

4G Dipole Articulated Antenna

SOLUTION SHEET

SSH-0275-00 1.3 en-US ENGLISH



Important User Information

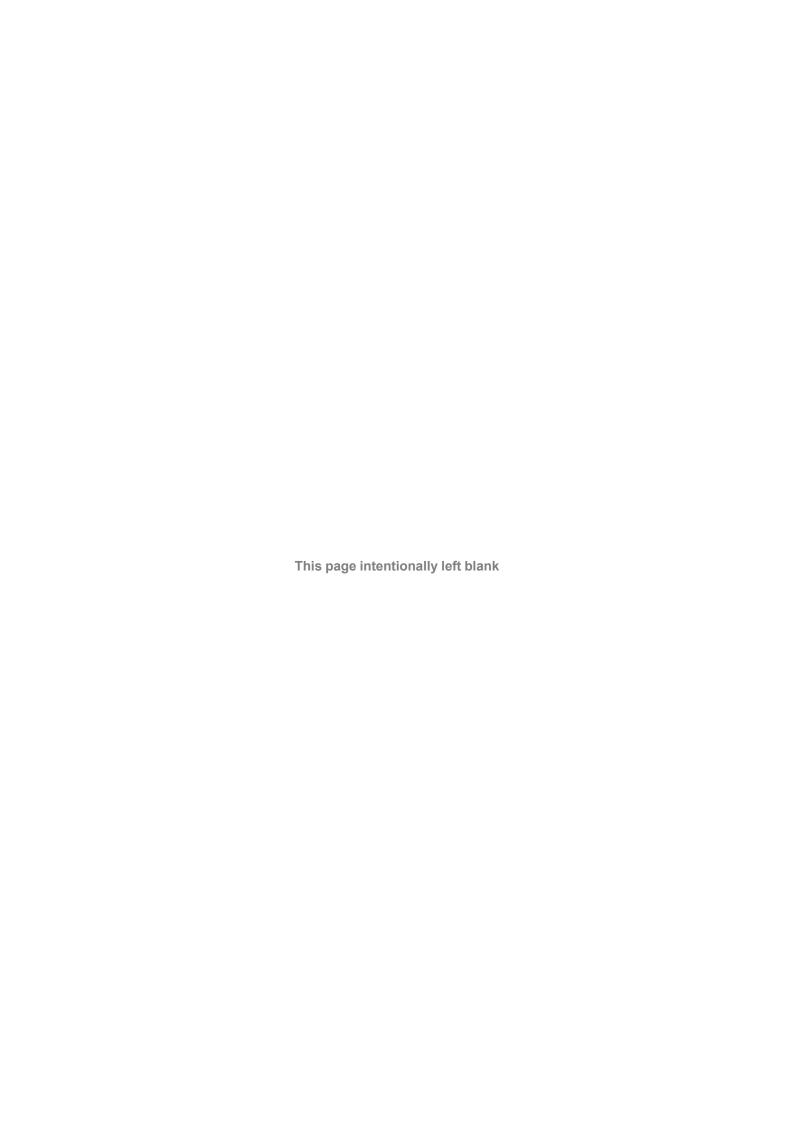
Disclaimer

The information in this document is for informational purposes only. Please inform HMS Industrial Networks of any inaccuracies or omissions found in this document. HMS Industrial Networks disclaims any responsibility or liability for any errors that may appear in this document.

HMS Industrial Networks reserves the right to modify its products in line with its policy of continuous product development. The information in this document shall therefore not be construed as a commitment on the part of HMS Industrial Networks and is subject to change without notice. HMS Industrial Networks makes no commitment to update or keep current the information in this document.

