



4,5G LTE
800Mhz & 1800Mhz & 2600Mhz

ÖLÇEKLİ YERLEŞİM VE GÜVENLİK MESAFESİ PLANLARI REVİZYON

SİTE NO :	LBT0807
SİTE ADI :	BAHÇELİEVLER MAH
KURULACAGI ADRES :	BAHÇELİEVLER MAH. 1634. SK. ERDAL APT. NO:36 MERKEZ/BATMAN
KOORDİNATLAR :	N 37° 53' 48,40" E 41° 08' 18,37"



SİTE NO :	LBT0807
SİTE ADI :	BAHÇELİEVLER MAH

1- MEVCUTTA 2G+3G2100+3G900+L800+L1800Mhz ÇALIŞAN 3 ADET AQU4517R4 ANTENLER DEMONTE EDİLEREK YERİNE 3 ADET ASI4518R53 ANTEN MONTAJI YAPILACAKTIR. ANTELNERE L2600Mhz BAND İLAVESİ YAPILACAKTIR.

2-

3-

4-

5-

LBT0807

Tarih: 15.06.2022

ANTEN TESİSİ BAŞVURU FORMU

18 Mart Tarih ve 27878 sayılı Resmi Gazete 'de yayımlanarak yürürlüğe giren Hücresel Sistem Anten Tesislerinin Tasarımı ve Paylaşımına İlişkin ve Esaslar Hakkında Yönetmelikte (HSAT) yer alan hükümlere uygun olarak ~~Yeni bir anten tesisi~~ / Mevcut anten tesisi paylaşımı yoluyla kurulması planlanan sistemimiz için gerekli izinlerin verilmesi hususunu tensiplerinize arz ederiz.

Kaşe / İmza

KURULMASI PLANLANAN ANTEN TESİSİNE AİT BİLGİLER:

SİTE NO: LBT0807
KOORDİNAT: N 37° 53' 48,40" E 41° 08' 18,37"
KURULACAĞI YER: ÇATI ÜZERİ
KURULACAĞI ADRES: BAHÇELİEVLER MAH. 1634. SK. ERDAL APT. NO:36 MERKEZ/BATMAN
KURULACAĞI İL: BATMAN
İLÇE: MERKEZ

YENİ ANTEN SİSTEMİ KURMA GEREKÇESİ(LERİ) :

- 1- KAPSAMA PROBLEMLERİ X
- 2- MÜŞTERİ ŞİKAYETLERİ X
- 3- KALİTE PROBLEMLERİ
- 4- KAPASİTE PROBLEMLERİ

GEREKÇELERE İLİŞKİN BELGELER:

- 1- EK-B 4- KROKİLER
- 2- EK-D 5-GOOGLE EARTH
- 3- FOTOĞRAFLAR 6-ANTEN KATALOĞU

PAYLAŞILACAK İLAVE KAPASİTE BİLGİLERİ:

Tip1:.....İşletmeci

Tip2:.....İşletmeci

Tip3:.....İşletmeci

II. PAYLAŞILAN ANTEN TESİSİ:

TESİS PAYLAŞIMI YAPILAN İŞLETMECİ:

TT Mobill

VODAFONE

TÜRKCELL

MEVCUT TESİSDEKİ İLK KURULAN SİSTEDEKİ AİT SITE ID:

BT0807/WBT0807/UBT0807

A3674

90624

PAYLAŞIM TIPLERİ:

<input checked="" type="checkbox"/>	Tip 1: Arazi ve/veya bina paylaşımı
<input type="checkbox"/>	Tip 2: Kule veya direk paylaşımı
<input type="checkbox"/>	Tip 3: Kanal ve/veya boruların paylaşımı
<input type="checkbox"/>	Tip 4: Oda/konteyner ve iklimeştirme sistemlerinin paylaşımı
<input type="checkbox"/>	Tip 5: Anten ve anten elemanlarının paylaşımı
<input type="checkbox"/>	Tip 6: Ses/veri iletim ve ekipmanlarının paylaşımı

