



# Nigerian Airports Go Solar

## PROJECT SUMMARY



Runway Edge Lights



Runway Threshold Lights



Apron & Taxiway Edge Lights



Wireless Control

The Federal Airport Authority of Nigeria (FAAN) is dedicated to being a world-class provider of safe, secure and efficient services for the carriage of passengers and goods across Nigeria. Lighting runways to allow for nighttime use is a key component of FAAN's stated goal.

Carmanah Airfields has been an important partner in the 2015 phase of the FAAN improvement initiatives to provide airfield and taxiway lighting across Nigeria. Carmanah's solar airfield lights exceed key safety, reliability and compliance requirements set out by the agency and provide additional savings in the form of lower installation and maintenance costs. Solar lighting is independent of the grid and therefore installation requires no trenching or grid connection. High voltage concerns are eliminated and there is no ongoing power requirements for operation.

Carmanah looks forward to continuing its strategic contributions to airport safety in Nigeria and other African States.







# Yakubu Gowon Airport

## PROJECT SUMMARY



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Runway Threshold Lights



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Wireless Control



**Location:** Jos, Nigeria

**Runway length:** 3000 m x 45 m

### Overview:

At almost the geographical centre of Nigeria, at an elevation of 1238 meters, the city of Jos is home to approximately 900 000 residents. The Jos airport is a modern building with a runway long enough to handle jet traffic. Nighttime lighting will allow for additional flight traffic after sunset between Lagos and Jos, a long asked for service in the community.

### Our Solution:

A704 series, A650 series, Handheld Controller (HHC)





# Maiduguri Int'l Airport

## PROJECT SUMMARY



Runway Edge Lights



Runway Threshold Lights



Apron & Taxiway Edge Lights



Wireless Control



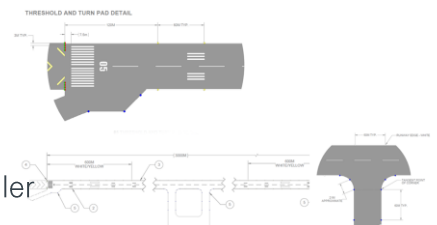
**Location:** Maiduguri, Nigeria  
**Runway length:** 3000 m x 60 m

### Overview:

The city of Maiduguri continues to be plagued by political instability. Having a runway available day and night was key to ensuring that support from the international community, including food drops and other critical services, could be delivered. Equipment was deployed within a few days' time – minimizing the implementation team's exposure to possibly unsafe conditions and almost instantly making the runway available for nighttime deliveries. Only Carmanah's reliable and self-contained solar solution would have worked in this difficult deployment environment.

### Our Solution:

A704 series, A650 series, Handheld Controller (HHC)





Runway Edge  
Lights



Runway  
Threshold  
Lights



Apron & Taxiway  
Edge Lights



Wireless Control



**Location:** Sokoto, Nigeria

**Runway length:** 3000 m x 60 m

### Overview:

Sokoto is the modern day capital of Sokoto State with a population of more than 430,000 and is considered to be one of the hottest cities in the world. It was essential that the lighting solutions deployed at the airport be able to withstand this challenging, heat intensive environment. Carmanah's products have been proven in SIMILAR extreme conditions and were the obvious choice for officials in Sokoto.

**Our Solution:** A704 series, A650 series, Handheld Controller (HHC)



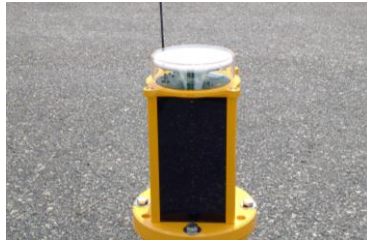


# Port Harcourt Int'l Airport

## PROJECT SUMMARY



Runway Edge Lights



Runway Threshold Lights



Apron & Taxiway Edge Lights



Wireless Control

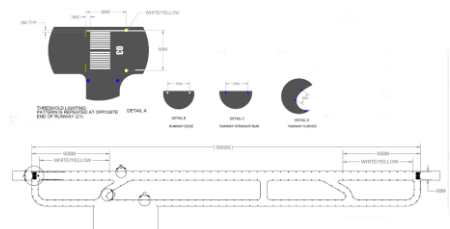
**Location:** Port Harcourt, Nigeria  
**Runway length:** 3000 m x 60 m

### Overview:

Previously deployed lights failed to meet operating expectations. Carmanah lights were chosen to replace an existing system based on their ability to deliver on spec and exceed reliability requirements. With a population of nearly 1.4 million, Port Harcourt is a significant commercial hub with many multinational firms in the petrochemical industry having offices in the city that rely on the availability of nighttime flights.

