

OPISYS Incorporated

511 S. Harbor Blvd, Unit P. La Habra, CA. 90631, USA

E-MAIL : gina@aceteq.com

Subject: Antenna Kitting

FCC ID: **Q4EUSHR-700L**

The antenna kitting options for model **USHR-700L** signal booster were done for 3 Outdoor Antenna kit options and 3 Indoor Antenna kit options.

The repeater(**USHR-700L**) uses four of the RF cable.

The order of the attached calculations is as follows:

1. List of approved antenna

Item	Model	Gain
Service Antenna (Indoor Antenna)	PAT-CPWI-L	+4dBi
	TS260771	+8dBi
	TS250374	+5dBi
	MAX GAIN	+8dBi
Donor Antenna (Outdoor Antenna)	ALP-17QD-L	+6dBi
	TS210471	+4.5dBi
	TS220971	+9dBi
	MAX GAIN	+9dBi

2. List of approved RF cable

Model	Cable Type
AC200000	LMR200
TS320000	RF240
TS340000	RF400
TS350000	1/2"
TS360000	1/2"

OPISYS Incorporated

511 S. Harbor Blvd, Unit P. La Habra, CA. 90631, USA

E-MAIL : gina@aceteq.com

3. In case of minimum cable loss and antenna gain

3.1 Downlink(Indoor Antenna)

①Conducted power	②RF Coaxial Cable Loss /Model	③Antenna Gain/Model	EIRP power (①+②+③)
+2dBm	-1.1dB/AC200000	+4dBi/PAT-CPWI-L	+4.9dBm
+2dBm	-1.1dB/AC200000	+8dBi/TS260771	+8.9dBm
+2dBm	-1.1dB/AC200000	+5dBi/TS250374	+5.9dBm
+2dBm	-1.0dB/TS320000	+4dBi/PAT-CPWI-L	+5dBm
+2dBm	-1.0dB/TS320000	+8dBi/TS260771	+9dBm
+2dBm	-1.0dB/TS320000	+5dBi/TS250374	+6dBm
+2dBm	-1.0dB/TS340000	+4dBi/PAT-CPWI-L	+5dBm
+2dBm	-1.0dB/TS340000	+8dBi/TS260771	+9dBm
+2dBm	-1.0dB/TS340000	+5dBi/TS250374	+6dBm
+2dBm	-0.9dB/TS350000	+4dBi/PAT-CPWI-L	+5.1dBm
+2dBm	-0.9dB/TS350000	+8dBi/TS260771	+9.1dBm
+2dBm	-0.9dB/TS350000	+5dBi/TS250374	+6.1dBm
+2dBm	-0.9dB/TS360000	+4dBi/PAT-CPWI-L	+5.1dBm
+2dBm	-0.9dB/TS360000	+8dBi/TS260771	+9.1dBm
+2dBm	-0.9dB/TS360000	+5dBi/TS250374	+6.1dBm
MAX EIRP		+9.1dBm	

3.2 Uplink(Outdoor Antenna)

①Conducted power	②RF Coaxial Cable Loss	③Antenna Gain	EIRP power(①+②+③)
+22dBm	-2.4dB/AC200000	+6dBi/ALP-17QD-L	+25.6dBm
+22dBm	-2.4dB/AC200000	+4.5dBi/TS210471	+24.1dBm
+22dBm	-2.4dB/AC200000	+9dBi/TS220971	+28.6dBm
+22dBm	-1.8dB/TS320000	+6dBi/ALP-17QD-L	+26.2dBm
+22dBm	-1.8dB/TS320000	+4.5dBi/TS210471	+24.7dBm
+22dBm	-1.8dB/TS320000	+9dBi/TS220971	+29.2dBm
+22dBm	-1.8dB/TS340000	+6dBi/ALP-17QD-L	+26.2dBm
+22dBm	-1.8dB/TS340000	+4.5dBi/TS210471	+24.7dBm
+22dBm	-1.8dB/TS340000	+9dBi/TS220971	+29.2dBm
+22dBm	-2.1dB/TS350000	+6dBi/ALP-17QD-L	+25.9dBm
+22dBm	-2.1dB/TS350000	+4.5dBi/TS210471	+24.4dBm
+22dBm	-2.1dB/TS350000	+9dBi/TS220971	+28.9dBm
+22dBm	-2.1dB/TS350000	+6dBi/ALP-17QD-L	+25.9dBm
+22dBm	-2.1dB/TS350000	+4.5dBi/TS210471	+24.4dBm
+22dBm	-2.1dB/TS350000	+9dBi/TS220971	+28.9dBm
MAX EIRP		29.2 dBm	

