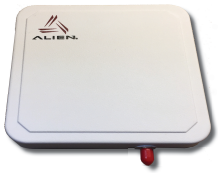
ALR Family
Antennas

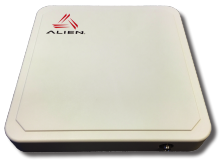
HIGHLIGHTS:

- Circular polarized antenna
- All antenna work worldwide…no need to worry about regions.
- Physically robust
- Choice of cable lengths
- Choice of gains and beam width

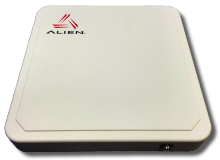
ALR-A1001



ALR-A0501



ALR-8697



ALR-8698

ALR-8696-C

	ALR-A1001	ALR-A0501	ALR-8697	ALR-8698	ALR-8696
Frequency	865-867MHz 902-928MHz	865-868MHz 902-928MHz	865 – 928MHz	866 – 928MHz	865-960MHz
Gain	8.5dBic	6dBic	8.5dBic	11 dBic (FCC) 10dBic (ETSI)	8.5dBic
Size	9.84″ x 9.84″ x 0.55″	5.04″ x 5.04″ x 0.79″	10.16″ x 10.16″ x 1.42″		10.2″ x 10.2″ x 1.32″
Cable/Connector	Inset SMA male connector		No cable / inset RTNC (i.e. any cable)		20ft (6m) w/RTNC
IP Rating	IP67				IP54

ALR-A1001

Ultra Slim 8.5dBic Antenna

The Alien Technology® ALR-A1001 is a high-performance, circular-polarized antenna for use in demanding applications. The ALR-A1001 is a 8.5dBic gain antenna for use with Alien®'s readers.

FEATURES

- Very Low Profile
- Up to 9m / 29 ft. read range
- Extremely low VSWR and axial ratio
- Weather and UV resistant radome (IP67)
- SMA female connector
- RoHS EU 2002/95/EC compliant

APPLICATIONS

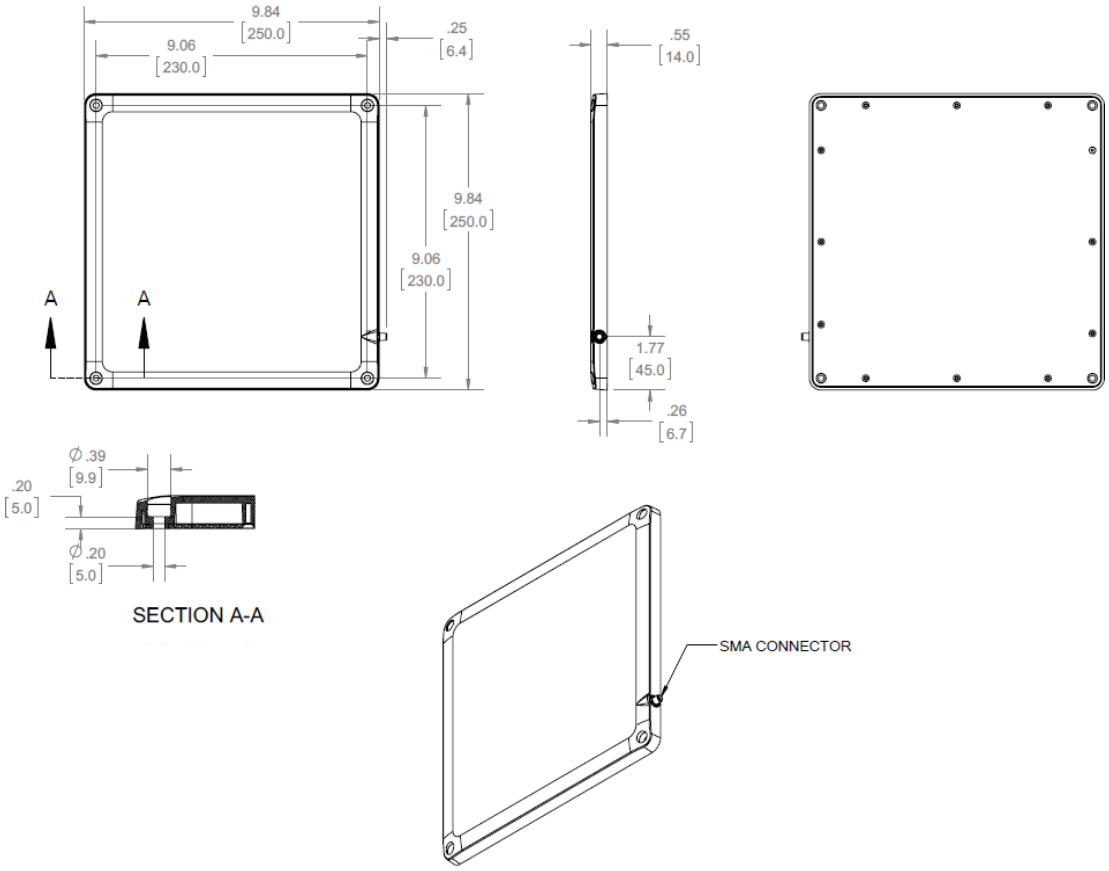
- Warehouses
- Distribution centers
- Airports and hospitals
- Transit terminals
- Conveyer belts

