# MARS ANTENNAS & RF SYSTEMS LTD.

## MARS Antennas introduces innovative line of Compact Size 2.3-2.7 GHz Sector Antennas

MARS Antennas & RF Systems Ltd, the world class leading antenna company, introduces a new line of 2.3-2.7 GHz sector antennas with beam widths of 60,90 and 120 degrees and gain up to 17 dBi in a very compact (15-31 inch) and robust housing. The lightweight and easy-to-install antennas are a perfect solution for all WLL, WLAN, ISM and Wi-Fi applications. Beam width in the E-Plane guarantees simple and handy installation. Compact size allows for quick installation with specially designed adjustable tilt mount.

### Compact 2.3-2.7 GHz Sector Antennas

	<u>15" (38cm)</u>	<u>31"(80 cm)</u>
60°	<b>14 dBi</b> (P/N: MA-WC24-14)	<b>17 dBi</b> (P/N: MA-WC24-17)
90°	<b>13 dBi</b> (P/N:MA-WD24-13)	<b>15.5 dBi</b> (P/N:MA-WD24-15)
120°	<b>12 dBi</b> (P/N: MA-WE24-11)	<b>15 dBi</b> (P/N: MA-WE24-14)

#### About MARS Antennas & RF Systems Ltd

MARS Antennas & RF Systems Ltd is a world class leading antenna and RF solutions Research & Development and manufacturing company based in Israel, with a demonstrated capacity to design and provide cost effective products with exceptional performance characteristics. The company established in 1987 and is located in Tel-Aviv area.

MARS offers a wide range of Broadband Access Antennas both Subscriber and Base Station Antennas for Wi-MAX, Wi-Fi and WLAN applications covering 700 MHz, 915 MHz, 2.5, 3.5, 4.9 and 5.8 GHz bands. MARS also has a strong line of In-Building antennas that allows for cost effective solution for Cellular and Wi-Fi applications. In addition MARS offers a wide range of antennas for ISM & Special Applications, Embedded Antennas, Wi-Fi Repeaters, In-Building Cellular Repeaters – High Selective and FCC approved.

MARS is ISO 9001 and RoHS certified Research & Development and manufacturing company.





#### 2.3-2.7 GHz Base Station Antenna, 60° MA-WC24-14

MARS 60° Base Station Antenna with 14 dBi of gain is lightweight yet has a robust and durable construction. Antenna Features:

- quick and easy installation
- small, aesthetic and unobtrusive radome
- easily adapted to any RF connector
- easy mounting allows to obtain required downtilt degree

**Applications:** 

- Point-to-Multi-Point Systems
- for WLL applications
- MMDS
- ISM applications

#### **Specifications:**

	Electrical		
Frequency range	2.3 - 2.7 GHz		
GAIN, min.	14 dBi		
VSWR, max.	1.7:1		
Polarization	Linear, Vertical		
3 dB Beam-Width, H-Plane, typ.	90°		
3 dB Beam-Width, E-Plane, typ.	14°		
Side Lobes, min.	-12 dB		
Cross Polarization, min.	-22 dB		
Front to Back Ratio, min.	-22 dB		
Input power, max	50 Watt		
Input Impedance	50 Ohm		
Lightning Protection	DC Grounded		
	Mechanical		
Dimensions (HxWxD)	380 x 150 x 80 mm (15"x 5.9"x 3.1"-including side wings)		
Weight	0.5 kg		
Connector	N-Type, Female		
Back Plane	Aluminum protected through chemical passivation		
Radome	UV Protected, Plastic		
Mount	MNT-1		
Environmental			
<b>Operating Temperature Range</b>	- 40°C to + 65°C		
Vibration	According to IEC 60721-3-4		
Wind Load	200 km/h (survival)		
Flammability	UL94		
Water Proofing	IP-65		
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)		
Salt Fog	According to IEC 68-2-11		
Ice and Snow	25mm radial (survival)		
Service Life	>10 years		





#### 2.3-2.7 GHz Base Station Antenna, 90° MA-WD24-13

MARS 90° Base Station Antenna has a lightweight and durable construction. Additional Features:

- Compact Size
- Quick and easy installation
- Adjustable Tilt (with optional mount MNT-1)

**Applications:** 

- Point -to –Multi Point Applications
- WLL Applications
- MMDS
- ISM Applications