OPISYS Incorporated

511 S. Harbor Blvd, Unit P. La Habra, CA. 90631, USA

E-MAIL : gina@aceteq.com

Sincerely Yours,



Karen Kyung Hee Koo
C.E.O.

Donor Antenna Specification(Outdoor Antenna)

Model Name : ALP-17QD-L

◆ Specification

ITEM		Specification
Frequency range		698 ~787 MHz
VSWR		≤ 1.8 : 1
Gain		6dBi
V	-3dB beamwidth	60° ~ 110°
	F/B Ratio(@180±30°)	≥ 4dB
H	-3dB beamwidth	40° ~ 80°
	F/B Ratio(@180±30°)	≥ 4dB
Impedance		50Ω
Polarization		Vertical
3 rd IMD		≤ -140 dBc
Max power		100W
Connector Type		N – Female x 1
Wind speed		60m/s
Demension(W x D x H)		110 × 480 × 45 mm
Weight		1.8 kg

◆ Photo



Donor Antenna Specification(Outdoor Antenna)

Model Name : TS210471

◆ Specification

Electrical Specifications			
Frequency Range	698-806 MHz	806-960MHz	1710-2170MHz
Polarization	Vertical		
VSWR	≤2.0	≤1.5	≤1.5
Gain	3.5/4.5dBi		
Input Impedance	50Ω		
3dB Beamwidth	H:360° E:60°		
Max.Power	50W		
Lightning Protection	DC Ground		
Mechanical Specifications			
Connector Type	N-female		
Dimensions	Ø60×250 mm (Ø 2.36x63.5in)		
Antenna weight	1.0kgs		
Reflector material	Copper		
Radome material	UV-PVC		
Radome color	White		
Wind Speed, maximum	216.0 km/h		
Operating Temperature	-40°C to +60 °C (40°F to +140 °F)		
Mounting pole	Ø38-Ø52mm		

◆ Photo



Donor Antenna Specification(Outdoor Antenna)

Model Name : TS220971

◆ Specification

Electrical Specifications			
Frequency Range	698-806MHz	806-960MHz	1710-2700MHz
Polarization	Vertical		
VSWR	≤1.7	≤1.5	≤1.5
Gain	9dBi		
3dB Beamwidth	H: 90° E: 60°		
F/B Ratio	≥16dB		
Input Impedance	50Ω		
Max.Power	50W		
Lightning Protection	DC Ground		
Mechanical Specifications			
Connector	N-female		
Pigtail Cable	RG58U		
Mount Type	Mast Mount		
Dimensions	295×210×65mm		
Packing Size	45x34x47cm/ 10pcs		
Antenna weight	0.90kgs		
Reflector material	Aluminum		
Radome material	ABS		
Radome color	White		
Wind Speed, maximum	180 km/h		
Operating temperature	-40°C to +60 °C (40°F to +140 °F)		

◆ Photo



Service Antenna Specification(Indoor Antenna)

Model Name : PAT-CPWI-L

◆ Specification

ITEM		Specification
Frequency range		698 ~787 MHz
VSWR		$\leq 2.0 : 1$
Gain		4.0dBi
V	-3dB beamwidth	$90^{\circ} \pm 40^{\circ}$
	F/B Ratio(@180±30°)	$\geq 5\text{dB}$
H	-3dB beamwidth	$90^{\circ} \pm 40^{\circ}$
	F/B Ratio(@180±30°)	$\geq 5\text{dB}$
Impedance		50Ω
Polarization		Vertical
3 rd IMD		$\leq -140\text{ dBc}$
Max power		10W
Connector Type		N – Female
Wind speed		30m/s
Demension(W x D x H)		150 × 170 × 45 mm
Weight		0.8 kg