Benefit	Enabled By:	What does this mean to me?
A thin antenna with no protrusions	Low profile, just 14mm/0.55" thick	Enables mounting where objects may otherwise hit or damage a larger antenna
Built to keep the elements out	Weather and UV resistant and IP67 rating	Designed for a variety of inside and outside applications that demand a robust antenna
Highly efficient antenna	Extremely low VSWR and axial ratio	Read tags in challenging environment and/or at greater distances. Very robust read capability regardless of tag orientation.

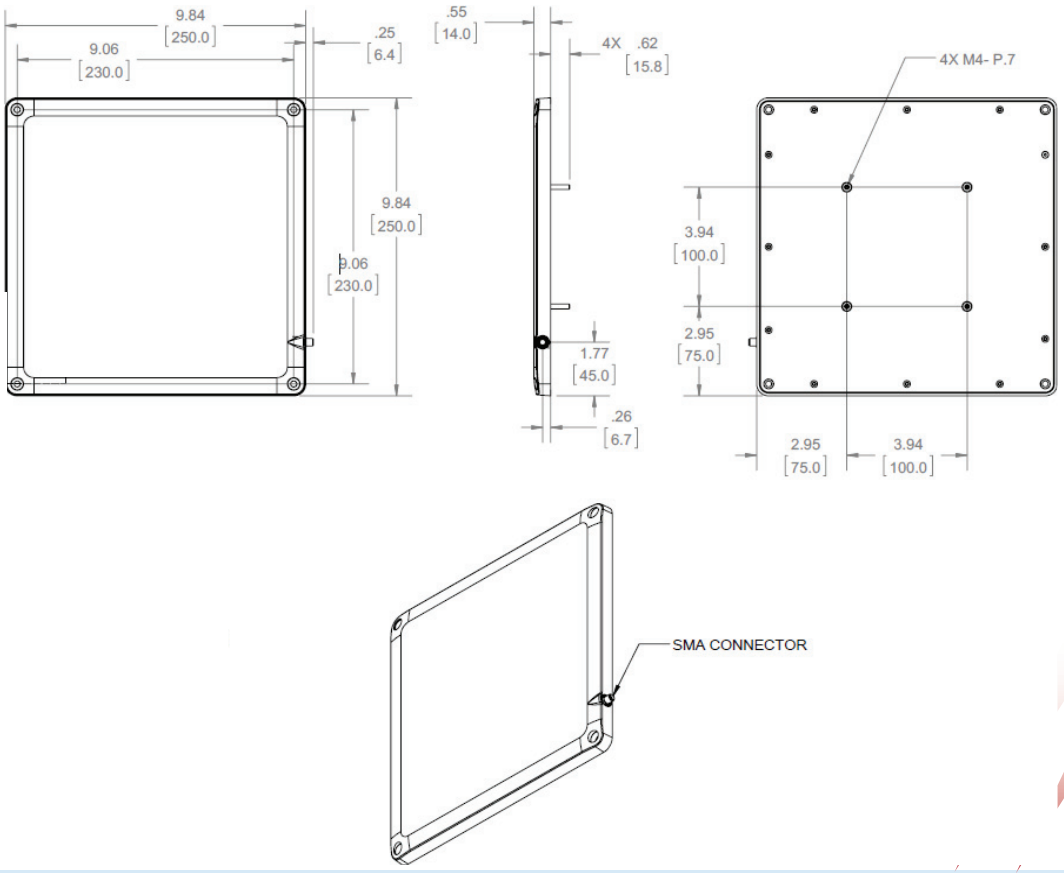
The Alien Technology's ALR-A1001 antenna is circularly polarized panel antenna that provides reception and transmission of signals either in the 865-867 ETSI (ALR-A1001-E-x) or 902-928 MHz FCC (ALR-A1001-F-x) frequency band. The design achieves maximum efficiency and performance across the entire frequency band and all tag orientations.

VSWR and axial ratios are both excellent and allow the user to achieve the maximum performance for an antenna of this type. The antenna is housed in a heavy duty radome enclosure with options for direct wall mounting via flush through-hole (ALR-A1001-x-S) or VESA studded (ALR-A1001-x-V) mounting techniques.

