AA3110-101 Horizontally Polarized Panel Antenna

Features

- Suitable for traffic management and tolling applications
- Asymmetrical broadcast pattern
- Low-profile design
- Weatherproof enclosure suitable for non-vertical mounting orientation
- UV-tolerant and corrosion-resistant construction

The Horizontally Polarized Panel Antenna (AA3110-101) broadcasts and receives radio frequency (RF) signals in the 902 to 928 MHz RF band. It is a precision dipole array designed for directional transmission and reception. For installations requiring a reading area larger in one dimension than in another, the AA3110-101 Panel Antenna provides a 48° variance in half-power beam width from the horizontal to the vertical plane.

The AA3110-101 antenna’s relatively thin 7 inch (17.8 cm) depth makes it ideally suited to applications requiring a low-profile antenna.

A heavy laminated fiberglass radome encloses the AA3110-101 Panel Antenna for protection against severe environmental conditions. In addition, the backplate fittings have been sealed with polyurethane caulking to prevent moisture penetration. Radome materials provide favorable electrical characteristics and resistance to ultraviolet (UV) radiation. All fastenings and hardware are stainless steel for maximum corrosion resistance.

Suitable for use with TransCore’s Encompass® family of multiprotocol readers, the AA3110-101 antenna read area is ideal for traffic management and toll lane applications.
**AA3110-101 Horizontally Polarized Panel Antenna**

**COMMUNICATIONS**

**Frequency Range**  
902 to 928 MHz  
Custom frequencies available upon request

**Gain**  
11.5 dBi

**Front-to-Back Ratio**  
>19 dB

**VSWR**  
1.25:1 maximum

**Impedance**  
50 ohms

**HARDWARE FEATURES**

**Connector**  
Type N female

**PHYSICAL**

**Dimensions**  
Size: 29 x 10.5 x 7 in.  
(73.7 x 26.7 x 17.8 cm)

**Weight:**  
Antenna only: 9.0 lb (4.1 kg)  
Antenna with mounting brackets: 13 lb (5.9 kg)

**Mounting Height**  
15 to 22 ft (4.6 to 6.7 m) typical  
18 ft (5.5 m) optimal

**Mounting Method**  
To circular support with maximum outside diameter of 2.375 in (6 cm)

**Mounting Orientation**  
Non-vertical

**Polarization**  
Horizontal

**Enclosure**  
Weatherproof radome and sealed backplate

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**Radiation Pattern**

- **H-Plane Elevation Pattern** (horizontal polarization)
- **E-Plane Azimuth Pattern** (horizontal polarization)