◆ Photo



Service Antenna Specification(Indoor Antenna)

Model Name : TS260771

◆ Specification

Electrical Specifications				
Frequency Range	698-806MH z	806-960MH z	1710-2500M Hz	2500-2700 MHz
Polarization	Vertical			
VSWR	≤1.8	≤1.5	≤1.5	≤1.8
Gain	7/8 dBi			
3dB Beamwidth	H:65° E:55°			
F/B Ratio	≥15dB			
Input Impedance	50Ω			
Max.Power	50W			
Lightning Protection	DC Ground			
Mechanical Specifications				
Connector	N-female			
Pigtail Cable	RG58U			
Mount Type	Wall Mount			
Dimensions	210×180×43mm			
Packing Size	52x33x41cm/ 20pcs			
Antenna weight	0.6kg			
Reflector material	Aluminum			
Radome material	ABS			
Radome color	White			
Operating Temperature	-40°C to +60 °C (40°F to +140 °F)			
Relative Humidity	Up to 100%			

◆ Photo



Service Antenna Specification(Indoor Antenna)

Model Name : TS250374

◆ Specification

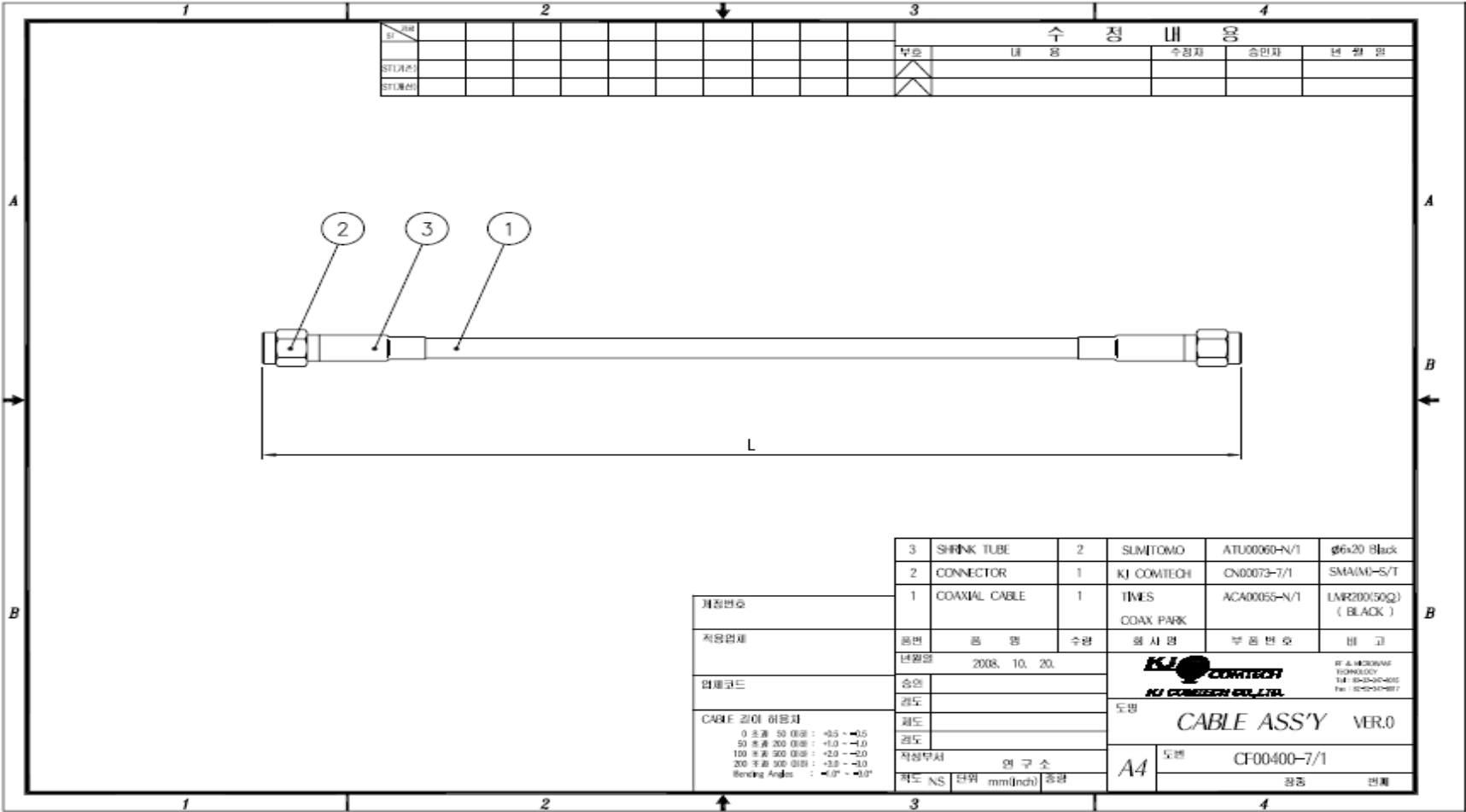
Electrical Specifications				
Frequency Range	698-806 MHz	806-960 MHz	1710-2500 MHz	2500-2700 MHz
Polarization	Vertical			
VSWR	≤1.8	≤1.5	≤1.5	≤1.5
Gain	2.5/5 dBi			
3dB Beamwidth	H:360° E:60°			
Input Impedance	50Ω			
Max.Power	50W			
Lightning Protection	DC Ground			
Mechanical Specifications				
Connector	N-female			
Pigtail Cable	RG58U			
Mount Type	Ceiling Mount			
Dimensions	Ø186×86 mm			
Packing Size	78x33x37cm/ 20pcs			
Antenna weight	260g			
Reflector material	Aluminum			
Radome material	ABS			
Radome color	White			
Operating temperature	-40°C to +60 °C (40°F to +140 °F)			
Relative Humidity	Up to 100%			