 BİLGİ TEKNOLOJİLERİ VE İLETİŞİM KURUMU		SABİT TELEKOMÜNİKASYON CİHAZI													
		MÜRACAAT DEĞERLENDİRME FORMU													
		MEVCUT			YENİ										
		H	T	R	H	T	R								
		AÇIKLAMALAR													
İŞLETMECİ/İŞLETİCİNİN AD/ÜNVANI		TT MOBİL İLETİŞİM HİZMETLERİ A.Ş.													
ŞİRKET ADI VE YAYIN LOGOSU															
CIHAZIN KURULU BULUNDUĞU AÇIK ADRES		BAHÇELİEVLER MAH. 1634. SK. ERDAL APT. NO:36 MERKEZ/BATMAN													
KOORDİNAT		N 37° 53' 48,40"						E 41° 08' 18,37"							
SİTE ID		LBT0807													
MARKA		NOKIA													
MODEL		AIRSCALE													
KULLANILAN FREKANS		4,5G													
KATALOG ÇIKIŞ GÜCÜ (Watt)		80W													
		SEKTÖR 1						SEKTÖR 2				SEKTÖR 3			
						S1-A	S1-B	S1-C	S2-A	S2-B	S2-C	S3-A	S3-B	S3-C	
KULLANILAN FREKANS						800Mhz	1800Mhz	2600Mhz	800Mhz	1800Mhz	2600Mhz	800Mhz	1800Mhz	2600Mhz	
KULLANILAN MAXIMUM ÇIKIŞ GÜCÜ (Watt)		20						20				20			
ANTEN KAZANCI (dBi)		14,5 17,20 18,10						14,5 17,20 18,10				14,5 17,2 18,10			
ANTEN SAYISI		1						1				1			
ANTEN TİPİ		ASI4518R53						ASI4518R53				ASI4518R53			
*ANTEN YAYIN PATERNİ (Krok Üzerinde)		KROKİ						KROKİ				KROKİ			
ANTENİN YERDEN YÜKSEKLİĞİ		32,50						32,50				32,50			
YETKISİZ ERİŞİM (Balkon-Teras)		ENGELLENMEKTEDİR						ENGELLENMEKTEDİR				ENGELLENMEKTEDİR			
BİNA YÜZEYİNE YANSITICI LEVHA		GEREK YOKTUR						GEREK YOKTUR				GEREK YOKTUR			
GÜVENLİK MESAFESİ (m.)		16,72 15,21 16,00						16,72 15,21 16,00				16,72 15,21 16,00			
* SAĞLIK KURULUŞU BİNASINA GÖRE GÜVENLİK MESAFESİ İÇİNDE SAĞLIK KURULUŞU YOKTUR.															
* OKUL BAHÇE DUVARı SINIRINA GÖRE GÜVENLİK MESAFESİ İÇİNDE OKUL YOKTUR.															
* GEREKÇE RAPORU															
* TELSİZ KULLANIM ŞEMASI															
* İLGİLİ TK FORMLARI															
* KAPASİTE RAPORU															
* İMZА SÍRKÜLERİ															
* VERGİ LEVHASI															
* ÇALIŞANLARIN SİGORTA BİLDİRGESİ															
* TİCARET SÍCIL GAZETESİ															
* SÖZLEŞME FOTOKOPISİ															
* ARAÇ RUHSAT FOTOKOPISİ															
* ÖLÇEKLİ YERLEŞİM KROKİSİ KROKİ															
* ANTEN MONTAJ YERİ KROKİSİ KROKİ															
* TOPRAKLAMA SİSTEMİ MEVCUTTUR VE DIRENCİ 5 OHM UN ALTINDADIR.															
* PARATONER MEVCUTTUR.															
* SÍVİL HAVACILIK TEDBÝRLERÝ GEREKMЕMEKTEDİR.															
İŞLETME/ İŞLETMECİ: TT MOBİL <u>İletişim Hizmetleri A.S.</u>										KONTROL:					
<small>H: Hacresel Sistem, T: Telsiz Sistemi, R: Radyo, TV Vericileri</small> <small>*: Ayrıca belgesi gönderilecek veya belge üzerinde belirtilecek evraklar.</small>															

SITE ADI	BAHÇELİEVLER MAH
SITE NO	LBT0807
SITE ADRES	BAHÇELİEVLER MAH. 1634. SK. ERDAL APT. NO:36 MERKEZ/BATMAN

YETKISIZ ERİŞİMİN ENGELLENMESİ:

İSTASYONA YETKISİZ ERİŞİM TERAS KAPISI KİLİTLENEREK ENGELLENMEKTEDİR.

BİNA YÜZEYİNDE YANSITICI LEVHA DURUMU:

KULLANILMAYACAKTIR.

ÇOCUK OYUN PARKI DURUMU:

GÜVENLİK MESAFESİ İÇİNDE ÇOCUKLAR İÇİN AYRILMIŞ OYUN ALANLARI SINIRI YOKTUR.

TOPRAKLAMA DURUMU

MEVCUTTUR VE DIRENCİ 5 OHM UN ALTINDADIR.

PARATONER DURUMU:

MEVCUTTUR.

SİVİL HAVACILIK TEDBİRLERİ:

GEREKMEMEKTEDİR.

Hazırlayan	Yetkili İmza	Site No - Adı	
		LBT0807	BAHÇELİEVLER MAH
Koordinatlar			
		N= 37° 53' 48,40"	E= 41° 08' 18,37"

PLANLANAN GÜVENLİK MESAFESİ HESAP TABLOSU

GÜVENLİK MESAFESİ

<i>HÜCRE 1</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	7,778	14,5	20	800

16,72 (metre)

<i>HÜCRE 2</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	7,778	14,5	20	800

16,72 (metre)

<i>HÜCRE 2</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	7,778	14,5	20	800

16,72 (metre)

<i>HÜCRE 2</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	#YOK	#YOK	20	0

#YOK (metre)

$$HÜCRE 1 = \frac{\sqrt{30 * PG * 10}}{G/10} = 16,71852419 \text{ (metre)}$$

E

$$HÜCRE 2 = \frac{\sqrt{30 * PG * 10}}{G/10} = 16,71852419 \text{ (metre)}$$

E

$$HÜCRE 3 = \frac{\sqrt{30 * PG * 10}}{G/10} = 16,71852419 \text{ (metre)}$$

E

$$HÜCRE 4 = \frac{\sqrt{30 * PG * 10}}{G/10} = \#YOK \text{ (metre)}$$

E

PLANLANAN GÜVENLİK MESAFESİ HESAP TABLOSU

GÜVENLİK MESAFESİ

<i>HÜCRE 1</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	11,667	17,20	20	1800

15,21 (metre)

<i>HÜCRE 2</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	11,667	17,20	20	1800

15,21 (metre)

<i>HÜCRE 2</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	11,667	17,20	20	1800