Dimensions - Standard Flush mount (ALR-A1001-x-S)



Dimensions - VESA Stud mount (ALR-A1001-x-V)



ALR-A1001

Ultra Slim 8.5dBic Antenna

Ordering Information

Model #	Description
ALR-A1001-F-S	FCC / Standard Flush Mount
ALR-A1001-F-V	FCC / VESA Stud Mount
ALR-A1001-E-S	ETSI / Standard Flush Mount
ALR-A1001-E-V	ETSI / VESA Stud Mount

Specifications

Parameter	ALR-A1001-F-x	ALR-A1001-E-x
Frequency Range	902 - 928 MHz	865 - 867 MHz
Gain	8.5dBic	
Maximum VSWR	≤ 1.3:1	
3 dB Beamwidth - Azimuth	68° x 68°	
Front to Back Ratio	20 dB	
Polarization	Circular Right-hand	
Maximum Input Power	3 Watts (34dBm)	
Input Impedence	50 ohms	
Axial Ratio	2dB typical ; 4dB Max	
Weight	1.6 lbs (0.75 Kg)	
Mechanical Size	9.84" x 9.84" x 0.55" (250 x 250 x 14mm)	
Antenna Connection	SMA Female (no cable) *	
Radome	UV-Resistant ABS	
Mount Style	Standard Flush (ALR-A1001-x-S) or 100mm VESA (ALR-A1001-x-V)	
Operating Temperature	-20° to +55°C / -4° to +131°F	
Storage Temperature	-30° to +65°C / -22° to +149°F	
Humidity	5-85% Non Condensing	
Lightning Protection	DC Grounded	
Environmental Rating	IP 67	

* Alien recommends ALX-421-6 cable (not included) to ensure compliance with local regulations. Other options listed below

Antenna Cable Options (Not Supplied with Antenna)

Model #	Description	Comment
ALX-421-3	3 METER SMA M to RP-TNC M Antenna Cable	Per FCC, professional installation is required to ensure compliance with local regulations
ALX-421-6	6 METER SMA M to RP-TNC M Antenna Cable	Default solution for Alien Antenna
ALX-421-9	9 METER SMA M to RP-TNC M Antenna Cable	

February 28, 2017

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ALR-A0501

Compact 5” 6dBic Antenna

The Alien Technology® ALR-A0501 is a compact 5” x 5”, 6dBic gain circular-polarized antenna for use in applications where footprint is critical or a small to medium read distance is preferred.

FEATURES

- Small Footprint
- Dust and spray resistant radome (IP67)
- SMA female connector
- RoHS EU 2002/95/EC compliant

APPLICATIONS

- Tag Commissioning
- Distribution centers
- Airports and hospitals
- Transit terminals
- Warehouses

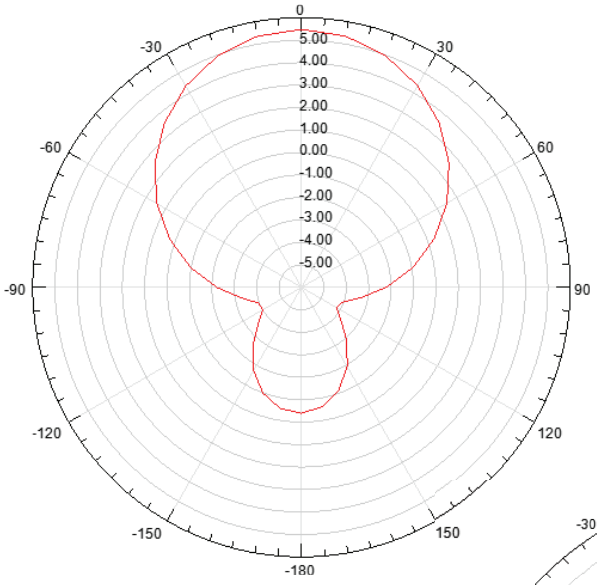
Benefit	Enabled By:	What does this mean to me?
Built to keep the dust and moisture out	Weather and UV resistant	Designed for a variety of inside and outside applications that demand a **robust IP67 antenna**
Space Efficient	Small SMA Connector and small 5” x 5” footprint	Fits into space constrained areas.

The Alien Technology’s ALR-A0501 antenna is small footprint (5” square) 6dBi gain, circularly polarized panel antenna that provides reception and transmission of signals either in the in the 902-928 MHz frequency band or the 865-868 MHz frequency band. The design methodology achieves maximum efficiency and performance across the entire frequency band and tag orientations.