◆ Photo



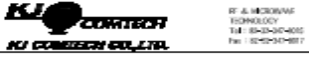
RF Cable Specification

- 1. Connector Type : N-type Male
- 2. Model : AC200000 , Cable Type : LMR-200
- 3. Cable Loss : -4.0dB@698MHz ~ 787MHz, length 10m



수 정 내 용									
구분	내 용	수정자	승인자	년	월	일			
STL(내선)									
STL(출선)									

3	SHRINK TUBE	2	SUMITOMO	ATU00060-N/1	ø6x20 Black	
2	CONNECTOR	1	KJ COMTECH	CN00073-7/1	SMA(M)-S/T	
1	COAXIAL CABLE	1	FINES COAX PARK	ACA00055-N/1	LMR200(50Ω) (BLACK)	
품번	품 명	수량	회사명	부품번호	비고	
년월일			2008. 10. 20.			
승인			 KJ COMTECH KJ COMTECH CO., LTD.		RF & MICROWAVE TECHNOLOGY TEL : 02-262-02400 FAX : 02-262-02401	
검도					도명	CABLE ASS'Y VER.0
검도						
검도						
작성부서		연구소		도번 CF00400-7/1	작성 연월	
검도	NS	단위	mm(Inch)			측량
A4						



CABLE ASS'Y VER.0

Model Name : TS320000, Cable Type : RF240

◆ Specification

Construction			
Inner conductor	Material	Bare copper wire	
	Dia. , mm	1.42±0.02	
Insulation	Material	Physically foamed PE	
	Dia., mm	3.81±0.20	
Outer conductor	First shield	Bonded AL/PET/AL Tape (Diameter:3.94mm)	
	Second shield	Tinned annealed copper wire	
	Construction	16x7/Φ0.16 , p≥90%	
	Diameter	4.52	
Jacket	Material	FR PVC or PE	
	Thickness,m m	0.80	
	Dia., mm	6.10±0.20	
Mechanical properties			
Bending radius, mm		Single Repeated Moving	19.1 63.5 -
Tensile strength, kg		36.3	
Crush resistance, kg/mm		0.36	
Recommended temperature, °C		Store Installation Operation	-70℃~+85℃ -40℃~+85℃ -40℃~+85℃
Electrical properties			
DC. Resistance, Ω /km		In. cond. Out. cond.	10.5 12.8
Impedance, Ω		50	
Capacitance, pF/m		79.4	
Propagation velocity, %		84	
DC breakdown voltage, kV		1.5	
Peak power, kW		5.6	
Screening effectiveness, dB		>90	
Cut-off frequency, GHz		31	