#### **Specifications:**



Electrical		
Frequency range	2.3 - 2.7 GHz	
GAIN, min.	13 dBi	
VSWR, max.	1.7 : 1	
Polarization	Linear, Vertical	
3 dB Beam-Width, H-Plane, typ.	90°	
3 dB Beam-Width, E-Plane, typ.	15°	
Side Lobes, min.	-12 dB	
Cross Polarization, min.	-22 dB	
Front to Back Ratio, min.	-30 dB	
Input power, max	50 Watt	
Input Impedance	50 Ohm	
Lightning Protection	DC Grounded	
	Mechanical	
Dimensions (HxWxD)	380 x 75 x 80 mm (15"x3"x3.1")	
Weight	0.5 kg	
Connector	N-Type, Female	
Back Plane	Aluminum protected through chemical passivation	
Radome	UV Protected, Plastic	
Mount	MNT-2	
Environmental		
<b>Operating Temperature Range</b>	- 40°C to + 65°C	
Vibration	According to IEC 60721-3-4	
Wind Load	200 km/h (survival)	
Flammability	UL94	
Water Proofing	IP-65	
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	
Salt Fog	According to IEC 68-2-11	
Ice and Snow	25mm radial (survival)	
Service Life	>10 years	





#### 2.3-2.7 GHz Base Station Antenna, 120° MA-WE24-11

MARS 120° Base Station Antenna has a lightweight and durable construction. Additional Features:

- Compact Size
- Quick and easy installation
- Adjustable Tilt (with optional mount MNT-1)

**Applications:** 

- Point -to –Multi Point Applications
- WLL Applications
- MMDS
- ISM Applications

#### **Specifications:**



Electrical			
Frequency range	2.3 - 2.7 GHz		
GAIN, typ.	11.5 dBi		
VSWR, max.	1.7:1		
Polarization	Linear, Vertical		
3 dB Beam-Width, H-Plane, typ.	120°		
3 dB Beam-Width, E-Plane, typ.	15°		
Side Lobes, min.	-12 dB		
Cross Polarization, min.	-22 dB		
Front to Back Ratio, min.	-17 dB		
Input power, max	50 Watt		
Input Impedance	50 Ohm		
Lightning Protection	DC Grounded		
Mechanical			
Dimensions (HxWxD)	380 x 75 x 80 mm (15"x3"x3.1")		
Weight	0.5 kg		
Connector	N-Type, Female		
Back Plane	Aluminum protected through chemical passivation		
Radome	UV Protected, Plastic		
Mount	MNT-2		
Environmental			
<b>Operating Temperature Range</b>	- 40°C to + 65°C		
Vibration	According to IEC 60721-3-4		
Wind Load	200 km/h (survival)		
Flammability	UL94		
Water Proofing	IP-65		
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)		
Salt Fog	According to IEC 68-2-11		
Ice and Snow	25mm radial (survival)		
Service Life	>10 years		





#### 2.3-2.7 GHz Base Station Antenna, 60° **MA-WC24-17**

MARS 60° Base Station Antenna with 17 dBi of gain is lightweight yet has a robust and durable construction. **Antenna Features:** 

- quick and easy installation \_
- small, aesthetic and unobtrusive radome \_
- easily adapted to any RF connector \_
- easy mounting allows to obtain required \_ downtilt degree

**Applicable Applications:** 

- **Point-to-Multi-Point Systems**
- for WLL applications -
- \_ **MMDS**
- **ISM applications** \_

Specifications			
Specifications: Electrical			
Frequency range	2.3 – 2.7 GHz		
GAIN. tvp.	17 dBi		
VSWR, max.	1.7:1		
Polarization	Linear, Vertical		
3 dB Beam-Width, H-Plane, typ.	60°		
3 dB Beam-Width, E-Plane, typ.	8°		
Side Lobes, min.	-13 dB		
Cross Polarization, min.	-20 dB		
Front to Back Ratio, min.	-24 dB		
Input power, max	50 Watt		
Input Impedance	50 Ohm		
Lightning Protection	DC Grounded		
0 0	Mechanical		
Dimensions (HxWxD)	800 x 120 x 65 mm (31.5"x4.7"x2.6")		
Weight	1.2 kg		
Connector	N-Type, Female		
Back Plane	Aluminum protected through chemical passivation		
Radome	UV Protected, Plastic		
Mount	MNT-5		
Environmental			
Operating Temperature Range	- 40°C to + 65°C		
Vibration	According to IEC 60721-3-4		
Wind Load	200 km/h (survival)		
Flammability	UL94		
Water Proofing	IP-65		
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)		
Salt Fog	According to IEC 68-2-11		
Ice and Snow	25mm radial (survival)		
Service Life	>10 years		
Standard Compliance			