15,21 (metre)

$$HÜCRE 1 = \frac{\sqrt{30 * PG * 10}}{E} = 15,20955219 \quad (\text{metre})$$

G/10

E

$$HÜCRE 2 = \frac{\sqrt{30 * PG * 10}}{E} = 15,20955219 \quad (\text{metre})$$

G/10

E

$$HÜCRE 3 = \frac{\sqrt{30 * PG * 10}}{E} = 15,20955219 \quad (\text{metre})$$

G/10

E

PLANLANAN GÜVENLİK MESAFESİ HESAP TABLOSU

GÜVENLİK MESAFESİ

<i>HÜCRE 1</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	12,300	18,10	20	2600

16,00 (metre)

<i>HÜCRE 2</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	12,300	18,10	20	2600

16,00 (metre)

<i>HÜCRE 2</i>	E (V/m)	G (dBi)	PAKTİF (W)	F (MHz)
	12,300	18,10	20	2600

16,00 (metre)

$$HÜCRE 1 = \frac{\sqrt{30 * PG * 10}}{G/10} = 16,00186174 \text{ (metre)}$$

E

$$HÜCRE 2 = \frac{\sqrt{30 * PG * 10}}{G/10} = 16,00186174 \text{ (metre)}$$

E

$$HÜCRE 3 = \frac{\sqrt{30 * PG * 10}}{G/10} = 16,00186174 \text{ (metre)}$$

E

Düzenleyen – Prepared NOKIA	Sorumlu - Subject responsible TT MOBİL İLETİŞİM HİZMETLERİ A.Ş.	İstasyon İsmi - Site Name BAHÇELİEVLER MAH
Onaylayan - Doc.Respons/Approved	Tarih – Date 15.06.2022	Dosya - Reference File LBT0807

SAHA GENEL GÖRÜNÜM

MEVCUT TT MOBİL SAHASININ BULUNDUĞU BİNA h:27.00



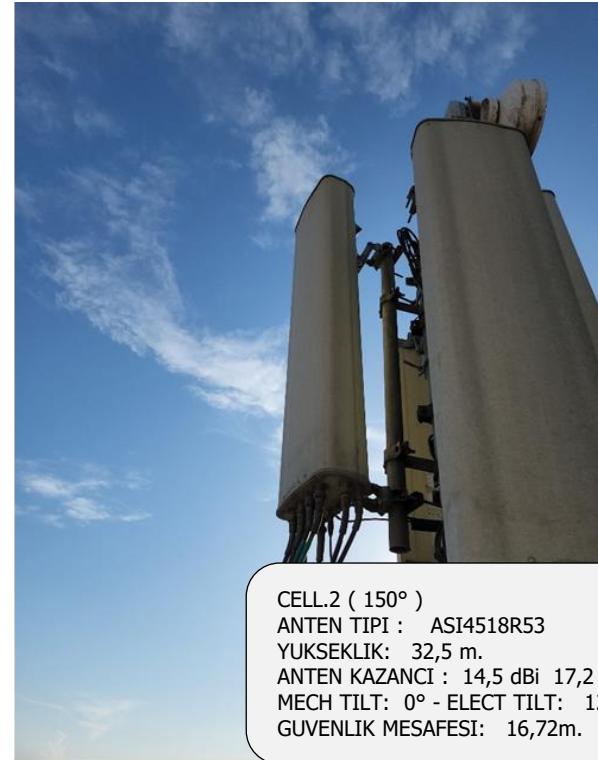
Approved	Signature	Date
		15.06.2022

Düzenleyen – Prepared	Sorumlu - Subject responsible	İstasyon İsmi - Site Name
NOKIA	TT MOBİL İLETİŞİM HİZMETLERİ A.Ş.	BAHÇELİEVLER MAH
Onaylayan - Doc.Respons/Approved	Tarih – Date	Dosya - Reference File
	15.06.2022	LBT0807

SİSTEM VE ANTEN YERLEŞİMİ



CELL.1 (80°)
ANTEN TIPI : ASI4518R53
YUKSEKLIK: 32,5 m.
ANTEN KAZANCI : 14,5 dBi 17,2 dBi 18,1 dBi
MECH TILT: 0° - ELECT TILT: 12/8/4°
GUVENLIK MESAFESİ: 16,72m. 15,21m. 16m.



CELL.2 (150°)
ANTEN TIPI : ASI4518R53
YUKSEKLIK: 32,5 m.
ANTEN KAZANCI : 14,5 dBi 17,2 dBi 18,1 dBi
MECH TILT: 0° - ELECT TILT: 12/8/4°
GUVENLIK MESAFESİ: 16,72m. 15,21m. 16m.



CELL.3 (350°)
ANTEN TIPI : ASI4518R53
YUKSEKLIK: 32,5 m.
ANTEN KAZANCI : 14,5 dBi 17,2 dBi 18,1 dBi
MECH TILT: 0° - ELECT TILT: 12/8/4°
GUVENLIK MESAFESİ: 16,72m. 15,21m. 16m.

Approved	Signature	Date
		15.06.2022

Düzenleyen – Prepared NOKIA	Sorumlu - Subject responsible TT MOBİL İLETİŞİM HİZMETLERİ A.Ş.	İstasyon İsmi - Site Name BAHÇELİEVLER MAH
Onaylayan - Doc.Respons/Approved	Tarih – Date 15.06.2022	Dosya - Reference File LBT0807

4,5G SEKTÖR YÖNLERİ

1. SEKTÖR ANTEN BAKIŞ YÖNÜ 80°



2. SEKTÖR ANTEN BAKIŞ YÖNÜ 150°



Approved	Signature	Date
		15.06.2022

Düzenleyen – Prepared NOKIA	Sorumlu - Subject responsible TT MOBİL İLETİŞİM HİZMETLERİ A.Ş.	İstasyon İsmi - Site Name BAHÇELİEVLER MAH
Onaylayan - Doc.Respons/Approved	Tarih – Date 15.06.2022	Dosya - Reference File LBT0807