The data, examples and illustrations found in this document are included for illustrative purposes and are only intended to help improve understanding of the functionality and handling of the product. In view of the wide range of possible applications of the product, and because of the many variables and requirements associated with any particular implementation, HMS Industrial Networks cannot assume responsibility or liability for actual use based on the data, examples or illustrations included in this document nor for any damages incurred during installation of the product. Those responsible for the use of the product must acquire sufficient knowledge in order to ensure that the product is used correctly in their specific application and that the application meets all performance and safety requirements including any applicable laws, regulations, codes and standards. Further, HMS Industrial Networks will under no circumstances assume liability or responsibility for any problems that may arise as a result from the use of undocumented features or functional side effects found outside the documented scope of the product. The effects caused by any direct or indirect use of such aspects of the product are undefined and may include e.g. compatibility issues and stability issues.

Ta	Table of Contents				
1	Pref	face	3		
	1.1	About This Document	3		
	1.2	Document History	3		
	1.3	Related Documents	3		
	1.4	Trademark Information	3		
2		terial Descriptionhnical Drawing			
3	rec	nnical Drawing	5		
4	Spe	cifications	6		
5	Part	t Number	8		
6	Ref	erences	9		



Preface 3 (10)

1 Preface

1.1 About This Document

The present document describes the 4G dipole articulated antenna that can be combined with a cellular Ewon gateway.

For additional related documentation and file downloads, please visit www.ewon.biz/support.

1.2 Document History

Version	Date	Description
1.0	2017-10-08	First release
1.1	2017-12-04	Changed: Title, References, Mechanical Data
1.2	2018-02-05	Changed: Part Number
1.3	2020-08-19	Changed: General template

1.3 Related Documents

Document	Author	Document ID	

1.4 Trademark Information

Ewon * is a registered trademark of HMS Industrial Networks SA. All other trademarks mentioned in this document are the property of their respective holders.

Material Description 4 (10)

2 Material Description

This dipole antenna has been primarily designed for 3G and 4G cellular devices such as the Ewon gateway.

It does not require a ground-plane to connect to and has a robust PC+ABS housing. The antenna also has a SMA(M) connector that can be used straight or hinged by 90°.

The antenna has a wide-band high efficiency response on nearly all 2G/3G/4G frequency bands worldwide.

Technical Drawing 5 (10)

3 Technical Drawing

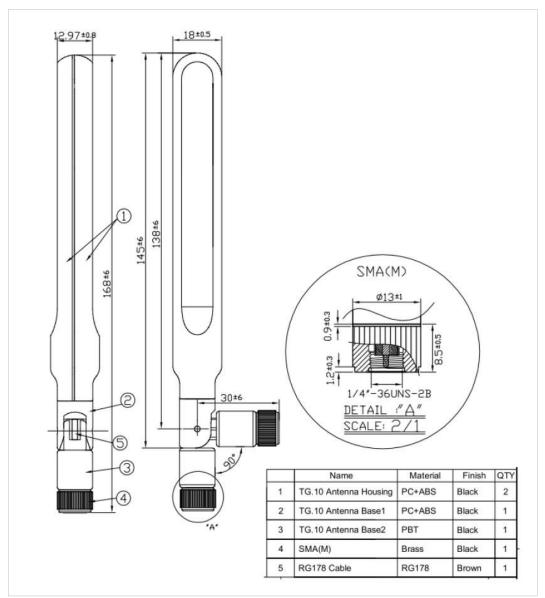


Fig. 1 Technical drawing.

Specifications 6 (10)