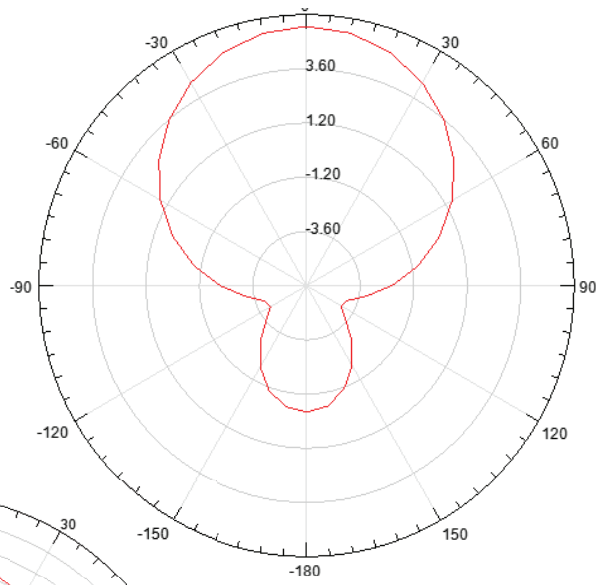
Both VSWR and axial ratios are both excellent and allow the user to achieve the maximum performance for an antenna of this size. The antenna is housed in a heavy duty radome enclosure to protect from dust and moisture ingress.

ALR-A0501 - RF Radiation Plot

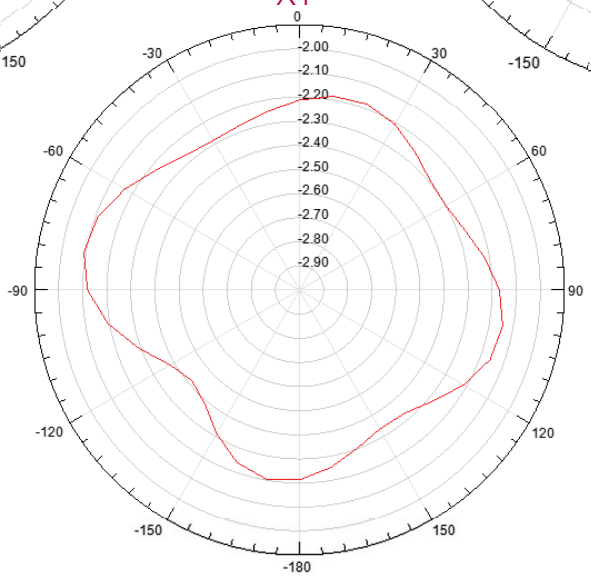
XZ



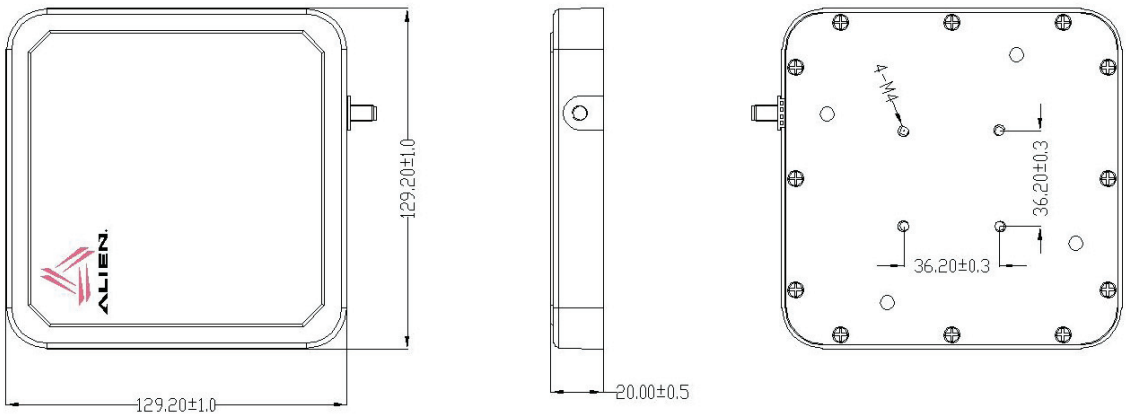
YZ



XY



Dimensions



ALR-A0501
Compact 5” 6dBic Antenna

Ordering Information

Model #	Description
ALR-A0501-F	FCC Version
ALR-A0501-E	ETSI Version

Specifications

Parameter	ALR-A0501-F	ALR-A0501-E
Frequency Range	902 - 928 MHz	865 - 868 MHz
Gain	6dBic	
Maximum VSWR	≤ 1.3:1	
3 dB Beamwidth - Azimuth	105° x 105°	
Front to Back Ratio	5.6 dB	
Polarization	Circular Right	
Maximum Input Power	10 Watts (40dBm)	
Input Impedance	50 ohms	
Axial Ratio	<1.5dB	
Weight	0.66 lbs (0.30 Kg)	
Mechanical Size	5.04” x 5.04” x 0.79” (128 x 128 x 20mm)	
Antenna Connection	SMA Female (no cable) *	
Radome	ABS	
Mount Style	Thread Stud	
Operating Temperature	-13 to 158°F (-25°C to +70°C)	
Lightning Protection	DC Grounded	
Environmental Rating	IP 67	

* Alien® recommends ALX-421-6 cable (not included) to ensure compliance with local regulations. Other options listed below

Antenna Cable Options (Not Supplied with Antenna)