1、Inner conductor 2、Insulation 3、1st shield
4、2nd shield 5、Jacket

Attenuation and average power		
Frequency ,MHz	Nom.attenuation @20°C ,dB/100m	Power rate @20°C ,kW
30	4.4	1.49
50	5.7	1.15
150	9.9	0.66
220	12.0	0.54
450	17.3	0.38
900	24.8	0.26
1500	32.4	0.20
1800	35.6	0.18
2000	37.7	0.17
2500	42.4	0.15
5800	66.8	0.10
● Maximum attenuation value will be 105% of the nominal attenuation value.		
Return loss		
820-960MHz	> 20dB	
1700-2200MHz	> 20dB	
Environment requirements		
Comply with the RoHS Directive 2011/65/EU and its Subsequent amendments.		
		

RF Cable Specification

Model Name : TS340000, Cable Type : RF400

◆ Specification

Construction		
Inner conductor	Material	Copper clad aluminum wire
	Dia. , mm	2.74±0.025
Insulation	Material	Physically foamed PE
	Dia., mm	7.24±0.20
Outer conductor	1 st shield	Bonded Al/PET/Al Tape (Diameter:7.39mm)
	2 nd shield	Tinned annealed copper wire braid Construction: 24x7 / Φ0.16 / 35 Coverage: ≥90% Diameter: 8.13mm
Jacket	Material	PE
	Thickness,mm	1.06
	Dia., mm	10.29±0.20
Mechanical properties		
Bending radius,mm	Single	25.4
	Repeated Moving	101.6
Tensile strength, kg		72.6
Crush resistance, kg/mm		0.71
Recommended temperature, °C	Store	-70℃~+85℃
	Installation	-40℃~+85℃
	Operation	-40℃~+85℃
Electrical properties		
DC. Resistance Ω /km	In. cond.	4.6
	Out. cond.	5.4
Impedance, Ω		50
Capacitance, pF/m		78.4
Inductance, μH/m		0.20
Propagation velocity, %		85
DC breakdown voltage, kV		2.5
Peak power, kW		16
Screening effectiveness, dB		>90
Cut-off frequency, GHz		16.2



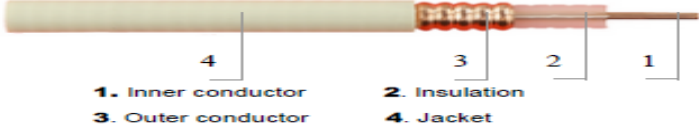
1, Inner conductor 2, Insulation 3, 1st shield
4, 2nd shield 5, Jacket

Attenuation and average power		
Frequency ,MHz	Nom.attenuation @20℃ ,dB/100m	Power rate @20℃ ,kW
30	4.4	1.49
50	5.7	1.15
150	9.9	0.66
220	12.0	0.54
450	17.3	0.38
900	24.8	0.26
1500	32.4	0.20
1800	35.6	0.18
2000	37.7	0.17
2500	42.4	0.15
5800	66.8	0.10
● Maximum attenuation value will be 105% of the nominal attenuation value.		
Return loss		
820-960MHz	>20dB	
1700-2200MHz	>20dB	
Environment requirements		
Comply with the RoHS Directive 2011/65/EU and its Subsequent amendments.		
		