4,5G SEKTÖR YÖNLERİ

3.SEKTÖR ANTEN BAKIŞ YÖNÜ 350°



Approved	Signature	Date
		15.06.2022

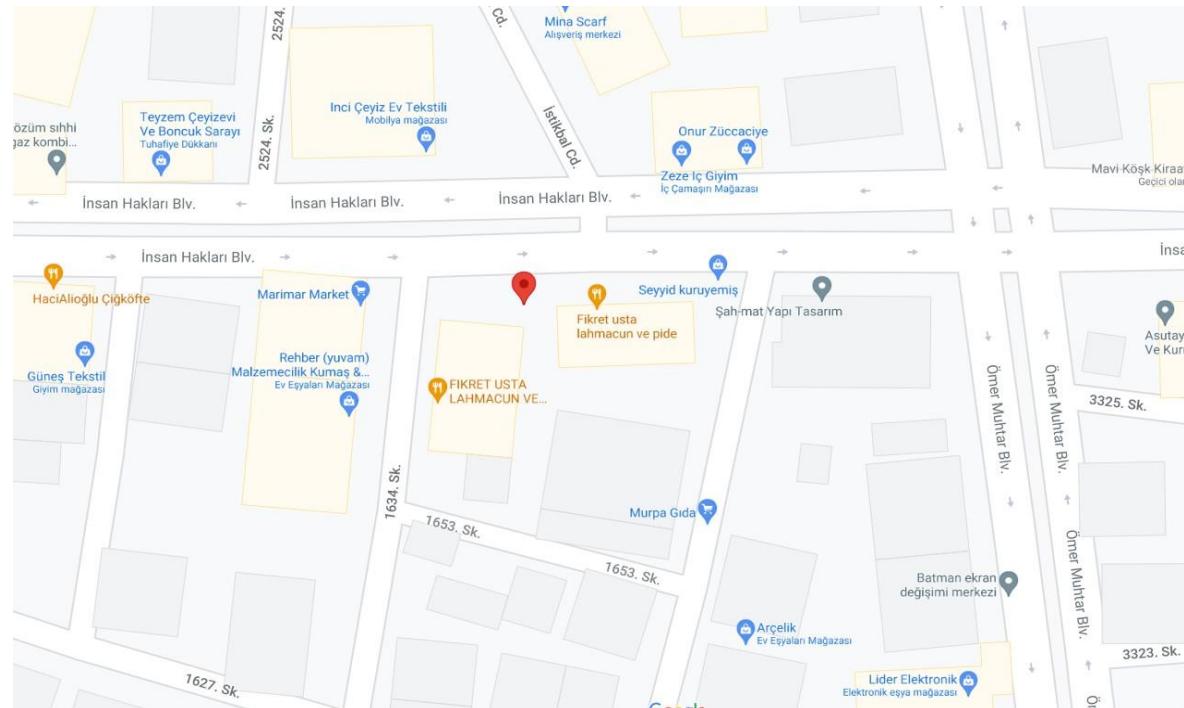
Düzenleyen – Prepared NOKIA	Sorumlu - Subject responsible TT MOBİL İLETİŞİM HİZMETLERİ A.Ş.	İstasyon İsmi - Site Name BAHÇELİEVLER MAH
Onaylayan - Doc.Respons/Approved	Tarih – Date 15.06.2022	Dosya - Reference File LBT0807

YETKISIZ ERİŞİM



Approved	Signature	Date
		15.06.2022

Düzenleyen – Prepared NOKIA	Sorumlu - Subject responsible TT MOBİL İLETİŞİM HİZMETLERİ A.Ş.	İstasyon İsmi - Site Name BAHÇELİEVLER MAH
Onaylayan - Doc.Respons/Approved	Tarih – Date 15.06.2022	Dosya - Reference File LBT0807