Model #	Description	Comment
ALX-421-3	3 METER SMA M to RP-TNC M Antenna Cable	Per FCC, professional installation is required to ensure compliance with local regulations
ALX-421-6	6 METER SMA M to RP-TNC M Antenna Cable	Default solution for Alien Antenna
ALX-421-9	9 METER SMA M to RP-TNC M Antenna Cable	

February 28, 2017

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ALR-8697

Low VSWR/Axial Ratio Antenna

The Alien Technology ALR-8697 is a high-performance, worldwide, circular-polarized antenna for use in demanding applications. Both the ALR-8697 and ALR-8698 antenna utilize the same form-factor but offer different gain. The ALR-8697 is a 8.5dBic gain antenna for use with the the ALR-F800 and ALR-9680 readers.

FEATURES

- Extremely low VSWR and axial ratio
- Wide band antenna for worldwide applications
- Low Profile
- Weather and UV resistant radome (IP67)
- Reverse polarity TNC connector
- RoHS EU 2002/95/EC compliant

APPLICATIONS

- Warehouses
- Distribution centers
- Airports and hospitals
- Transit terminals
- Conveyer belts

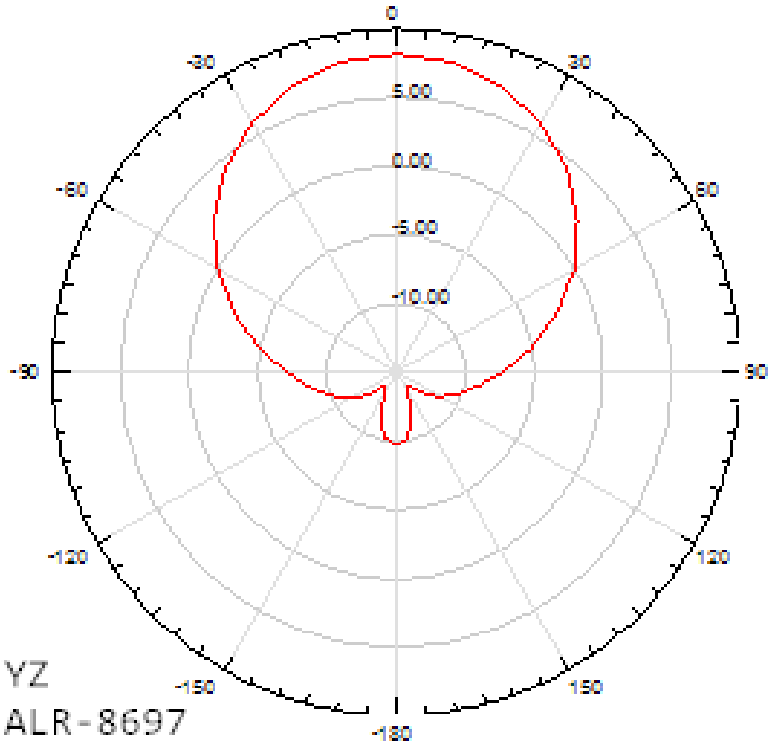
Benefit	Enabled By:	What does this mean to me?
Wide band antenna	865 - 928 MHz antenna	Single antenna for worldwide usage
A thin antenna with no protrusions	Low profile	Enables mounting where objects may otherwise hit or damage a larger antenna
Built to keep the elements out	Weather and UV resistant	Designed for a variety of inside and outside applications that demand a **robust IP67 antenna**
Highly efficient antenna	Extremely low VSWR and axial ratio	Read tags in challenging environment and/or at greater distances. Very robust read capability regardless of tag orientation.

The Alien Technologies ALR-8697 antenna is a circularly polarized panel antenna that provides reception and transmission of signals in the 865-928 MHz frequency band. The design methodology achieves maximum efficiency and performance across the entire frequency band and tag orientations.

Both VSWR and axial ratios are both excellent and allow the user to achieve the maximum performance for an antenna of this type. The antenna is housed in a heavy duty radome enclosure that can be directly wall mounted via standard VESA mounting techniques.

Both the ALR-8697 and ALR-8698 antenna have exactly the same footprint so can be interchanged if needed and both have the same inset reverse TNC connector that helps to protect it from knocks and damage.

