

<Technical Report>

XGP Forum Document
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Title: Characteristics of FWA XGP system
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XGP Forum

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Characteristics of FWA XGP system

Contents included in the below and following information are technical and operational characteristics of FWA XGP system for both base stations and mobile stations as reference values.

<Base station>

Parameter	Model 1,2	Model 3
Average power (dBm)	43dBm/10MHz	35dBm/10MHz
Antenna gain (dBi)	17dBi	25dBi
Radiation pattern	Rec ITU-R F.1336	Rec ITU-R F.1245

<Mobile station >

Parameter	Model 1	Model 2	Model 3
Average power (dBm)	23dBm	23dBm	23dBm
Antenna gain (dBi)	10dBi	20dBi	23dBi
Radiation pattern	Rec ITU-R F.1336	Rec ITU-R F.1245	Rec ITU-R F.1245

<FWA Model>

Model 1 : indoor CPE (Customer Premises Equipment) [Point to Multipoint]

Model 2 : outdoor CPE [Point to Multipoint]

Model 3 : Relay transmission [Point to Point]

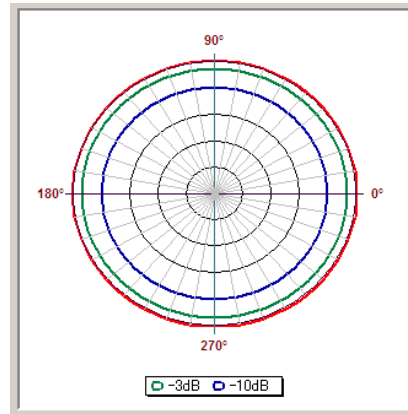
Base station antenna characteristics

Model 1,2

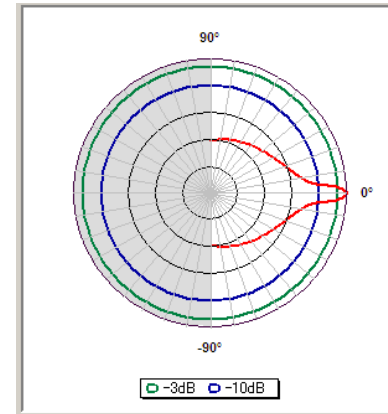
Antenna Gain : 17dBi

Radiation Patterns : Recommendation ITU-R F.1336

Horizontal Pattern



Vertical Pattern

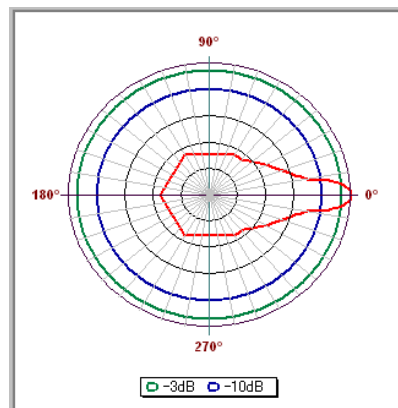


Model 3

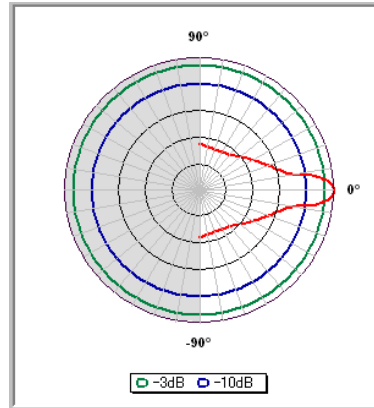
Antenna Gain : 25dBi

Radiation Patterns : Recommendation ITU-R F.1245

Horizontal Pattern



Vertical Pattern



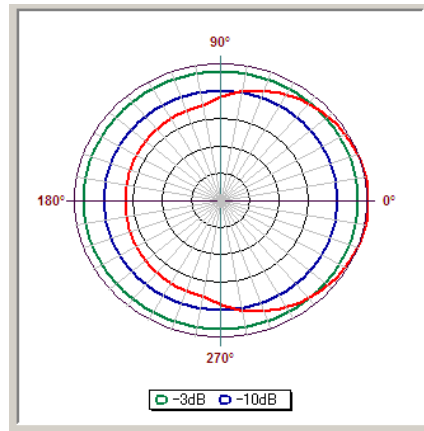
Mobile station antenna characteristics

Model 1

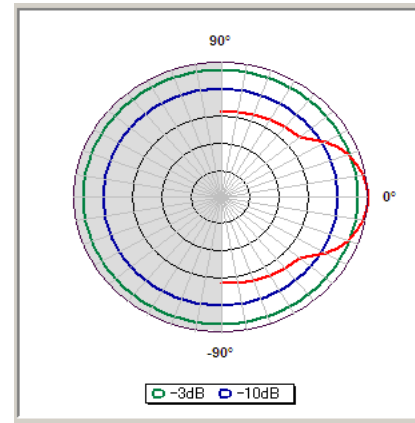
Antenna Gain : 10dBi

Radiation Patterns : Recommendation ITU-R F.1336

Horizontal Pattern



Vertical Pattern

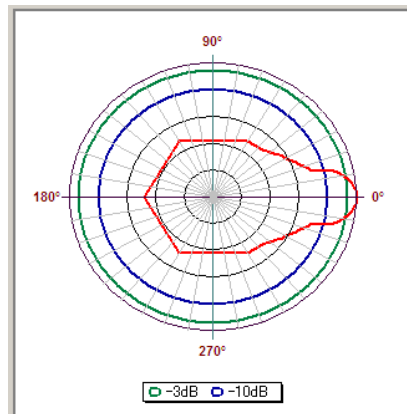


Model 2

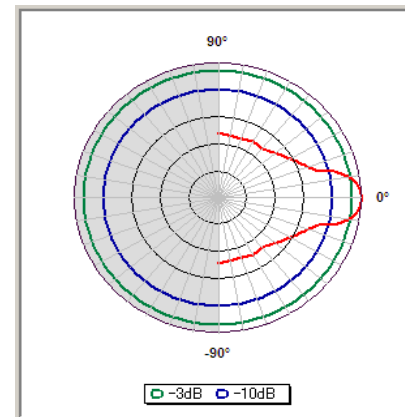
Antenna Gain : 20dBi

Radiation Patterns : Recommendation ITU-R F.1245

Horizontal Pattern



Vertical Pattern

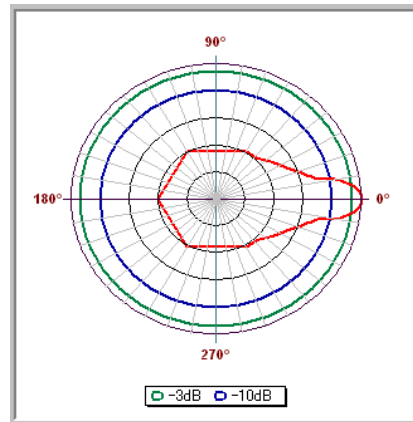


Model 3

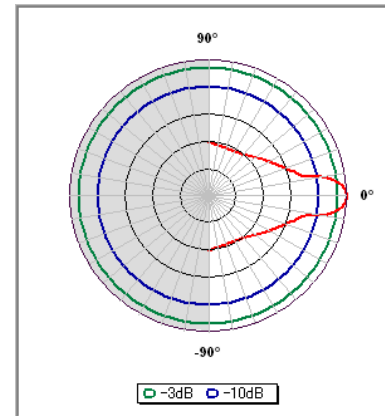
Antenna Gain : 23dBi

Radiation Patterns : Recommendation ITU-R F.1245

Horizontal Pattern



Vertical Pattern



<Reference> Japanese Regulations

(Excerpt)

Transmission Characteristics

Transmission Power (ORE,Article 49.29) (ORE,Article 14) (NT No.651, 2007)

(1) The transmission power of BS shall be as follows.

Table 1 Transmission Power of BS