İSTASYON YOL TARİFİ

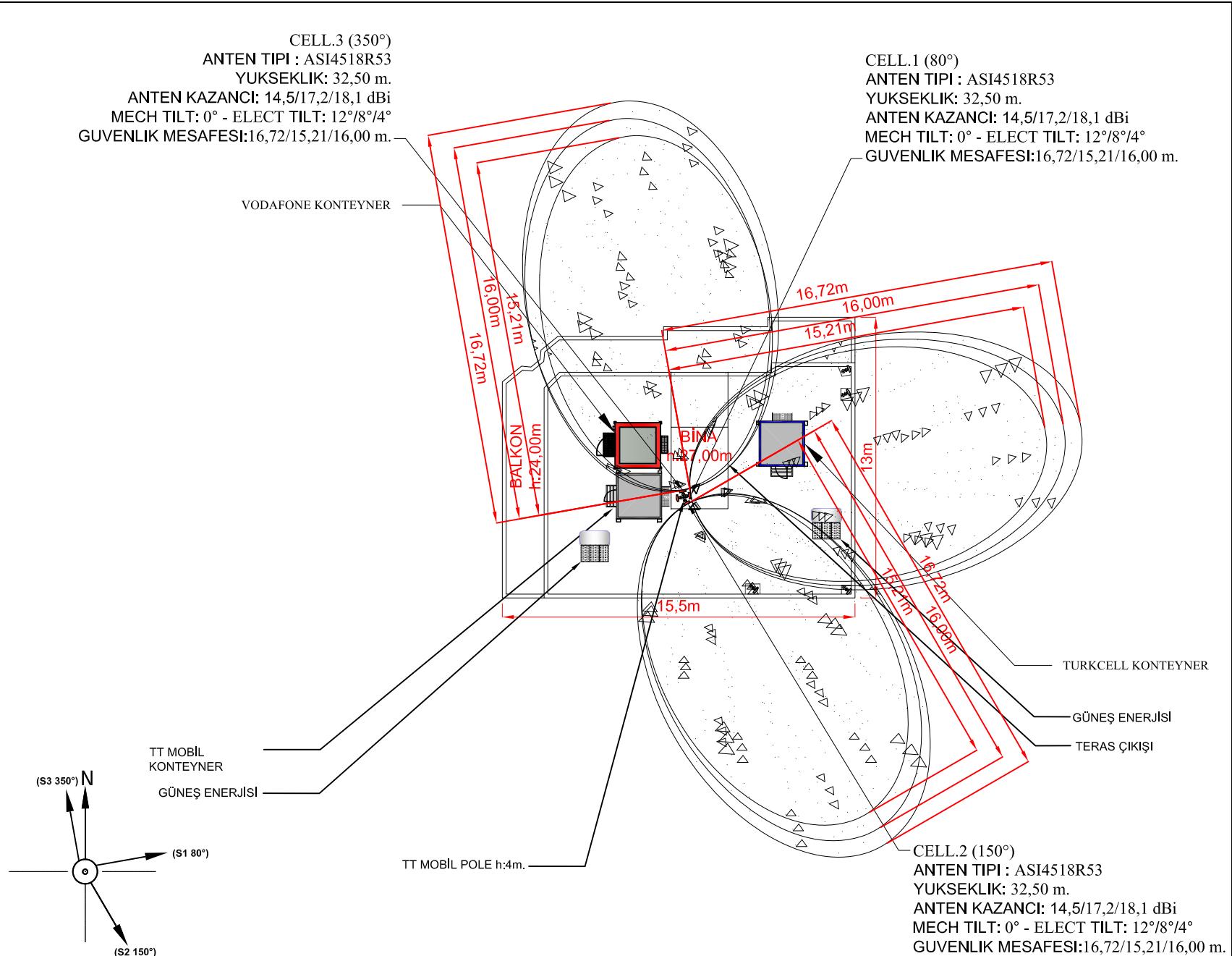
BAHÇELİEVLER MAH. 1634. SK. ERDAL APT. NO:36 MERKEZ/BATMAN

15,21

Approved	Signature	Date
		15.06.2022



RF ANTENNA DETAILS								MW ANTENNA DETAILS					DEPT.	RECEIVED DATE&HR	NAME	SIGNATURE	TRANSMITED DATE&HOUR	REVISION	DATE	VER	
SECTOR	TYPE	SIZE	T.N. AZ.	M.TILT	E.TILT	FEEDER TYPE	FEEDER LENGTH	ROOFTOP	BOTTOM HEIGHT	MW	SIZE	AZ.	TOWER	CENTER HEIGHT	CW				PREPARED BY ERS TECNIC		
1	AS4518R53	150 cm.	80°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						MW						
2	AS4518R53	150 cm.	150°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						RF						
3	AS4518R53	150 cm.	350°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						AQ						
																		FILE NAME AND PATH : DRAWING NO : LBT0807-001			

**GENERAL NOTES**

- RF (FEEDER) CABLE
- RF (FEEDER) KABLOSU
- MICRO WAVE RADIO CABLE
- MICRO WAVE RADIO KABLOSU
- AC CABLE
- AC KABLOSU
- AC GROUNDING CABLE
- AC TOPLAKLAMA KABLOSU
- GROUNDING CABLE
- TOPRAKLAMA KABLOSU
- LIGHTNING GROUNDING CABLE
- PARATONER TOPRAKLAMA KABLOSU
- +/- GROUNDING PIT
- +/- GROUNDING ALANI
- +/- ANTLIGHTNING PROTECTION
- +/- YILDIRIM KORUMASI

A		
A		
A		
A		
A		
NO	UPDATE BY	DESCRIPTION
		DATE

UPDATES

DESIGN COMPANY	
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PROJECT NAME:
TURKEY GSM PROJECT

DRAWING STATUS

for APPROVE	for CONSTR.	AS BUILT
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SITE CODE:**LBT0807****SITE NAME:****BAHÇELEVLER MAH.****AZIMUTHS:**

N: 37° 53' 48,40" E: 41° 08' 18,37"

SITE ADDRESS:

BAHÇELEVLER MAH. 1634. SK. ERDAL APT. NO:36 MERKEZ/BATMAN

TSS DONE BY:

SAQ TT MOBİL İLETİŞİM A.Ş.

