

## Satellite Communication Systems & IP in Modern Networks

*Barcelona (Spain)*

*3 - 7 March 2025*

UK Traininig

# PARTNER



# Satellite Communication Systems & IP in Modern Networks

Code: GC28 From: 3 - 7 March 2025 City: Barcelona (Spain) Fees: 5100 Pound

## Introduction

Successful as they are today, satellite systems are on the brink of a revolution. that will doubtless have a significant impact in the not-too-distant future. New and promising technology continues to appear every day. This satellite communications training course covers the most recent advancement in the field of satellite communication systems.

This course enables the participants to learn about updates in the basics of satellite basics and the parts of a satellite. and how to build a communications satellite with the latest updates. also an understanding of the major approaches, including network topologies, VSAT, and IP networking over satellite.

## Course Objectives of Satellite Communication Systems & IP in Modern Networks

- Being introduced to satellite communication systems.
- how does satellite communication work?
- Learning about satellite band frequencies.
- Identifying the requirements for an effective IP network, network ID in IP address.
- Examining the potential security risks in AAA.
- Understanding the wireless LAN and Other Access Technology .
- how to check the used IP address in the network.

## Satellite Communication Systems & IP in Modern Networks Course Outlines

### Day 1

#### Introduction of Satellite communication systems

- Introduction of Advanced Satellite communication systems, and satellite communication basics.
- Multiple Access Techniques: FDMA, TDMA, CDMA, Random Access.
- All Digital Modulation Techniques.
- Amplitude Shift Keying ASK and Frequency Shift Keying FSK.
- Binary Phase Shift Keying BPSK and Quadrature Phase Shift Keying QPSK.
- Data Rate And Baud Rate.

### Day 2

#### Earth Station Antenna

- Earth Station Antenna types.
- SNG Antennas.
- Fly Away Antennas.
- On the move antenna.



- Maritime Antennas.
- TVRO Antennas.
- Pointing/Tracking.

### Day 3

#### Satellite band frequencies

- Small antennas at the Ku band.
- FCC-Intelsat-ITU antenna requirements and EIRP density limitations.
- Overview of satellite band frequencies.
- The electromagnetic spectrum.
- The radio spectrum.
- Windows to space.
- L-band 1-2 GHz.
- S-band 2-4 GHz.
- C-band 4-8 GHz.
- X-band 8-12 GHz.
- Ku-band 12-18 GHz.
- Ka-band 26-40 GHz.

### Day 4

#### Modern types of modulation in the communication system, satellite communication service

- Overview of modern types of modulation in the communication system.
- Protocol Suite Overview.
- IP and Data Networks.
- IP Network Operation.

### Day 5

#### Potential security risks in AAA & wireless LAN and Other Access Technology

- IP Telephony and VoIP.
- IP in the Mobile Network.
- IPv6.
- DNS.
- DHCP.
- SS7 Functions, Architecture, and the Message Transfer Part.
- Security and AAA.
- Wireless LAN and Other Access Technologies.



# Blackbird Training Cities

## Europe



Malaga (Spain)



Sarajevo (Bosnia and Herzegovina)



Oporto (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Anney (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)  
(Netherlands)



Podgorica (Montenegro)



Batumi (Georgia)



London (UK)



Istanbul (Turkey)



Amsterdam



Düsseldorf (Germany)



Paris (France)



Barcelona (Spain)



Munich (Germany)



Geneva (Switzerland)



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich (Switzerland)



Manchester (UK)



Milan (Italy)



# Blackbird Training Cities

## USA & Canada



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

## Africa



Baku (Azerbaijan)  
(Thailand)



Maldives (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney (Australia)



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Dubai (UAE)



Kuala Lumpur (Malaysia)



Kuwait City (Kuwait)



Pulau Ujong (Singapore)



Jakarta (Indonesia)



Amman (Jordan)



Beirut (Lebanon)



## Blackbird Training Cities

### Asia



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



## Blackbird Training Clients



UK Training  
**PARTNER**



## Blackbird Training Categories

### Management & Admin

Professional Skills  
Finance, Accounting, Budgeting  
Media & Public Relations  
Project Management  
Human Resources  
Audit & Quality Assurance  
Marketing, Sales, Customer Service  
Secretary & Admin  
Supply Chain & Logistics  
Management & Leadership  
Agile and Elevation

### Technical Courses

Hospital Management  
Public Sector  
Special Workshops  
Oil & Gas Engineering  
Telecom Engineering  
IT & IT Engineering  
Health & Safety  
Law and Contract Management  
Customs & Safety  
Aviation  
C-Suite Training



**BLACKBIRD**  
FOR TRAINING



International House 185 Tower Bridge  
Road London SE1 2UF United Kingdom



+44 7401 1773 35  
+44 7480 775526



Sales@blackbird-training.com



www.blackbird-training.com

UK Training

**PARTNER**