Model Name : TS350000, Cable Type : ½"

◆ Specification

Construction		
Inner Conductor	Material	Copper clad Aluminum
	Diameter, mm	4.80±0.05
Insulation	Material	PE Spline
	Diameter, mm	11.80±0.20
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	13.80±0.30
Jacket	Material	Plenum rated jacket
	Min. thickness, mm	>0.8
	Diameter, mm	16.00±0.20
Mechanical properties		
Bending radius, mm	Single	70
	Repeated	125
	Moving	250
Pulling strength, N		1130
Crush resistance, kg/mm		1.4
Bending moment, N·m		15.4
Storage temperature,℃		-20~+80
Installation temperature,℃		-20~+60
Operation temperature,℃		-20~+80
Electrical properties		
Inner conductor DC resistance, Ω /km		1.48
Outer conductor DC resistance, Ω /km		2.10
Impedance, Ω		50±2
Inductance,μH/m		0.190
Capacitance, pF/m		75.5
Propagation velocity, %		88
DC breakdown voltage, kV		6.0
Insulation resistance, M Ω ·km		>5× 10 ³
Peak power, kW		40
Screening attenuation, dB		>>120
Cut-off frequency, GHz		8.8

	
Nominal attenuation (<@20℃, dB/100 m>)	
Frequency, MHz	Nominal Attenuation
10	0.673
100	2.19
200	3.15
450	4.85
800	6.65
900	7.07
1000	7.53
1500	9.46
1800	10.50
2000	11.16
2300	12.11
3000	14.16
6000	21.58
● Maximum attenuation value shall be 105% of the nominal attenuation value.	
VSWR	
806~960 MHz	≤ 1.15
1700~2400 MHz	≤ 1.15
5~3000 MHz	≤ 1.25
Fire retardant properties	
Meet UL444 CATVP/CMP, NFPA-262	
RoHS	
Comply with the RoHS Directive 2002/95/ES and its Subsequent amendments.	
	

RF Cable Specification

Model Name : TS360000, Cable Type : ½"

◆ Specification

Construction		
Inner Conductor	Material	Copper clad Aluminum
	Diameter, mm	4.80±0.19
Outer conductor	Material	Annularly corrugated copper
	Diameter, mm	13.80±0.54
Jacket	Material	Polyethylene, PE
	Min. thickness, mm	>0.8
Mechanical properties		
Bending radius, mm	Single	70
	Repeated	125
Pulling strength, N		1100
Crush resistance, kg/mm		1.4
Bending moment, N·m		70
Storage temperature, °C		-70~+85
Installation temperature, °C		-40~+60
Operation temperature, °C		-50~+85
Electrical properties		
Inner conductor DC resistance, Ω/km		1.57
Outer conductor DC resistance, Ω/km		2.60
Impedance, Ω		50±1
Capacitance, pF/m		0.190
Max. Operation Frequency GHz		8.8
Propagation velocity, %		88
Jacket Spark Test RMS (V)		8000
Insulation resistance, MΩ·km		>5×10 ³
Peak power, kW		38
RF Peak Voltage Rating (V)		1950

	
1. Inner conductor	2. Insulation
3. Outer conductor	4. Jacket
Nominal attenuation (@20°C, dB/100 m)	
Frequency, MHz	Nominal Attenuation
0.5	0.149
1.5	0.258
10	0.671
30	1.17
88	2.02
100	2.16
150	2.66
200	3.08
300	3.81
450	4.71
800	6.39
900	6.80
1000	7.20
1500	8.97
1800	9.91
2000	10.5
2200	11.1
3000	13.2
6000	19.6
8000	23.2
Maximum attenuation value shall be 105% of the nominal attenuation value.	
VSWR	
Performance	Standard
Fire retardant properties	
Halogene Free	

Antenna kitting information

1. List of approved antenna

Item	Model	Gain
Service Antenna (Indoor Antenna)	PAT-CPWI-L	+4dBi
	TS260771	+8dBi
	TS250374	+5dBi
Donor Antenna (Outdoor Antenna)	ALP-17QD-L	+6dBi
	TS210471	+4.5dBi
	TS220971	+9dBi

2. List of approved RF cable

Model	Cable Type
AC200000	LMR200
TS320000	RF240
TS340000	RF400
TS350000	1/2"
TS360000	1/2"

3. RF Cable Loss

3.1 Minimum cable length & loss

The minimum cable length is longer than at least the value shown in the table below.