CONSTRUCTION SERHAT ALTINDAĞ

SUBCONTRACTOR NOKIA

DRAWING NAME:**PLAN_DETAIL**

REVISION	DATE	SCALE
	15.06.2022	1 / 250

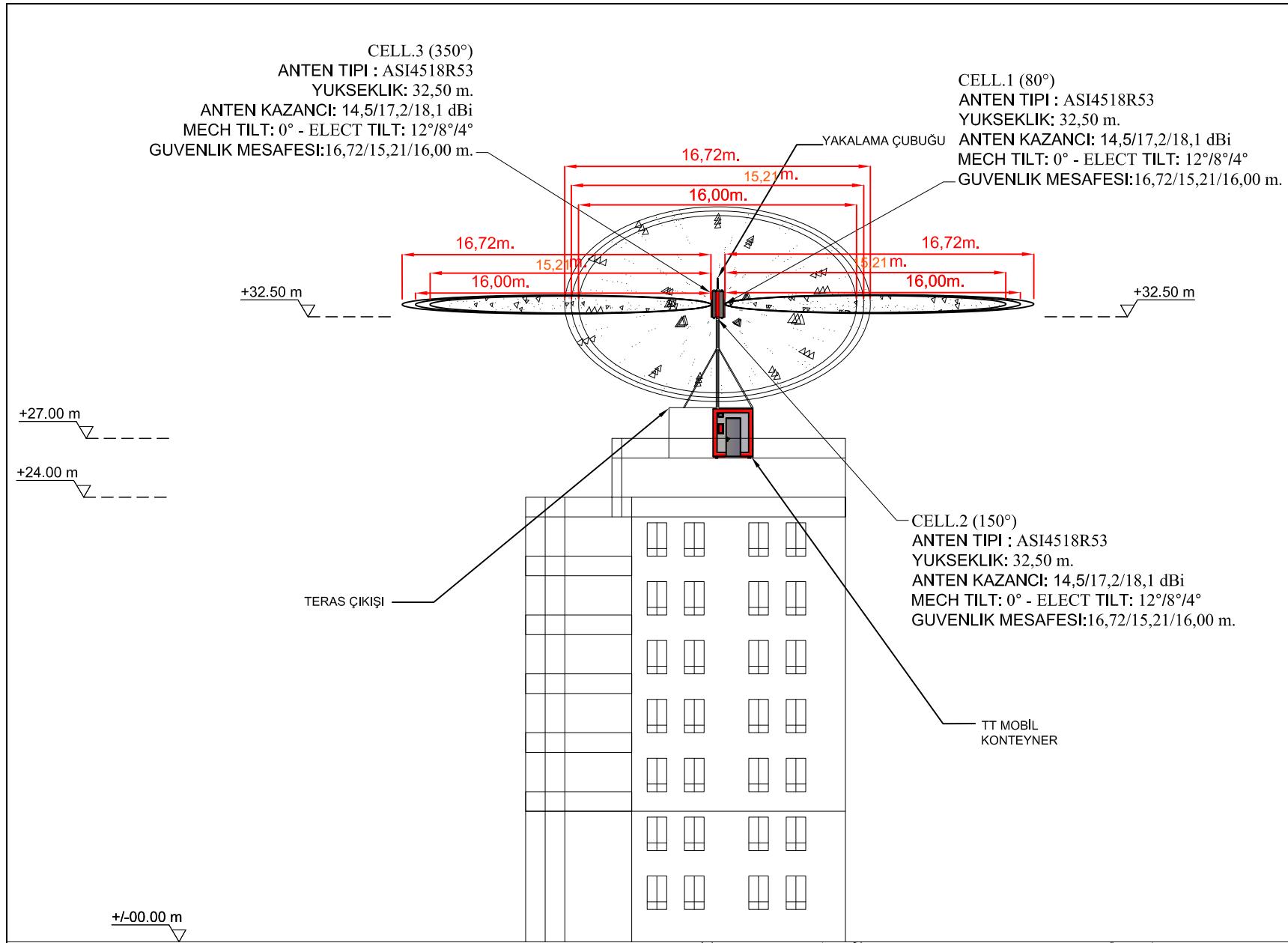
PREPARED BY

ERS TECNIC

FILE NAME AND PATH :

DRAWING NO : LBT0807-001

RF ANTENNA DETAILS							MW ANTENNA DETAILS					DEPT.	RECEIVED DATE&HR	NAME	SIGNATURE	TRANSMITED DATE&HOUR		
SECTOR	TYPE	SIZE	T.N. AZ.	M.TILT	E.TILT	FEEDER TYPE	FEEDER LENGTH	ROOFTOP	BOTTOM HEIGHT	MW	SIZE	AZ.	TOWER	CENTER HEIGHT	CW			
1	ASI4518R53	150 cm.	80°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						MW			
2	ASI4518R53	150 cm.	150°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						RF			
3	ASI4518R53	150 cm.	350°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						AQ			



GENERAL NOTES

- RF (FEEDER) CABLE
RF (FEEDER) KABLOSU
- MICRO WAVE RADIO CABLE
MICRO WAVE RADIO KABLOSU
- AC CABLE
AC KABLOSU
- AC GROUNDING CABLE
AC TOPRAKLAMA KABLOSU
- GROUNDING CABLE
TOPRAKLAMA KABLOSU
- LIGHTNING GROUNDING CABLE
PARATONER TOPRAKLAMA KABLOSU
- + GROUNDING PIT
TOPRAKLAMA ALANI
- + ANTLIGHTNING PROTECTION
YILDIRIM KORUMASI

A		
A		
A		
A		
A		
NO	UPDATE BY	DESCRIPTION
		DATE

UPDATES

DESIGN COMPANY	
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PROJECT NAME:
TURKEY GSM PROJECT

DRAWING STATUS

for APPROVE	for CONSTR.	AS BUILT
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SITE CODE:
LBT0807SITE NAME:
BAHÇELİEVLER MAH.

AZIMUTHS:

N: 37° 53' 48,40" E: 41° 08' 18,37"

SITE ADDRESS:
BAHÇELİEVLER MAH. 1634. SK. ERDAL APT. NO:36
MERKEZ/BATMAN

TSS DONE BY:

SAQ TT MOBİL İLETİŞİM A.Ş.