4 Specifications

				ELECTRIC	CAL			
				n free sp				
Frequency	702 002	024 004	000 000	4575 40	1710 1000	1050 1000	1000 0170	2400 2500
(MHz)	703~803	824~894				1850~1990	1920~2170	2490~269
			E	fficiency	(%)			
straight	41.82	33.71	26.83	26.17	41.01	35.76	39.76	46.48
bent	48.78	45.62	40.51	26.82 erage Gair	49.05	43.56	47.78	55.37
straight	-3.80	-4.74	-5.73	-5.82	-3.92	-4.48	-4.03	-3.44
bent	-3.12	-3.41	-3.93	-5.71	-3.14	-3.62	-3.22	-2.63
Peak Gain(dBi)								
straight	0.34	0.03	-0.48	-1.85	0.67	-0.07	0.23	2.04
bent	-0.21	0.35	0.22	-2.00	1.00 m ground	0.65	1.30	3.45
				CIII A SC	an ground			
Frequency	703~803	824~894	880~960	1575.42	1710~1880	1850~1990	1920~2170	2490~269
(MHz)			F	fficiency	(%)			
straight	71.68	49.29	43.13	20.87	57.84	67.45	74.31	66.25
bent	74.12	61.90	51.94	23.16	53.64	67.19	73.14	68.20
				erage Gair				
straight	-1.45	-3.08	-3.66	-6.80	-2.38	-1.74	-1.30	-1.84
bent	-1.30	-2.09	-2.86	-6.35	-2.71	-1.76	-1.36	-1.70
atus i alat	2.05	1 20		eak Gain(2.57	4.22	2.05
straight bent	2.85 1.43	1.20 0.79	0.19 -0.13	-2.47 -1.44	2.34	3.57 2.69	4.22 2.96	3.95 4.44
Dene	1.45	100000000000000000000000000000000000000		100000000000000000000000000000000000000	ınd plane e	100000000000000000000000000000000000000	2.50	76.55
Frequency (MHz)	703~803	824~894	880~960	1575.42	1710~1880	1850~1990	1920~2170	2490~269
			E	fficiency	(%)			
straight	57.56	41.53	42.09	18.06	75.91	71.83	68.52	57.08
bent	57.30	48.37	42.12	20.37	72.62	71.93	70.21	58.98
				erage Gair				
straight bent	-2.41 -2.42	-3.82 -3.19	-3.76 -3.76	-7.43 -6.90	-1.20 -1.39	-1.44 -1.43	-1.65 -1.54	-2.50 -2.36
Dent	-2,42	-3.19		eak Gain(-1.45	-1.54	-2.36
straight	2.96	0.68	-0.01	-3.02	3.37	2.83	2.82	3.17
bent	0.61	-0.78	-0.87	-2.61	3.49	4.63	4.76	3.12
		On	30cmX30	cm grou	nd plane ce	nter		
Frequency (MHz)	703~803	824~894	880~960	1575.42	1710~1880	1850~1990	1920~2170	2490~269
				fficiency	(%)			
straight	42.15	28.00	20.35	24.88	39.11	49.92	55.35	47.74
bent	27.52	21.92	15.49	24.23	61.22	64.56	62.92	56.43
straight	-3.76	-5.65	-6.92	erage Gai -6.04	n(dBi) -4.09	-3.04	-2.58	-3.33
bent	-5.63	-6.67	-8.12	-6.15	-2.14	-1.90	-2.02	-2.52
12.0000	2.00	(Heese)		eak Gain(12137
straight	-0.06	-0.66	-1.81	-2.50	0.98	2.01	2.33	2.07
	-0.31	-2.93	-4.79	1.22	4.11	5.42	4.94	4.70
bent	Impedance 50Ω							
bent	ance	Linear						
bent					Linear			
bent Impeda	ation				Linear Omni			

Fig. 2 Specifications

Specifications 7 (10)

Mechanical Data				
Dimensions (mm)	Length 168*18*13mm,Φ13mm			
Casing	PC + ABS			
Connector	Hinged SMA Male			
Operating Temp (°C)	-40°C to 85°C			
Humidity	Non-condensing 65°C 95% RH			
Weight	24g			

Part Number 8 (10)

5 Part Number

Item	EWON P/N	Manufacturer	Manufacturer P/N
Antenna	FAC90901_0000	Taoglas	TG.10.0113

References 9 (10)

6 References

All the above content is based on the Taoglas antennas documentation: http://www.taoglas.com

info@hms.se