

## Hands-free, Wide Area, Always On, Continuous Scanning

CS Smart Antenna Technology is the source of RTLS data which is filtered and customized from the RFC Operating System. It is an essential component to delivering hands-free, continuous, 3D location of RAIN RFID (Passive UHF) tags. Both the CS-445B and the larger CS-490 have long read-range capabilities and flexible mounting options suited for high-ceiling and wide areas.



IDENTIFY



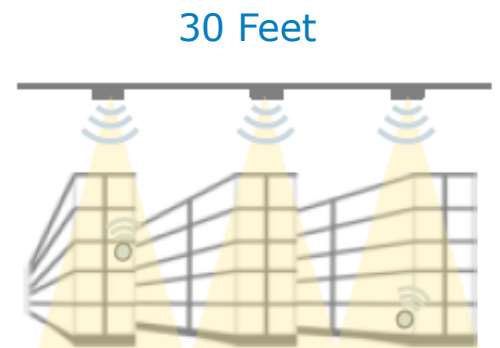
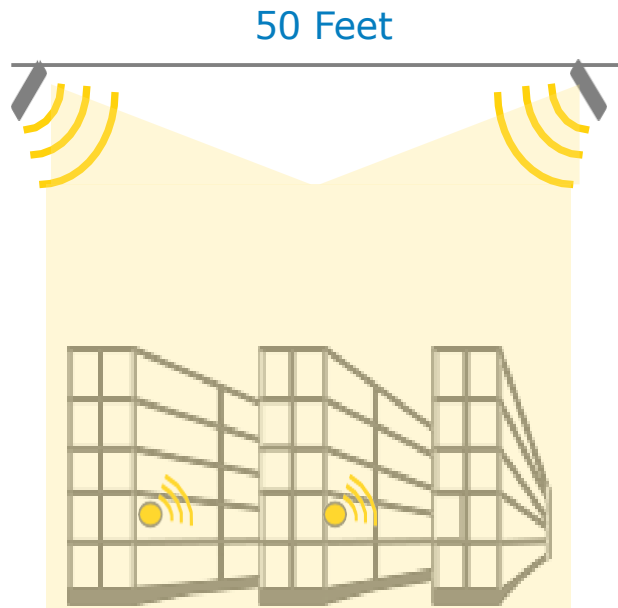
LOCATE



TRACK



## High Ceiling, Fixed Infrastructure Tracks Everything Using Cost Effective RAIN RFID Tags



## Impressive Performance

CS Smart Antenna



Tag Read Distance (ft)  
 Mounting Height (ft)  
 Tag Read Period (ms)  
 Location Accuracy (ft)  
 Data & Power Source

**CS-445B**

45  
 10 – 30  
 8  
 1.0 – 1.5  
 PoE

**CS-490**

90  
 20 – 50  
 8  
 1.0 – 3.0  
 PoE+

# Passive RTLS CS Smart Antenna



## Series

## CS-445B

## CS-490

|  | Min                                      | Max                                  | Units         | Min           | Max                                  | Units    |               |
|--|--|--------------------------------------|---------------|---------------|--------------------------------------|----------|---------------|
| <b>Performance</b>                       | Tag read period <sup>1</sup>             | -                                    | 8             | ms            | -                                    | 8        | ms            |
|  | Tag location accuracy                    | 1.0 (0.31)                           | 1.5 (0.46)    | ft (m)        | 1.0 (0.31)                           | 3 (0.9)  | ft (m)        |
|  | Scan angle – horizontal                  | -45                                  | 45            | Degrees       | -45                                  | 45       | Degrees       |
|  | Scan angle – vertical                    | -45                                  | 45            | Degrees       | -45                                  | 45       | Degrees       |
|  | Power Level <sup>2</sup>                 | 0.2                                  | 4             | W-EIRP        | 0.2                                  | 4        | W-EIRP        |
|  | Radiated Power (FCC/IC)                  | -                                    | +36           | dBm (4W) EIRP | -                                    | +36      | dBm (4W) EIRP |
|  | Radiated Power (ETSI Upper) <sup>3</sup> | -                                    | +33           | dBm (2W) ERP  | -                                    | +33      | dBm (2W) ERP  |
| Radiated Power (ETSI Lower) <sup>3</sup> | -  | +36                                  | dBm (4W) EIRP | -             | -                                    | -        |               |
| <b>Power</b>                             | PoE IEEE 802.3at Class 4                 | 42.5                                 | 57            | VDC           | 42.5                                 | 57       | VDC           |
|  | PoE Current                              | -                                    | 0.3           | A             | -                                    | 0.6      | A             |
|  | AC Line Voltage                          | -                                    | -             | -             | 90                                   | 264      | VAC           |
|  | AC Frequency                             | -                                    | -             | -             | 47                                   | 63       | Hz            |
|  | Current - 100 VAC                        | -                                    | -             | -             | -                                    | 1.3      | A (rms)       |
|  | Current - 240 VAC                        | -                                    | -             | -             | -                                    | 0.7      | A (rms)       |
| <b>Operating</b>                         | Operating Environment                    | -                                    | Indoor        | -             | -                                    | Indoor   | -             |
|  | Humidity Range                           | 5                                    | 95            | %RH           | 5                                    | 95       | %RH           |
|  | Operating Temp Range <sup>4</sup>        | -30 (-22)                            | 60 (140)      | °C (°F)       | -30 (-22)                            | 60 (140) | °C (°F)       |
|  | Non-Op Temp Range                        | -40 (-40)                            | 85 (185)      | °C (°F)       | -40 (-40)                            | 85 (185) | °C (°F)       |
|  | Cold Start Installation Temp             | -10 (-14)                            | -             | °C (°F)       | -10 (-14)                            | -        | °C (°F)       |
| <b>Mechanical</b>                        | Length                                   | 23.75 in (60 cm)                     |               |               | 35.6 in (90 cm)                      |          |               |
|  | Width                                    | 23.75 in (60 cm)                     |               |               | 35.6 in (90 cm)                      |          |               |
|  | Depth                                    | 4 in (10 cm)                         |               |               | 6 in (16 cm)                         |          |               |
|  | Weight                                   | 15 lbs (6.8 kg)                      |               |               | 54 lbs (25 kg)                       |          |               |
| <b>Installation</b>                      | All-In-One Integrated                    | CS-445B BESPA RFID Reader            |               |               | CS-490 BESPA RFID Reader             |          |               |
|  |  | Adjustable Mounting Kit <sup>5</sup> |               |               | Adjustable Mounting Kit <sup>5</sup> |          |               |
|  | Data & Power Connector                   | RJ45 10/100 Ethernet                 |               |               | RJ45 10/100 Ethernet                 |          |               |
|  | AC Power Connector                       | RJ45 PoE IEEE 802.3at Type 2 Class 3 |               |               | RJ45 PoE IEEE 802.3at Type 2 Class 3 |          |               |
|  | -  |                                      |               | -             |                                      |          |               |

### Regulatory Certifications

FCC CFR47 Part 15.247 at RFID reader and system level Subpart B EMC, ETSI 302-208, EN 301 489-1, EN 301 489-3, CE EN55024, EN55032, EN55035

<sup>1</sup> Time to read one tag, given a Q of 0 (tag population of 1). System is turned on and enabled

<sup>2</sup> Calibrated power level settable in firmware

<sup>3</sup> ETSI-Lower Band 865-868MHz ETSI-Upper Band 915-921MHz where allowed

<sup>4</sup> Unit operating temperature range does not indicate compliance with local safety standards

<sup>5</sup> CS antennas must be fixed and not allowed to move after installation

