Avior

High Performance Tolling Antenna

Highlights

- Specially designed for High Speed Tolling Systems
- Perfect read zone in ORT, Multi-Lane Free Flow, or Single Lane Plaza based All-Electronic Tolling (AET) Systems

Avior ™

Product Description

Avior tolling antenna is designed and built specifically to be an over-the-road antenna for high speed tolling systems using passive tags.

With its unique and patented design, Avior creates an ideal read zone in either an ORT, Multi-Lane Free Flow or in a Single Lane Plaza based All-Electronic Tolling (AET) System.

Equipped with a focused narrow beam, Avior provides the power to assure that read rates at high speed are not only maximized, but also isolated to the desired read zone, avoiding cross-lane reads and adjacent lane interference.

Avior's reduced footprint and weight is unique in the market compared to competitive products. Its improved smaller size makes it perfect for more efficient and safer installation over roads. Economically speaking, its compact size reduces shipping and storage cost while makes installation easier.

Toll operators using passive tags require dependable and focused antennas to maximize read rates and automatic transactions. Avior has been created with the toll operator in mind.

Avior also has a wideband design allowing it to operate in the 865 – 928 MHz range, which makes it applicable for use across the globe.

Built from heavy duty aluminum with a full IP-67 housing, the Avior is meant to last in the harshest roadside environments.

Your Success is Our Vision

STAR Systems International Ltd.
Unit 7B, 8/F Vanta Industrial Centre
21-33 Tai Lin Pai Road, Kwai Chung
Hong Kong

www.star-int.net
+852 3691 9925
sales@star-int.net

CERTIFIED ISO 9001:2008 COMPANY

Specifications

Electrical

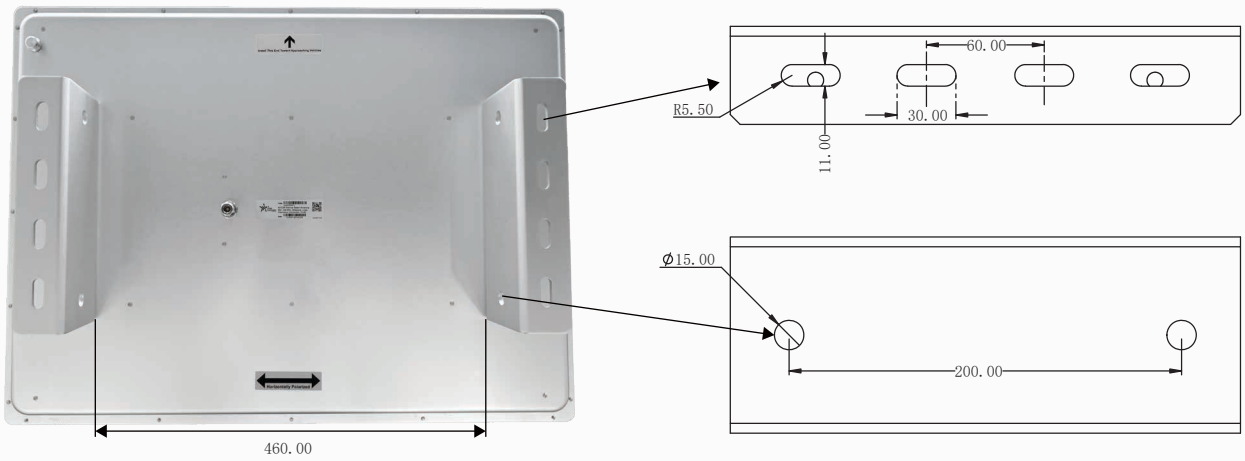
Frequency Range	865 – 928 MHz
Gain	15 dBi ± 1 dB
Return Loss	Below -15 dB
3dB Beamwidth	27.5° – 29° (Azimuth)
	34° – 36° (Elevation)
Polarization	Linear Horizontal
Side Lobes Level	Below -20 dB
Cross Polarization	Below -18 dB
Front to Back Ratio	Below -30 dB
Max. Input Power	6 W
Impedance	50 Ω
Lightning Protection	DC Grounded
RoHS Compliance	Yes