Model	Cable Type	Frequency(MHz)	Cable Loss/1m	Minimum Cable Length(m)		N-Type connection loss when assembled	Total Loss(dB)	
				Downlink port ↔Indoor Ant	Uplink port ↔ Outdoor Ant		Downlink port ↔Indoor Ant	Uplink port ↔ Outdoor Ant
AC200000	LMR200	698~787	-0.32	1	5	-0.8	-1.1	-2.4
TS320000	RF240	698~787	-0.2	1	5	-0.8	-1.0	-1.8
TS340000	RF400	698~787	-0.2	1	5	-0.8	-1.0	-1.8
TS350000	1/2"	698~787	-0.066	1	20	-0.8	-0.9	-2.1
TS360000	1/2"	698~787	-0.063	1	20	-0.8	-0.9	-2.1

3.2 Maximum cable length & loss

The value in the table below is an example for maximum cable length, it can be longer or shorter according to the installation

Model	Cable Type	Frequency(MHz)	Cable Loss/1m	Maximum Cable Length(m)		N-Type connection loss when assembled	Total Loss(dB)	
				Downlink port ↔Indoor Ant	Uplink port ↔ Outdoor Ant		Downlink port ↔Indoor Ant	Uplink port ↔ Outdoor Ant
AC200000	LMR200	698~787	-0.32	50	50	-0.8	-16.8	-16.8
TS320000	RF240	698~787	-0.2	100	100	-0.8	-20.8	-20.8
TS340000	RF400	698~787	-0.2	100	100	-0.8	-20.8	-20.8
TS350000	1/2"	698~787	-0.066	300	300	-0.8	-20.6	-20.6
TS360000	1/2"	698~787	-0.063	300	300	-0.8	-19.7	-19.7

4. EIRP calculation result

4.1 In case of minimum cable loss and antenna gain

4.1.1 Downlink(Indoor Antenna)

①Conducted power	②RF Coaxial Cable	③Antenna Gain/Mode	EIRP power(①+②+③)
+2dBm	-1.1dB/AC200000	+4dBi/PAT-CPWI-L	+4.9dBm
+2dBm	-1.1dB/AC200000	+8dBi/TS260771	+8.9dBm
+2dBm	-1.1dB/AC200000	+5dBi/TS250374	+5.9dBm
+2dBm	-1.0dB/TS320000	+4dBi/PAT-CPWI-L	+5dBm
+2dBm	-1.0dB/TS320000	+8dBi/TS260771	+9dBm
+2dBm	-1.0dB/TS320000	+5dBi/TS250374	+6dBm
+2dBm	-1.0dB/TS340000	+4dBi/PAT-CPWI-L	+5dBm
+2dBm	-1.0dB/TS340000	+8dBi/TS260771	+9dBm
+2dBm	-1.0dB/TS340000	+5dBi/TS250374	+6dBm
+2dBm	-0.9dB/TS350000	+4dBi/PAT-CPWI-L	+5.1dBm
+2dBm	-0.9dB/TS350000	+8dBi/TS260771	+9.1dBm
+2dBm	-0.9dB/TS350000	+5dBi/TS250374	+6.1dBm
+2dBm	-0.9dB/TS360000	+4dBi/PAT-CPWI-L	+5.1dBm
+2dBm	-0.9dB/TS360000	+8dBi/TS260771	+9.1dBm
+2dBm	-0.9dB/TS360000	+5dBi/TS250374	+6.1dBm

4.1.2 Uplink(Outdoor Antenna)

①Conducted power	②RF Coaxial Cable Los	③Antenna Gain	EIRP power(①+②+③)
+22dBm	-2.4dB/AC200000	+6dBi/ALP-17QD-L	+25.6dBm
+22dBm	-2.4dB/AC200000	+4.5dBi/TS210471	+24.1dBm
+22dBm	-2.4dB/AC200000	+9dBi/TS220971	+28.6dBm
+22dBm	-1.8dB/TS320000	+6dBi/ALP-17QD-L	+26.2dBm
+22dBm	-1.8dB/TS320000	+4.5dBi/TS210471	+24.7dBm
+22dBm	-1.8dB/TS320000	+9dBi/TS220971	+29.2dBm
+22dBm	-1.8dB/TS340000	+6dBi/ALP-17QD-L	+26.2dBm
+22dBm	-1.8dB/TS340000	+4.5dBi/TS210471	+24.7dBm
+22dBm	-1.8dB/TS340000	+9dBi/TS220971	+29.2dBm
+22dBm	-2.1dB/TS350000	+6dBi/ALP-17QD-L	+25.9dBm
+22dBm	-2.1dB/TS350000	+4.5dBi/TS210471	+24.4dBm
+22dBm	-2.1dB/TS350000	+9dBi/TS220971	+28.9dBm
+22dBm	-2.1dB/TS350000	+6dBi/ALP-17QD-L	+25.9dBm
+22dBm	-2.1dB/TS350000	+4.5dBi/TS210471	+24.4dBm
+22dBm	-2.1dB/TS350000	+9dBi/TS220971	+28.9dBm

