Cobham Antenna Systems
Microwave Antennas
Specialist Antenna Design and Manufacture
RFID Antennas

The most important thing we build is trust

ROAD TOLLING
Automatic road tolling providing accurate vehicle charging, enabled through rugged and efficient RFID antennas.

SECURITY
Valuable items can be monitored and secured using RFID antennas reducing risk of theft and potentially insurance costs.

HEALTHCARE
Medical equipment and patients can be tracked and monitored reducing patient turnaround times in theatres and wards.

STOCK CONTROL
Stock can be tracked and monitored efficiently reducing handling, turnover and shipping times.
Introduction

RFID and Cobham Antenna Systems

Radio frequency identification (RFID) has evolved into a major technology tool for tracking goods and assets. Organisations can locate and track expensive equipment more quickly, improving operational efficiency as required in today's world.

Manufacturers and logistics providers are utilising RFID to improve the management of assets by tracking goods from the point of manufacture through to point of sale (POS). As a result there is a significant uptake of RFID at many stages of the supply chain.

With these developments it is important to ensure that RFID systems are designed and installed to maximise performance.

Tags and readers are a key component, but the overall performance of the system can be improved by selecting the correct antennas during planning and installing them in the right location to operate with the readers.

Cobham Antenna Systems (Microwave Antennas), in conjunction with a number of RFID reader manufacturers and system integrators, has developed antennas to maximise installation performance.

Through a range of antennas that offer controlled and repeatable pattern coverage, accurate efficient RFID systems are being achieved.

The Cobham Antenna Systems’ range of RFID antennas cover the 433 and 868MHz bands and the 915MHz band for non-European installations.

RFID antennas supplied by Cobham Antenna Systems are already being used in several locations including:

- Stock monitoring at military depots
- A private hospital operating theatre, ensuring accurate operation times are recorded
- Cargo monitoring system, enabling tags to be read on an approaching container vehicle so that the correct crane and replacement container can be in place on arrival
- Road tolling where each vehicle has to be correctly identified to ensure accurate fees are charged
- Securing valuable artefacts at museums and galleries

Antennas are 100% tested during manufacture to ensure that they match quoted specification and customer requirements.
### 433MHz Range

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Frequency (GHz)</th>
<th>Gain (dBi)</th>
<th>Beamwidth (Az)</th>
<th>Polarisation</th>
<th>Size (mm)</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPA0-0.4R/9401</td>
<td>0.433</td>
<td>0</td>
<td>80</td>
<td>80</td>
<td>325x325x41</td>
<td>BNC (M) 1m Cable</td>
</tr>
<tr>
<td>FPA4-0.4R/9402</td>
<td>0.433</td>
<td>4</td>
<td>47</td>
<td>48</td>
<td>725x725x3</td>
<td>BNC (M) 1m Cable</td>
</tr>
<tr>
<td>FPA0-0.4R/9403</td>
<td>0.433</td>
<td>0</td>
<td>80</td>
<td>80</td>
<td>585x585x3</td>
<td>BNC (M) 1m Cable</td>
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</tbody>
</table>

### 868MHz Range

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Frequency (GHz)</th>
<th>Gain (dBi)</th>
<th>Beamwidth (Az)</th>
<th>Polarisation</th>
<th>Size (mm)</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPA2-0.9R/9405</td>
<td>0.868</td>
<td>1.5</td>
<td>85</td>
<td>75</td>
<td>170x170x3</td>
<td>BNC (M) 1m Cable</td>
</tr>
<tr>
<td>FPA5-0.9R/9406</td>
<td>0.868</td>
<td>5.2</td>
<td>46</td>
<td>46</td>
<td>390x390x3</td>
<td>BNC (M) 1m Cable</td>
</tr>
</tbody>
</table>

### 915MHz Range

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Frequency (GHz)</th>
<th>Gain (dBi)</th>
<th>Beamwidth (Az)</th>
<th>Polarisation</th>
<th>Size (mm)</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPA7-900V-701/363</td>
<td>0.88-0.96</td>
<td>8</td>
<td>70</td>
<td>55</td>
<td>301x246x21</td>
<td>N(M) 90° 0.3m cable</td>
</tr>
<tr>
<td>FPA15-916H/1159</td>
<td>0.90-0.93</td>
<td>15.4</td>
<td>24</td>
<td>31</td>
<td>762x559x17</td>
<td>N(F)</td>
</tr>
<tr>
<td>PAS-915V/370</td>
<td>0.91-0.92</td>
<td>5</td>
<td>76</td>
<td>76</td>
<td>180x180x2</td>
<td>SMA(F)</td>
</tr>
</tbody>
</table>

Accurate, focused beam ensures extraneous RF signals, or tags in other areas do not affect the reading of the scanning antenna.

- Custom development projects undertaken
- Antennas can be designed to meet specific zone coverage
- All antennas have a high specification and meet quoted radiation pattern data
- Small, lightweight and discreet in appearance for minimum environmental impact
- Robust construction with mounting kit options
- Optional colour finishes, connectors and cable lengths