CONSTRUCTION SERHAT ALTINDAĞ

SUBCONTRACTOR NOKIA

DRAWING NAME:
FRONT_VIEW

REVISION	DATE	SCALE
	15.06.2022	1 / 300

PREPARED BY:
ERS TECNIC

FILE NAME AND PATH :

DRAWING NO : LBT0807-001

RF ANTENNA DETAILS

MW ANTENNA DETAILS

SECTOR	TYPE	SIZE	T.N. AZ.	M.TILT	E.TILT	FEEDER TYPE	FEEDER LENGTH	ROOFTOP	BOTTOM HEIGHT	MW	SIZE	AZ.	TOWER	CENTER HEIGHT	DEPT.	RECEIVED DATE&HR	NAME	SIGNATURE	TRANSMITED DATE&HOUR
1	ASI4518R53	150 cm.	80°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						CW				
2	ASI4518R53	150 cm.	150°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						MW				
3	ASI4518R53	150 cm.	350°	0°	12°/8°/4°	F/O	10 m.	27 m.	+32.50 m.						RF				

Antenna Specifications

Electrical Properties

Frequency range (MHz)		2 x (690 - 960)				2 x (1695 - 2690) (CLy2/CRy3)			
		690 - 803	790 - 862	824 - 894	880 - 960	1695 - 1990	1920 - 2200	2200 - 2490	2490 - 2690
Polarization		+45° , -45°							
Electrical downtilt (°)		2 - 16 , continuously adjustable, each band separately				2 - 12 , continuously adjustable, each band separately			
Gain (dBi)	at mid Tilt	14.2	14.5	14.8	15.1	17.2	17.6	18.0	18.1
	over all Tilts	14.1 ± 0.5	14.4 ± 0.5	14.7 ± 0.5	15.0 ± 0.5	17.1 ± 0.5	17.5 ± 0.5	17.9 ± 0.5	18.0 ± 0.5
Side lobe suppression for first side lobe above main beam (dB)		> 15	> 16	> 16	> 16	> 15	> 16	> 16	> 16
Horizontal 3dB beam width (°)		69 ± 6	67 ± 6	66 ± 6	65 ± 6	68 ± 8	65 ± 6	60 ± 6	58 ± 6
Vertical 3dB beam width (°)		15.1 ± 1.5	13.8 ± 0.9	13.3 ± 0.9	12.4 ± 0.8	6.9 ± 0.5	6.2 ± 0.6	5.5 ± 0.3	4.9 ± 0.4
VSWR		< 1.5				< 1.5			
Cross polar isolation (dB)		≥ 28				≥ 28			
Interband isolation (dB)		≥ 26				≥ 26			
Front to back ratio , ±30° (dB)		> 20	> 21	> 22	> 22	> 24	> 26	> 25	> 26
Cross polar ratio (dB)	0°	> 18	> 18	> 18	> 18	> 17	> 17	> 17	> 18
Max. power per input (W)		400 (at 50°C ambient temperature)*				250 (at 50°C ambient temperature)*			
Intermodulation IM3 (dBc)		≤ -153 (2 x 43 dBm carrier)				≤ -153 (2 x 43 dBm carrier)			
Impedance (Ω)		50				50			
Grounding		DC Ground				DC Ground			

Electrical Properties

Frequency range (MHz)		2 x (1695 - 2690) (Ly1/Ry4)			
		1695 - 1990	1920 - 2200	2200 - 2490	2490 - 2690
Polarization		+45° , -45°			
Gain (dBi)	at mid Tilt	17.2	17.6	18.0	18.1
	over all Tilts	17.1 ± 0.5	17.5 ± 0.5	17.9 ± 0.5	18.0 ± 0.5
Side lobe suppression for first side lobe above main beam (dB)		> 16	> 16	> 16	> 16
Horizontal 3dB beam width (°)		69 ± 6	68 ± 6	66 ± 6	59 ± 7
Vertical 3dB beam width (°)		7.1 ± 0.5	6.3 ± 0.5	5.6 ± 0.3	5.1 ± 0.4
VSWR		< 1.5			
Cross polar isolation (dB)		≥ 28			
Interband isolation (dB)		≥ 26			
Front to back ratio , ±30° (dB)		> 26	> 25	> 24	> 24
Cross polar ratio (dB)	0°	> 18	> 18	> 18	> 16
Max. power per input (W)		250 (at 50°C ambient temperature)*			
Intermodulation IM3 (dBc)		≤ -153 (2 x 43 dBm carrier)			
Impedance (Ω)		50			
Grounding		DC Ground			

* Total power : 700 W (at 50°C ambient temperature)

1. Values based on NGMN recommendations on Base Station Antenna Standards (BASTA).

2. Electrical datasheet in XML format is available.

ASI4518R53v07

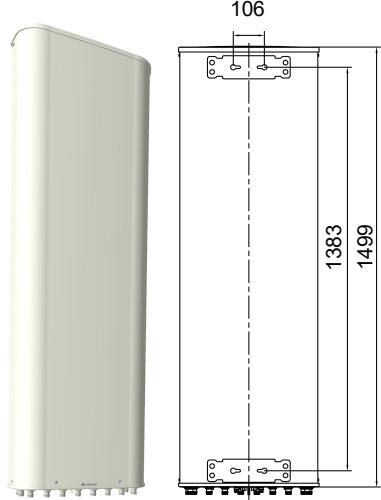
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65/65/65/65/65-14.5i/14.5i/17.5i/17.5i/17.5i-M/M/M/M/M-R