ALR-8697 - RF Radiation Plot



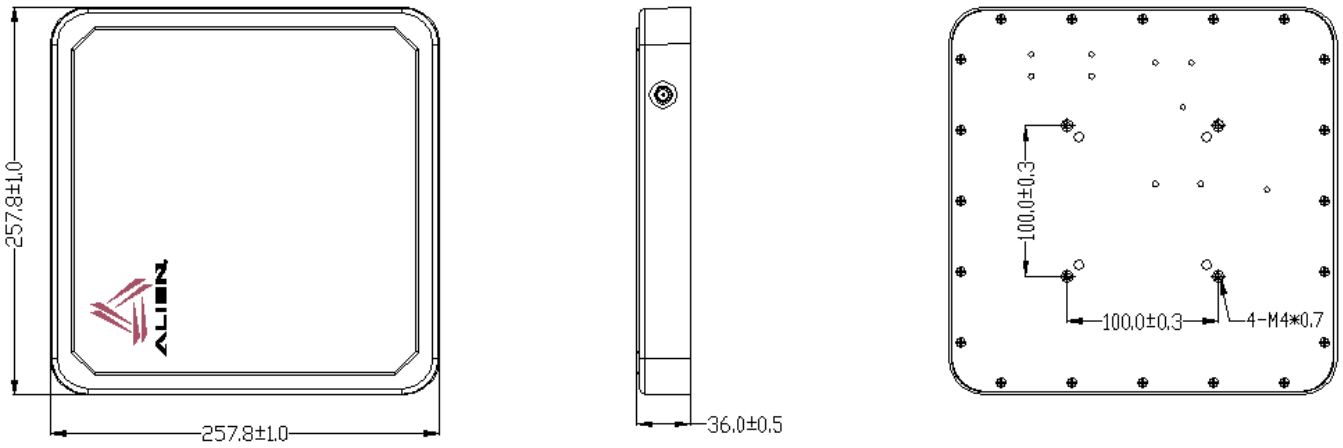
ALR-8697
Low VSWR/Axial Ratio Antenna

Specifications

Parameter	ALR-8697
Frequency Range	865 - 928 MHz
Gain	≥8.5 dBic
Maximum VSWR	≤ 1.3:1
3 dB Beamwidth - Azimuth	70° x 70°
Front to Back Ratio	20 dB
Polarization	Circular Right-hand
Maximum Input Power	33dBm
Input Impedence	50 ohms
Axial Ratio	1.2dB
Weight	2.0 lbs (0.91 Kg)
Mechanical Size	10.16" x 10.16" x 1.42"(258 x 258 x 36mm)
Antenna Connection	Inset Rev TNC Male (no cable) *
Radome	High Strength ASA
Mount Style	100mm VESA mounting holes
Temperature operational	-40°C to +70°C
Humidity	5-95% Non Condensing
Lightning Protection	DC Grounded
Environmental Rating	IP 67

* Alien recommends ALX-420-3 or ALX-420-6 cables to ensure complaince with local regulations and use professional installation

Dimensions



July 18 2016

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ALR-8698

Low VSWR/Axial Ratio Antenna

The Alien Technology ALR-8698 is a high-performance, worldwide, circular-polarized antenna for use in demanding applications. Both the ALR-8698 and ALR-8697 antenna utilize the same form-factor but offer different gain. The ALR-8698 is a 11dBic (US)/ 10dBic (EU) gain antenna for use with Alien's mid-range readers.

FEATURES

- Extremely low VSWR and axial ratio
- Wide band antenna for worldwide applications
- Low Profile
- Weather and UV resistant radome (IP67)
- Reverse polarity TNC connector
- RoHS EU 2002/95/EC compliant

APPLICATIONS

- Warehouses
- Distribution centers
- Airports and hospitals
- Transit terminals
- Conveyer belts

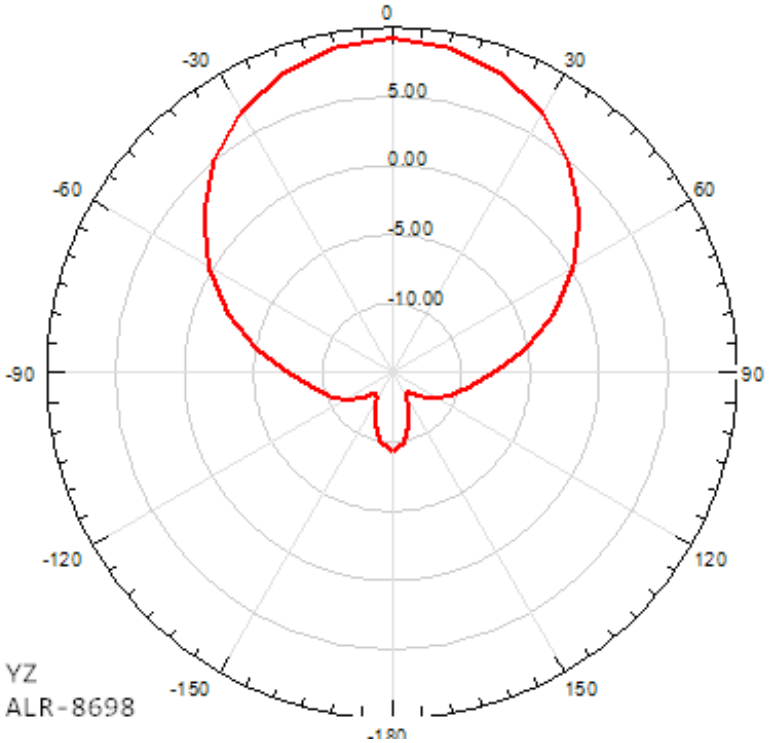
Benefit	Enabled By:	What does this mean to me?
Wide band antenna	865 - 928 MHz antenna	Single antenna for worldwide usage
A thin antenna with no protrusions	Low profile	Enables mounting where objects may otherwise hit or damage a larger antenna
Built to keep the elements out	Weather and UV resistant	Designed for a variety of inside and outside applications that demand a **robust IP67 antenna**
Highly efficient antenna	Extremely low VSWR and axial ratio	Read tags in challenging environment and/or at greater distances. Very robust read capability regardless of tag orientation.