Mechanical

Antenna	Dimensions	698 × 518 × 31 mm (Excludes mounting bracket)
	Weight	6.3 kg (Includes mounting bracket)
Mounting Bracket	Dimensions	260 × 50 × 100 mm
	Slot-to-slot distance	59-60-59 mm
	Round slot size	30 × 11 mm
Connector		N-Type Female
Mounting Kit	Included (Two U-bolt kits) Minimum width of the pole (to be mounted) is 25mm Maximum width of the pole (to be mounted) is 50mm	

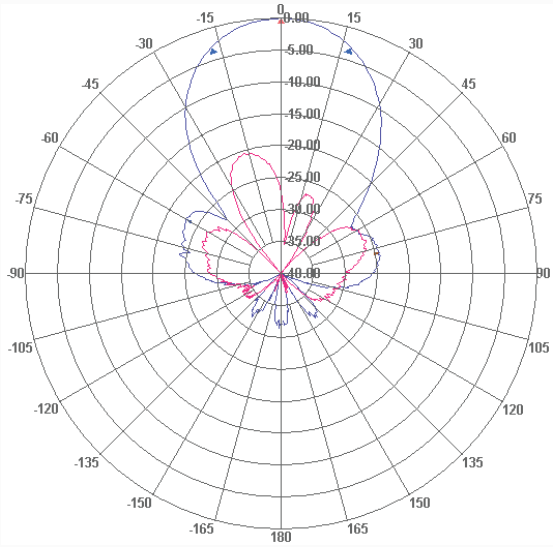
Environmental

Test	**Standard**	**Duration**	**Temperature**	**Notes**
Low Temperature	EN 60068-2-1-2007	72 Hours	-55 °C (67 °F)	
High Temperature	EN 60068-2-2-2007	72 Hours	+71 °C (159.8 °F)	
Temperature Cycling	EN 60068-2-14-2009	1 hour	-45 to 70 °C	Rate: ≤ 1 °C/min 3 cycles
Vibration	EN 60721-3-4-1995	30 mins / axis		4M3
Shock Mechanical	EN 60721-3-4-1995			4M3
Humidity	ETSI EN300-019-2-4-2015	144 Hours		Humidity 95% ± 5% (at 30 °C)
Waterproofing	IEC 60529-2013	30 mins		IP67 (Immersion: 1m)
Salt Spray	EN 60068-2-11-2001 Ka	500 Hours		Salt solution: 5% (at 35 °C)
Ice and Snow				25mm Radial
Wind Speed - Survival / Operation		30 mins		220 / 160 (Km/hr)
Wind Loading (Survival) - Front Thrust / Side Thrust		30 mins		167.1 / 7.4 (kg)

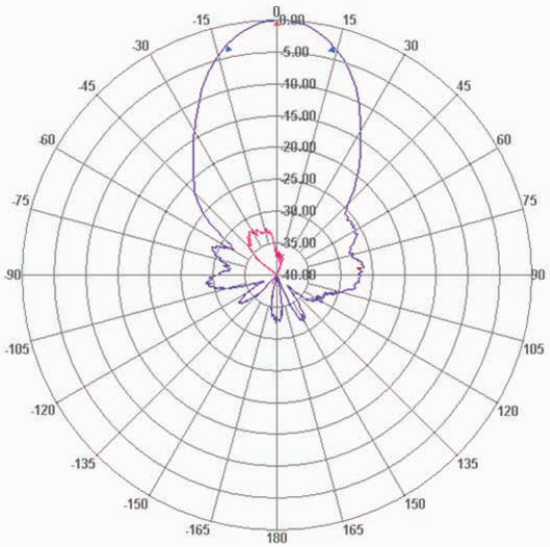


Unit: mm

Radiation Pattern



Elevation (H-plane)
Co- and Cross- Polarization Radiation Patterns



Azimuth (E-plane)
Co- and Cross- Polarization Radiation Patterns