The absolute gain of transmission antenna	The transmission power
17 dBi or less (Note1)	2.5/5/10MHz System: 20 W or less 20MHz system: 40 W or less
Over 17 dBi to 20 dBi or less (Note1, 2)	20 W or less
Over 20 dBi to 23 dBi or less (Note1, 2)	5 W or less
Over 23 dBi to 25 dBi or less (Note1, 2)	3.2 W or less

Note1: The following transmitter shall be limited for use in depopulated areas, mountain villages, isolated island areas or the areas authorized by Minister of Internal Affairs and Communications

; The transmitter in BS that communicates with MS or RS of which absolute gain of transmission antenna exceeds 4 dBi.

; The transmitter in BS with absolute gain of transmission antenna of over 17 dBi.

Note2: The BS with absolute gain of transmitting antenna of over 17 dBi shall communicate with only one radio station.

(2) The MS that communicates with BS of which absolute gain of transmission antenna be equal to 17 dBi or less shall be as follows.

Table 2 Transmission Power of MS (1)

The absolute gain of transmission antenna	The transmission power
Over 4 dBi to 10 dBi or less (Note1, 2)	200 mW or less
Over 10 dBi to 20 dBi or less (Note2,)	200 mW or less
Over 20 dBi to 23 dBi or less (Note2)	100 mW or less
Over 23 dBi to 25 dBi or less (Note2)	63 mW or less

Note1: The transmitter in MS with absolute gain of transmission antenna of over 4 dBi to 10 dBi or less is restricted to use in doors or the place where screening effect of radio wave is equal to indoor.

Note2: The transmitter in MS with absolute gain of transmission antenna of over 4 dBi shall be limited for use in depopulated areas, mountain villages, isolated islands or the areas authorized by Minister of Internal Affairs and Communications, also shall not communicate with the BS which is installed except in the above places.

(3) The MS that communicates with BS of which absolute gain of transmission antenna be over 17 dBi shall be as follows.

Table 3 Transmission Power of MS (2)

The absolute gain of transmission antenna	The transmission power
23 dBi or less	200 mW or less
Over 23 dBi to 25 dBi or less	126 mW or less

Note: The transmitter in MS shall be limited for use in depopulated areas, mountain villages, isolated islands or the areas authorized by Minister of Internal Affairs and Communications, and shall not communicate with the BS which is installed except in the above places.