### Our Solution:

A704 series, A650 series, Handheld Controller (HHC)





# Akanu Ibiam Int'l Airport

## PROJECT SUMMARY



Runway Edge Lights



Runway Threshold Lights



Apron & Taxiway Edge Lights



Wireless Control



**Location:** Enugu, Nigeria

**Runway length:** 3000 m x 45 m

### Overview:

AC infrastructure was highly unreliable and as a result the airport was not able to offer nighttime services. Installation of Carmanah's self-contained solar lights eliminated the need for AC power and enabled the airport to provide services after nightfall. For a city with a population of more than 725,000, a night functioning airport has a significant positive impact on the local economy.

### Our Solution:

A704 series, A650 series, Handheld Controller (HHC)





Runway Edge  
Lights



Runway  
Threshold Lights



Apron & Taxiway  
Edge Lights



Wireless Control



**Location:** Yola, Nigeria

**Runway length:** 3000 m x 45 m

### Overview:

Yola, the capital city and administrative center of Adamawa State, is located on the Benue River with a population of more than 340,000. It is the most convenient access point to the largest national park in Nigeria, the Gashaka Gumti Nature Reserve. The availability of nighttime services at the airport open up welcomed additional opportunities for commerce and tourism.

### Our Solution:

A704 series, A650 series, Handheld Controller (HHC)





# Akure Airport

## PROJECT SUMMARY



Runway Edge Lights



Runway Threshold Lights



Apron & Taxiway Edge Lights



Wireless Control



**Location:** Akure, Nigeria

**Runway length:** 2800 m x 45 m

### Overview:

With a population of over 560,000, Akure is the largest city and capital of Ondo State. The city is recognized for its progressive maternal health program and is home to a state specialist hospital. The installation of solar lighting created a functioning nighttime airport allowing emergency access to medical services, as well as passenger and goods transport after dark.

### Our Solution:

A704 series, A650 series, Handheld Controller (HHC)

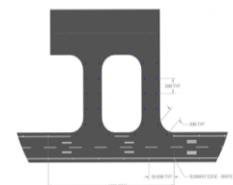
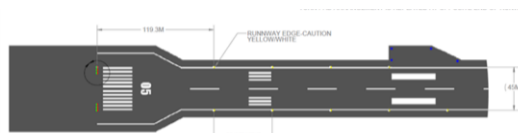


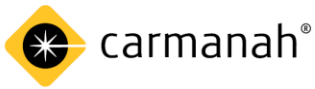


**Location:** Minna, Nigeria  
**Runway length:** 3400 m x 45 m

**Overview:**  
 Minna is the capital city of Niger State with a population of more than 305,000. Agriculture is important to the local economy. The addition of Carmanah's runway lighting means longer operating hours at the airport and greater access for transport of goods to markets outside the region.

**Our Solution:**  
 A704 series, A650 series, Handheld Controller (HHC)





# Ibadan Airport

## PROJECT SUMMARY



Runway Edge Lights



Runway Threshold Lights



Apron & Taxiway Edge Lights



Wireless Control



**Location:** Ibadan, Nigeria

**Runway length:** 2400 m x 45 m

### Overview:

The capital city of Oyo State with a population of over 3 million is an important transit point between coastal regions and areas to the north. Agricultural trade figures prominently in the economy and the city is a hub for agricultural processing, leather working and furniture making. With a non-functional railway, the airport is an essential link to outside markets and the addition of Carmanah's solar lights means that operating hours have been significantly extended.

### Our Solution:

A704 series, A650 series, Handheld Controller (HHC)





With more than 300 site installations, Carmanah is the most widely installed solution in the solar airfield industry. Our products are deployed at Military Bases, International and Domestic Airports, Helipads and Private Airfields in Africa, Asia, Australia, Europe, North America and South America.

### Carmanah Airfield Installations

- 
- Afghanistan
  - Algeria
  - Angola
  - Aruba
  - Ascension Island
  - Australia
  - Bahamas
  - Bahrain
  - Barbados
  - Bonaire
  - Brazil
  - Canada
  - Chad
  - Chile
  - China
  - Colombia
  - Costa Rica
  - Croatia
  - Cyprus
  - Djibouti
  - Dominican Republic
  - Ecuador
  - Equatorial Guinea
  - France
  - Greece
  - Guyana
  - India
  - Iraq
  - Ireland
  - Italy
  - Japan
  - Jordan
  - Kuwait
  - Malaysia
  - Micronesia
  - New Zealand
  - Nicaragua
  - Nigeria
  - Panama
  - Peru
  - Qatar
  - Saba
  - Saint Maarten
  - Singapore
  - South Africa
  - Spain
  - Sri Lanka
  - St. Eustatius
  - Switzerland
  - Taiwan
  - Tanzania
  - Thailand
  - Trinidad
  - Turkey
  - Turks & Caicos
  - Uganda
  - United Arab Emirates
  - United Kingdom
  - United States
  - Uruguay
  - Venezuela
  - Zambia

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