The Alien Technologies ALR-8698 antenna is circularly polarized panel antenna that provides reception and transmission of signals in the 865-928 MHz frequency band. The design methodology achieves maximum efficiency and performance across the entire frequency band and tag orientations.

Both VSWR and axial ratios are both excellent and allow the user to achieve the maximum performance for an antenna of this type. The antenna is housed in a heavy duty radome enclosure that can be directly wall mounted via standard VESA mounting techniques.

Bothe the ALR-8698 and ALR-8697 antenna have exactly the same footprint so can be interchanged if needed and both have the same inset reverse TNC connector that helps to protect it from knocks and damage.

ALR-8698 - RF Radiation Plot



ALR-8698

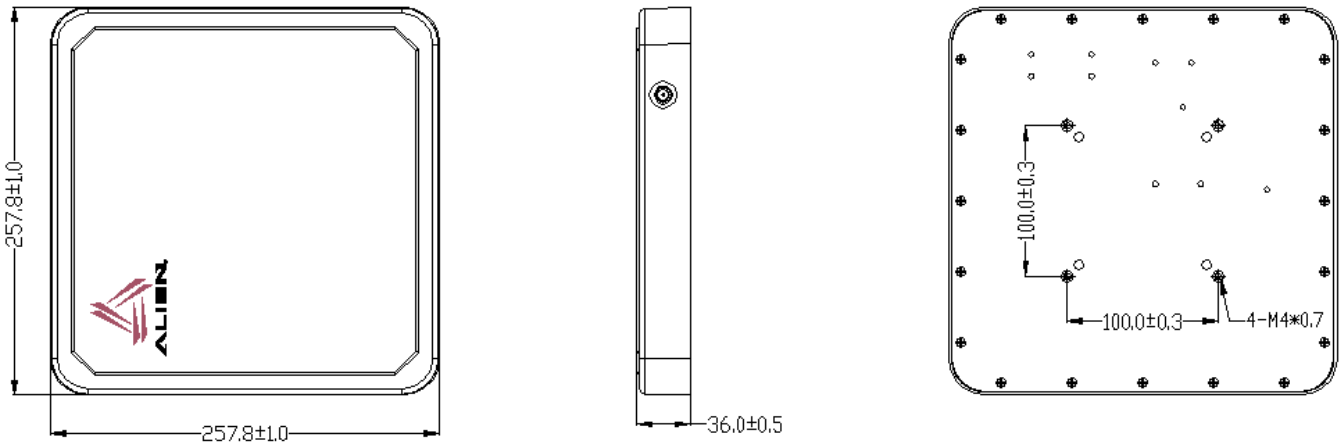
Low VSWR/Axial Ratio Antenna

Specifications

Parameter	ALR-8698
Frequency Range	865 - 928 MHz
Gain	≥11dBic FCC / ≥10dBic ETSI
Maximum VSWR	≤ 1.3:1
3 dB Beamwidth - Azimuth	70° x 70°
Front to Back Ratio	20 dB
Polarization	Circular Right-hand
Maximum Input Power	33dBm
Input Impedence	50 ohms
Axial Ratio	1.2dB
Weight	2.0 lbs (0.91 Kg)
Mechanical Size	10.16" x 10.16" x 1.42"(258 x 258 x 36mm)
Antenna Connection	Inset Rev TNC Male (no cable) *
Radome	High Strength ASA
Mount Style	100mm VESA mounting holes
Temperature operational	-40°C to +70°C
Humidity	5-95% Non Condensing
Lightning Protection	DC Grounded
Environmental Rating	IP 67

* Alien recommends ALX-420-3 or ALX-420-6 cables to ensure complaince with local regulations and use professional installation

Dimensions



July 18, 2016

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ALR-8696-C

Low VSWR/Axial Ratio Antenna

The Alien Technology ALR-8696-C is a high-performance, worldwide, circular-polarized antenna for use in demanding applications. The antenna is certified for use with all Alien fixed readers.

