

# HE Antenna

## Features

- Constructed to meet AREMA and EN shock and vibration standards
- IP65/67 rugged weatherproof enclosure
- Corrosion and chemical resistant
- Compact and lightweight
- RoHS, low-smoke, and low-toxicity compatible
- Includes strain relief for high vibration applications
- 870MHz ISM band

## Applications

- Train positioning
- Rail Automatic Equipment Identification (AEI)



The HE (Harsh Environment) Antenna offers rail integrators a rugged, reliable antenna in a small, easy to install package for today's increasingly crowded train undercarriages.

Designed to meet AREMA and EN shock and vibration standards, and ETSI 301 489-1 and -3 requirements for external antennas, the Compact HE Antenna can withstand some of the harshest conditions. The IP65/67 rugged weatherproof enclosure protects the antenna from wash-down spray and full submersion.

The Compact HE Antenna can be mounted under the locomotive or on the truck/bogie. Optional spacers allow the antenna to interface with brackets for other readers, minimizing modifications to existing equipment. TransCore's specially designed strain relief mount provides better coaxial cable durability when used in bogie mount applications.

The Compact HE Antenna case materials are designed to meet RoHS, low-toxicity, and low- smoke requirements.

# HE Antenna

## COMMUNICATIONS

### Frequency Range

865 to 875MHz or 902 to 928 MHz  
Meets EN302 208 Standards

### Gain (peak)

7 dBi

### Polarization

Linear, parallel with longer side

### VSWR

Maximum: 2.0 Typical: 1.6

### Impedance

50 ohms nominal

### Beamwidth

E-Plane: 84° H-Plane: 87°

## HARDWARE FEATURES

### Connectors

Right angle N-type female

## PHYSICAL CHARACTERISTICS

### Dimensions

Size: 7.9x12.2x2.1in(20.1x31.0x5.3cm)  
Weight: 6.1 lbs (2.8 kg)

### Radome

Impact Rating: 168 inch-pound Gardner

## ENVIRONMENTAL

### Operating Air Temperature

-40°F to +176°F (-40°C to +80°C)

### Humidity

100% condensing

### Vibration Tolerance

AREMA Part 11.5.1 Class G & H  
EN 61373:2010 Category 1B & 2  
3GRMS 5 to 250Hz

### Shock Tolerance

AREMA Part 11.5.1 Class G & H EN  
61373:2010 Category 1B & 2 30G peak x  
18ms

## Operational Vibration

EN 61373:2010 Category 1B & 2  
Maximum: 20G Random 20-700Hz at  
99.99% accuracy

### Dust/Water Ingress

IP65/67

## MODEL PART NUMBERS

2-02-3-0023-1

915MHZ Compact HE Antenna with  
spacers

2-02-3-0023-2

915MHZ Compact HE Antenna without  
spacers

2-02-3-0123-1

866MHZ Compact HE Antenna with  
spacers

2-02-3-0123-2

866MHZ Compact HE Antenna without  
spacers

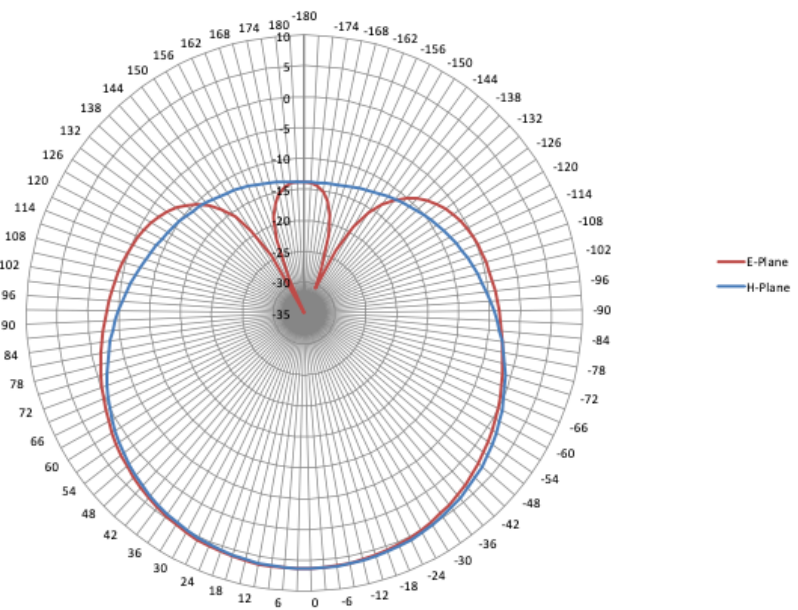
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Antenna Radiation Pattern

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