ETSI EN 301 525 v1.1.1





#### 2.3-2.7 GHz Base Station Antenna, 90° MA-WD24-15

MARS 90° Base Station Antenna with 15.5 dBi of gain is light-weight yet has a robust and durable construction. Antenna Features:

- quick and easy installation
- small, aesthetic and unobtrusive radome
- easily adapted to any RF connector
- easy mounting allows to obtain required downtilt degree

**Applicable Applications:** 

- Point-to-Multi-Point Systems
- for WLL applications
- MMDS
- ISM applications

#### **Specifications:**



Electrical		
Frequency range	2.3 – 2.7 GHz	
GAIN, typ.	15.5 dBi	
VSWR, max.	1.7 : 1	
Polarization	Linear, Vertical	
3 dB Beam-Width, H-Plane, typ.	90°	
3 dB Beam-Width, E-Plane, typ.	8°	
Side Lobes, min.	-13 dB	
Cross Polarization, min.	-20 dB	
Front to Back Ratio, min.	-24 dB	
Input power, max	50 Watt	
Input Impedance	50 Ohm	
Lightning Protection	DC Grounded	
	Mechanical	
Dimensions (HxWxD)	800 x 120 x 65 mm (31.5"x4.7"x2.6")	
Weight	1.2 kg	
Connector	N-Type, Female	
Back Plane	Aluminum protected through chemical passivation	
Radome	UV Protected, Plastic	
Mount	MNT-5	
Environmental		
<b>Operating Temperature Range</b>	- 40°C to + 65°C	
Vibration	According to IEC 60721-3-4	
Wind Load	200 km/h (survival)	
Flammability	UL94	
Water Proofing	IP-65	
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	
Salt Fog	According to IEC 68-2-11	
Ice and Snow	25mm radial (survival)	
Service Life	>10 years	
Standard Compliance		
ETSI EN 301 525 v1.1.1		





#### 2.3-2.7 GHz Base Station Antenna, 120° MA-WE24-14

MARS 120° Base Station Antenna with 14.5 dBi of gain is light-weight yet has a robust and durable construction. Antenna Features:

- quick and easy installation
- small, aesthetic and unobtrusive radome
- easily adapted to any RF connector
- easy mounting allows to obtain required downtilt degree

**Applicable Applications:** 

- Point-to-Multi-Point Systems
- for WLL applications
- MMDS
- ISM applications

#### **Specifications:**



Electrical		
Frequency range	2.3 – 2.7 GHz	
GAIN, typ.	14.5 dBi	
VSWR, max.	1.7 : 1	
Polarization	Linear, Vertical	
3 dB Beam-Width, H-Plane, typ.	120°	
3 dB Beam-Width, E-Plane, typ.	8°	
Side Lobes, min.	-13 dB	
Cross Polarization, min.	-20 dB	
Front to Back Ratio, min.	-24 dB	
Input power, max	50 Watt	
Input Impedance	50 Ohm	
Lightning Protection	DC Grounded	
Mechanical		
Dimensions (HxWxD)	800 x 120 x 65 mm (31.5"x4.7"x2.6")	
Weight	1.2 kg	
Connector	N-Type, Female	
Back Plane	Aluminum protected through chemical passivation	
Radome	UV Protected, Plastic	
Mount	MNT-5	
	Environmental	
<b>Operating Temperature Range</b>	- 40°C to + 65°C	
Vibration	According to IEC 60721-3-4	
Wind Load	200 km/h (survival)	
Flammability	UL94	
Water Proofing	IP-65	
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	
Salt Fog	According to IEC 68-2-11	
Ice and Snow	25mm radial (survival)	
Service Life	>10 years	
Standard Compliance		
ETSI EN 301 525 v1.1.1		