

RFID PORTAL FOR BAGGAGE HANDLING



Overview

The SlimLine A6020 is Times-7's latest generation portal for conveyor-belt based UHF RFID applications. The portal is designed to provide industry leading assignment rates and be easily installed into existing infrastructure. The advanced underbelt antenna rests on the conveyor tray directly beneath the moving belt; this is unique to Times-7. This improves read rates and dramatically reduces airport systems downtime during installation. The side and top antennas are also low profile and produce an even, balanced field. Mounting and connection options are extremely flexible. The antenna's near-field and far-field radiation patterns are optimised to read tags directly on or close to the belt.

The SlimLine A6020 is currently available for the US (FCC) 902 MHz – 928 MHz band and the European (ETSI) 864-869 MHz band.

The SlimLine A6020 is custom designed for airport baggage handling conveyor belts. When combined with a high-performing RFID reader, the key features are:

- Low profile antenna height (just 12mm)
- Robust industrial design
- Accurate to 99.5+% at existing live installations
- Easy and quick to install
- Affordable and cost effective
- Retro-fits under and over the conveyor belt
- Eliminates unwanted reads

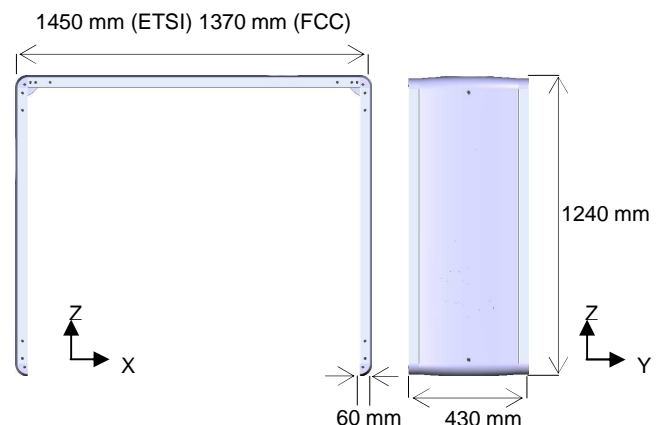
The SlimLine A6020 is leading the world in simplicity, ease of installation and cost effectiveness.

Mechanical/Environmental Specifications

- Operation and storage temperatures: 0°C to +50°C, -30°C to +60°C
- RF connectors: SMA

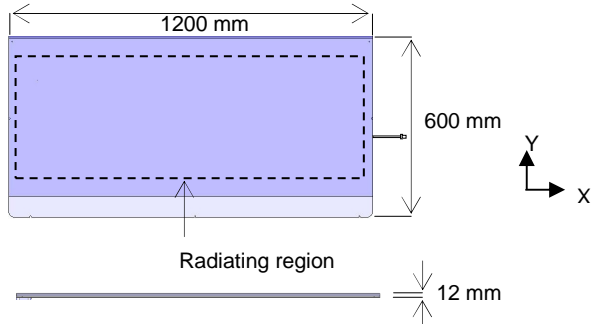
PORTAL

- Unit is shipped as modules (two sides and top)
- Dimensions (assembled) 1450 mm (ETSI) or 1370 mm (FCC) x 430 mm x 1240 mm
- Weight (assembled): 25 kg



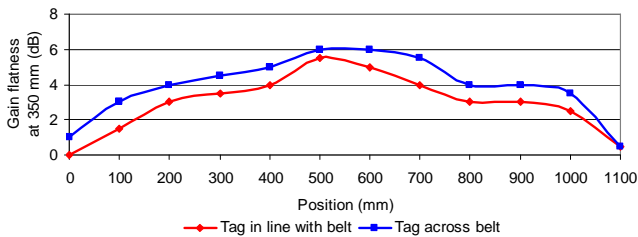
UNDERBELT

- Dimensions: 1200 mm x 600 mm x 12 mm
- Weight: 7 kg
- Radome material on underbelt: 3mm UHMWPE¹
- Slope on leading of underbelt edge: 7.4 degrees
- IP rating of underbelt: IP54
- Mounting: screwed directly onto frame of conveyor



Electrical Specifications

- Frequency bands ETSI 864 MHz – 869 MHz and FCC 902 MHz – 928 MHz
- Polarisation: Portal and underbelt antennas are all circular polarized
- Return loss all four antennas: VSWR < 2:1
- Front to back all antennas: > 22 dB
- Read zone above belt: up to 900 mm
- Read zone across belt: up to 1200 mm
- Peak farfield gain: 11 dBi all antennas
- Underbelt antenna's nearfield performance – see below



¹ Ultra-High Molecular Weight Polyethylene

Ordering

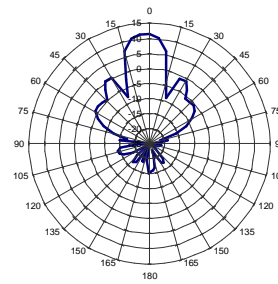
Please quote both product code and part number.

| Product Code | Band | Part No. |
|--------------|------|----------|
| A6020 | ETSI | 70820 |
| A6020 | FCC | 70913 |

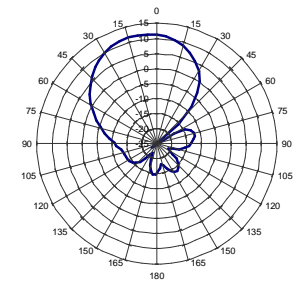
Cable Options. Each portal is shipped with a set of 3m length interconnecting cables.

| Portal end | Reader end | Part No. |
|------------|-------------|----------|
| SMA | SMA | 70829 |
| SMA | Reverse SMA | TBA |
| SMA | TNC | TBA |
| SMA | Reverse TNC | TBA |

- Underbelt antenna's farfield performance – see below

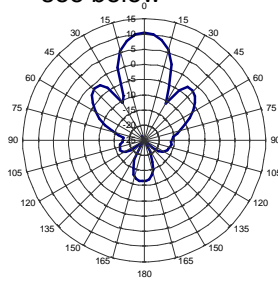


Total E-field elevation pattern (XZ plane)

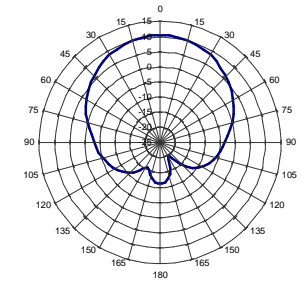


Total E-field elevation pattern (YZ plane)

- Two sides and top antenna farfield performance – see below



Total E-field elevation pattern (XZ plane)



Total E-field elevation pattern (YZ plane)