

SM715-SW1S(XX)(CWH-GNS) Rugged Transit Antenna, 5 in 1, LTE/WiFi/GNSS

- Wideband LTE port covers all major bands from 698 to 5600 MHz with high RF efficiency
- Built-in high performance GNSS that supports GPS, Galileo, GLONASS, and Beidou
- 2.6 inches height low profile and one 3/4" hole mount for easy installation
- High isolation for optimal performance; rugged design for harsh environment

Future proof that is 5G/CBRS/DSRC/C-V2X ready

The SM715 series is a rugged high performance 5 in 1 vehicle/transit antenna. The RF port covers all major LTE bands from 698 to 5600 MHz. The embedded GNSS antenna utilizes a high-performance LNA and supports all global navigation satellite systems, including GPS, Galileo, GLONASS, and Beidou. It features a rugged design with UV-resistant radome and IP67 rating for durability and long life. The ultra low profile design guarantees minimum potential downtime from damages and its compact size allows it to blend easily with any environment and is ideal for vehicle roof-top mounting. It can be conveniently mounted on a vehicle rooftop by drilling only one hole.



When ordering, please refer to the below chart for detailed model# and connector configurations. Other options are also available, please contact your Sinclair Sales Representative or Customer Service Representative for more information.

Model Number	LTE port	GNSS port	Pigtail
SM715-SW1SSM(CWH-GNS)	SMA(m)	SMA(m)	1 foot (30 cm)
SM715-SW1SNF(CWH-GNS)	N(f)	SMA(m)	1 foot (30 cm)
SM715-SW1SQF(CWH-GNS)	QMA(f)	SMA(m)	1 foot (30 cm)

When a longer pigtail is needed, extension cables are available upon request - see below. Connector and cable length are fully customizable, call for details.

	Model Number	Cable	Length (nominal)	Connector Ant-end	Radio-end
LTE port:	AEC-11-500-SFSM	EF142	5m/17ft	SMA(f) + SMA(m)	
LTE port:	AEC-11-500-SFNF	EF142	5m/17ft	SMA(f) + N(f)	
LTE port:	AEC-11-500-SFQF	EF142	5m/17ft	SMA(f) + QMA(f)	
LTE port:	AEC-01-500-SFSM	RG58/U	5m/17ft	SMA(f) + SMA(m)	
LTE port:	AEC-01-500-SFNF	RG58/U	5m/17ft	SMA(f) + N(f)	
LTE port:	AEC-01-500-SFQF	RG58/U	5m/17ft	SMA(f) + QMA(f)	
GNS port:	AEC-12-500-SFSM	EF316	5m/17ft	SMA(f) + SMA(m)	
GNS port:	AEC-03-500-SFSM	RG174/U	5m/17ft	SMA(f) + SMA(m)	

Note:

When mounted on a metal plate, such as a vehicle rooftop, no ground plate is required. Otherwise, a grounding plane no less than 24 inches in diameter is recommended for optimal performance.

Region	United States	Europe, Middle East, and Africa	Canada, Caribbean, and Latin America	Asia-Pacific
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Product Specification Sheet		SM715-SW1S(XX)(CWH-GNS)	Issue: 2	Dated: 15-03-21

Electrical Specifications

Frequency, port 1 & 2 (LTE)	MHz	698-5600	
Frequency, port 3 & 4 (WiFi)	MHz	2400-2500, 4900-5900	
Gain (Typ), port 1 & 2 (LTE)	dBi	4 to 6	*1
Gain (Typ), port 3 & 4 (WiFi)	dBi	5 to 6	*2
Connector		Various options avail.	*3
Input VSWR (typ)		1.5:1	*4
Polarization		vertical	*5
Impedance	Ω	50	
Pattern		Omni- directional	
Isolation			

Isolation Chart			
Port to Port	Frequency Range (MHz)	Isolation (typ) dB	Isolation (typ) dB
LTE to LTE	698 - 960	10 *	15 **
	1695 - 5600	25 *	30 **
LTE to Wi-Fi	698 - 960	30 *	30 **
	1695 - 5600	20 *	25 **
Wi-Fi to Wi-Fi	2400 - 2500	15 *	15 **
	4900 - 5900	20 *	25 **

* Measured with 1 ft/30 cm cable

** Measured with 17 ft/500 cm cable

Average Input Power (max)	W	LTE ports: 50 W; WIFI ports: 10	
GNSS Frequency	MHz	1559-1606	
GNSS Polarization		RHCP	
GNSS connector		SMA-male	
GNSS VSWR(max)		1.8:1	
GNSS Peak Gain		4.5 dBi	*6
GNSS Gain - LNA	dB	30	*7
GNSS Supply Voltage Range	VDC	3 to 16	
GNSS Current Consumption (typ)	mA	21	
GNSS Noise Figure (max)	dB	2.5	
GNSS Out of Band Rejection 1		>40dB @ <1500MHz	
GNSS Out of Band Rejection 2		>45dB @ <1525MHz	
GNSS Out of Band Rejection 3		>45dB @ >1630MHz	

Mechanical Specifications

Width	in (mm)	6.3 (160)	
Depth	in (mm)	6.3 (160)	
Height	in (mm)	2.6 (66)	
Cable - LTE port		EF142, LSZH, fire retardant	*8
Cable - WIFI port		EF142, LSZH, fire retardant	*9
Cable - GNS port		EF316, LSZH, fire retardant	*10
Radome material		UV stabilized ASA, UL94 HB	
Base plate material		aluminum	
Weight	lbs (kg)	2 (0.91)	
Shipping weight	lbs (kg)	3 (1.36)	
Shipping dimensions	in (mm)	10x10x10 (254x254x254)	
Radome Colour		White	
Ingress protection		IP67	*11

Environmental Specifications

Temperature range	°F (°C)	-40 to +140 (-40 to +60)
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Notes

- *1 : ±0.5 dBi, Measured on a 24x24 inch metal ground.
- *2 : ±0.5 dBi, Measured on a 24x24 inch metal ground.
- *3 : See previous page for details.
- *4 : VSWR (max) 2:1
- *5 : For LTE and WIFI ports.
- *6 : Passive.
- *7 : ± 2 dB.
- *8 : Flammability: EN 60332-1-2, UL 1581 § 1100, EN 50305, 9.1.2.
- *9 : Flammability: EN 60332-1-2, UL 1581 § 1100, EN 50305, 9.1.2.
- *10 : Flammability: EN 60332-1-2, UL 1581 § 1100, EN 50305, 9.1.2.
- *11 : After installed, please follow installation manual.

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