EasyRET 2L4H 12-Port Antenna with 6 Integrated RCUs -1.5m



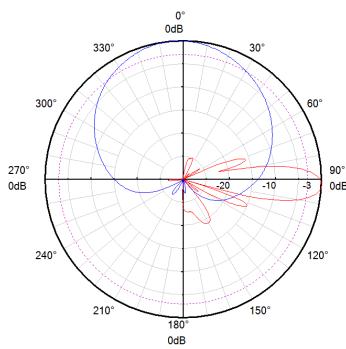
Mechanical Properties	
Antenna dimensions (H x W x D) (mm)	1499 x 469 x 206
Packing dimensions (H x W x D) (mm)	1760 x 540 x 250
Antenna weight (kg)	29.5
Clamps weight (kg)	3.6 (2 units)
Antenna packing weight (kg)	39.0 (Included clamps)
Mast diameter supported (mm)	50 - 115
Radome material	Fiberglass
Radome colour	Light grey
Operational temperature (°C)	-40 .. +65
Wind load (N)	Frontal: 440 (at 150 km/h) Lateral: 265 (at 150 km/h) Maximum: 585 (at 150 km/h)
Max. operational wind speed (km/h)	200
Survival wind speed (km/h)	250
Connector	12 x 4.3-10 Female
Connector position	Bottom



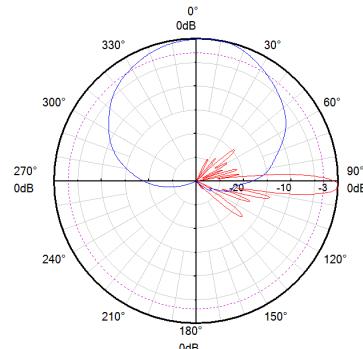
Accessories

Item	Model	Description	Weight	Units per antenna
Downtilt kit	ASMDT0D01	Mechanical downtilt: 0 - 16 °	2.1 kg	1 (Separate packing)

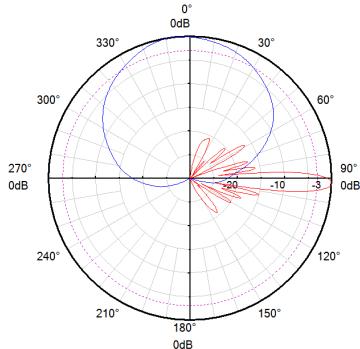
Pattern sample for reference



690 - 960 MHz



1695 - 2690 MHz
(Ly1/Ry4)



1695 - 2690 MHz
(CLy2/CRy3)

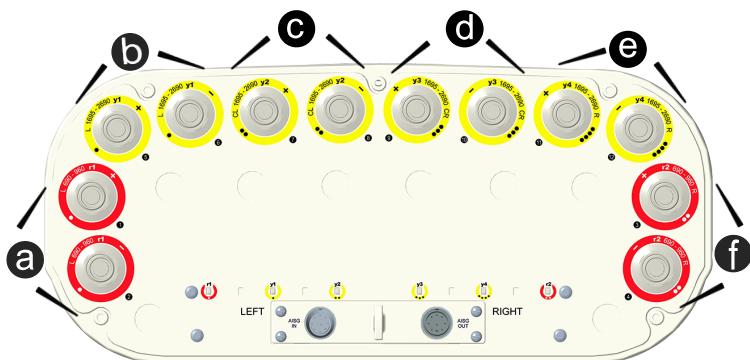
Integrated RET Specifications

Properties							
RET type	Integrated RET						
RET protocols*	AISG 2.0 / 3GPP						
Input voltage range (V)	10 - 30 DC						
Power consumption (W)	< 0.5 (when the motor does not work, 12 V) < 4.5 (when the motor is working, 12 V) < 10 (when the motor is starting up or shutting down, 12 V)						
Adjustment time (full range) (s)	Typ. 40 (typically, depending on antenna type)						
RET connector	2 x 8 pin connector according to IEC 60130-9 Daisy chain in: Male / Daisy chain out: Female						
Pin assignment according AISG	1 DC	2 n/c	3 RS-485B	4 n/c	5 RS-485A	6 DC	7 DC return
Lightning protection (kA)	2.5 (10/350 µs) 10 (8/20 µs)						

* Please confirm the AISG protocol of primary station is compatible with RET antenna protocol interface. The protocol of RET antenna software interface is switchable between AISG 2.0/3GPP and AISG 1.1 with a vendor defined command. For more details about protocol switching function, contact Huawei before system installation.

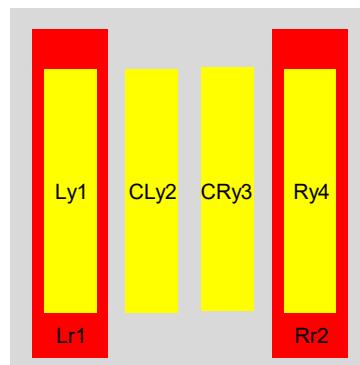
Standards: EN/IEC 60950-1(Safety), EN/IEC 60950-22(Safety – Equipment installed outdoor),EN 55032 (Emission),
 EN 55024 (Immunity), ETSI EN 301 489, FCC Part15, ICES-003

Certification: CE, FCC, IC, RCM, RoHS, REACH, WEEE



Integrated RET S/N:

- a HWNxxx.....Lr1
- b HWNxxx.....Ly1
- c HWNxxx.....CLy2
- d HWNxxx.....CRy3
- e HWNxxx.....Ry4
- f HWNxxx.....Rr2



r - Red y - Yellow
 L - Left array R - Right array C - Center array

NOTE

- Facilities, such as towers and poles, must bear the weight and wind load of antennas.
- HUAWEI's standard brackets and accessories must be used for any installation.
- The antenna working environment must meet the requirements specified in the datasheet.
- Only qualified personnel are allowed to perform installation. Installation tools and procedures must conform to requirements described in the antenna installation guide.