4.2 In case of maximum cable loss and antenna gain

4.2.1 Downlink(Indoor Antenna)

①Conducted power	②RF Coaxial Cable	③Antenna Gain/Mode	EIRP power(①+②+③)
+2dBm	-1.1dB/AC200000	+4dBi/PAT-CPWI-L	-10.8dBm
+2dBm	-1.1dB/AC200000	+8dBi/TS260771	-6.8dBm
+2dBm	-1.1dB/AC200000	+5dBi/TS250374	-9.8dBm
+2dBm	-1.0dB/TS320000	+4dBi/PAT-CPWI-L	-14.8dBm
+2dBm	-1.0dB/TS320000	+8dBi/TS260771	-10.8dBm
+2dBm	-1.0dB/TS320000	+5dBi/TS250374	-13.8dBm
+2dBm	-1.0dB/TS340000	+4dBi/PAT-CPWI-L	-14.8dBm
+2dBm	-1.0dB/TS340000	+8dBi/TS260771	-10.8dBm
+2dBm	-1.0dB/TS340000	+5dBi/TS250374	-13.8dBm
+2dBm	-0.9dB/TS350000	+4dBi/PAT-CPWI-L	-14.6dBm
+2dBm	-0.9dB/TS350000	+8dBi/TS260771	-10.6dBm
+2dBm	-0.9dB/TS350000	+5dBi/TS250374	-13.6dBm
+2dBm	-0.9dB/TS360000	+4dBi/PAT-CPWI-L	-13.7dBm
+2dBm	-0.9dB/TS360000	+8dBi/TS260771	-9.7dBm
+2dBm	-0.9dB/TS360000	+5dBi/TS250374	-12.7dBm

4.2.2 Uplink(Outdoor Antenna)

①Conducted power	②RF Coaxial Cable Los	③Antenna Gain	EIRP power(①+②+③)
+22dBm	-2.4dB/AC200000	+6dBi/ALP-17QD-L	+11.2dBm
+22dBm	-2.4dB/AC200000	+4.5dBi/TS210471	+9.7dBm
+22dBm	-2.4dB/AC200000	+9dBi/TS220971	+14.2dBm
+22dBm	-1.8dB/TS320000	+6dBi/ALP-17QD-L	+7.2dBm
+22dBm	-1.8dB/TS320000	+4.5dBi/TS210471	+5.7dBm
+22dBm	-1.8dB/TS320000	+9dBi/TS220971	+10.2dBm
+22dBm	-1.8dB/TS340000	+6dBi/ALP-17QD-L	+7.2dBm
+22dBm	-1.8dB/TS340000	+4.5dBi/TS210471	+5.7dBm
+22dBm	-1.8dB/TS340000	+9dBi/TS220971	+10.2dBm
+22dBm	-2.1dB/TS350000	+6dBi/ALP-17QD-L	+7.4dBm
+22dBm	-2.1dB/TS350000	+4.5dBi/TS210471	+5.9dBm
+22dBm	-2.1dB/TS350000	+9dBi/TS220971	+10.4dBm
+22dBm	-2.1dB/TS350000	+6dBi/ALP-17QD-L	+8.3dBm
+22dBm	-2.1dB/TS350000	+4.5dBi/TS210471	+6.8dBm
+22dBm	-2.1dB/TS350000	+9dBi/TS220971	+11.3dBm