ms
Modulation	QPSK/HQPSK	QPSK/HQPSK	QPSK/HQPSK	QPSK/HQPSK
MS Power	24dBm~-50dBm	24dBm~-50dBm	24dBm~-50dBm	24dBm~-50dBm
Power Class	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)
Sensitivity	-106.7dBm	-104.7dBm	-104.7dBm	-103.7dBm
TDMA Mux	8	8	8	8
Cell Radius	2Km	2Km	2Km	2Km

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### 2-4. LTE General Specification

	LTE Band1	LTE Band3	LTE Band5	LTE Band7	LTE Band8	LTE Band 20	LTE BAND 40
Freq. Band[MHz] Uplink/ Downlink	1920~1980 2110~2170	1710~1785 1805~1880	824~849 869~894	2500~2570 1805~1880	2500~2570 1805~1880	704~716 734~746	2300~2400
ARFCN range	UL: 18000~18599 DL: 0~599	UL: 19200~19950 DL: 1805~1880	UL: 20400~20649 DL: 2400~2649	UL: 20750~21449 DL: 2750~3449	UL: 21450~21799 DL: 3450~3799	UL: 24150~24449 DL: 6150~6449	38650~39649
Tx/Rx spacing	190MHz	95MHz	45MHz	120MHz	45MHz	41MHz	
Channel Bandwidth	60 MHz	75 MHz	25 MHz	70 MHz	35 MHz	30 MHz	5/10/15/20 MHz
Modulation	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK, 16/64QAM
MS Power (MPR)	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7dBm
Sensitivit (QPSK) (BW 10MHz)	-94 dBm	-92 dBm	-92 dBm	-95dBm	-95dBm	-95dBm	-97dBm
Cell Radius	>5Km	>5Km	>5Km	>5Km	>5Km	>5Km	>5Km