FEATURES

- Extremely low VSWR and axial ratio
- Wide band antenna for worldwide applications
- Low Profile
- Weather and UV resistant radome
- 20 ft. cable with reverse polarity TNC connector
- RoHS EU 2002/95/EC compliant

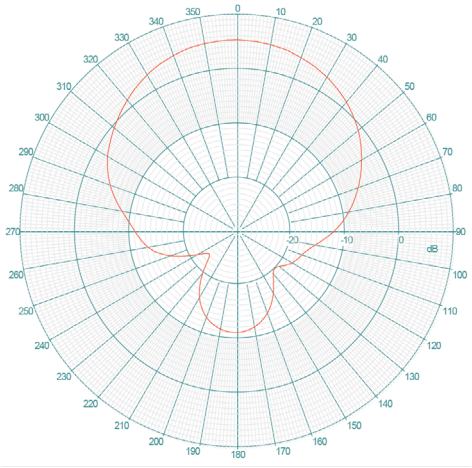
APPLICATIONS

- Warehouses
- Distribution centers
- Airports and hospitals
- Transit terminals
- Conveyer belts

Benefit	Enabled By:	What does this mean to me?
Wide band antenna	865 - 960 MHz antenna	Single antenna for worldwide usage
A thin antenna with no protrusions	Low profile	Enables mounting where objects may otherwise hit or damage a larger antenna
Built to keep the elements out	Weather and UV resistant	Designed for a variety of inside and outside applications that demand a robust IP54 antenna
Highly efficient antenna	Extremely low VSWR and axial ratio	Read tags in challenging environment and/or at greater distances. Very robust read capability regardless of tag orientation.

The Alien Technologies ALR-8696-C antenna is a circularly polarized panel antenna that provides reception and transmission of signals in the 865-960 MHz frequency band. The design methodology achieves maximum efficiency and performance across the entire frequency band and tag orientations.

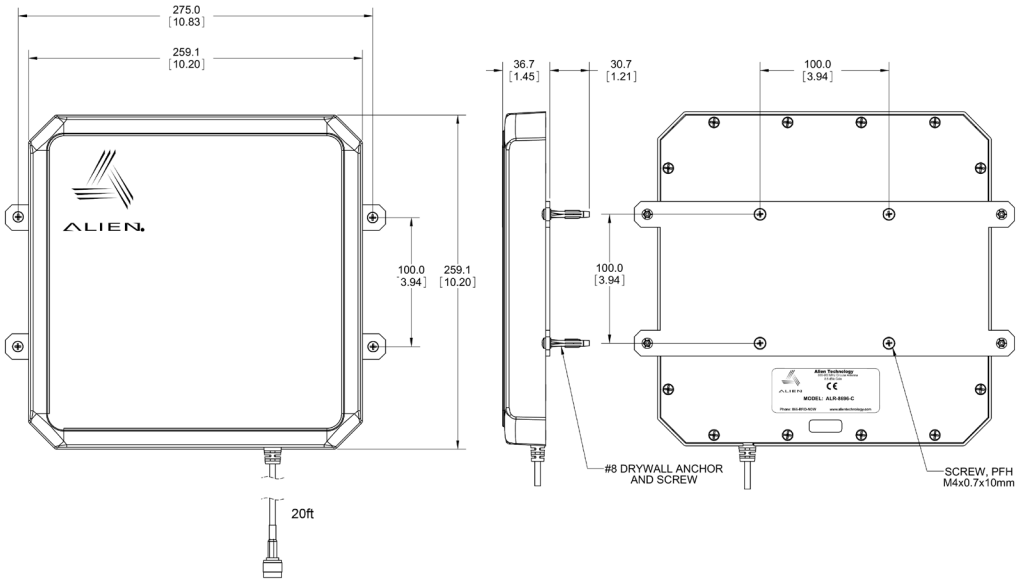
Both VSWR and axial ratios are both excellent and allow the user to achieve the maximum performance for an antenna of this type. The antenna is housed in a heavy duty radome enclosure that can be directly wall mounted.



ALR-8696-C

Low VSWR/Axial Ratio Antenna

Parameter	Application
Antenna Part number	ALR-8696-C
Frequency Range	865 - 960 MHz
Gain	8.5 dBic
Cable loss	2.2dB (20ft)
Maximum VSWR	1.4:1
3 dB Beamwidth - Azimuth	65°
Front to Back Ratio	20 dB
Polarization	Circular Right-hand
Maximum Input Power	2 Watts
Input Impedence	50 ohms
Axial Ratio	1.2dB
Weight (Kg)	2.5 lbs (1.13)
Mechanical Size	10.2" x 10.2" x 1.32"
Antenna Connection	Coax Pigtail, Rev TnC Male
Radome	High Strength PC
Mount Style	100mm VESA mounting plate
Temperature operational	-25°C to +70°C
Humidity	MIL-STD-810G, Method 507.5 Procedure II Aggravated
Lightning Protection	DC Grounded
Environmental Rating	IP 54



December 21, 2014

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