

SatMaster Pro: Advanced Satellite Link Budget Analysis

Telecom Engineering
Munich (Germany)
22 - 26 Sep 2025

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SatMaster Pro: Advanced Satellite Link Budget Analysis

Ref: 321453_136209 **Date:** 22 - 26 Sep 2025 **Location:** Munich (Germany) **Fees:** 4400 Euro

Course Description

This intensive 5-day course provides comprehensive training on satellite link budget analysis using SatMaster Pro software. Participants will gain in-depth knowledge of satellite communication systems, link budget calculations, and optimization techniques. The course combines theoretical concepts with hands-on practical exercises to ensure a thorough understanding of satellite engineering principles.

Learning Objectives

- Master the fundamentals of satellite link budget analysis
- Develop proficiency in using SatMaster Pro software for link budget calculations
- Understand advanced concepts in satellite communication system design
- Learn optimization techniques for various satellite network configurations
- Gain practical skills in troubleshooting and improving satellite link performance

Course Modules

Day 1: Introduction to Satellite Link Budgets

- Satellite communication basics and link budget overview
- SatMaster Pro software introduction and interface familiarization
- Key parameters in link budget calculations
- Hands-on exercises: Basic link budget setup

Day 2: Detailed Link Budget Analysis

- Advanced link budget components and calculations
- Propagation effects and atmospheric models
- Modulation and coding techniques
- Practical session: Complex link budget scenarios

Day 3: Satellite Network Design

- VSAT network architecture and design principles
- Transponder loading and optimization
- Interference analysis and mitigation strategies
- Workshop: Designing a multi-beam satellite network

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Day 4: Advanced Topics in Satellite Communications

- Non-GEO satellite systems and link budget considerations
- HTS and multi-spot beam architectures
- Adaptive coding and modulation techniques
- Case study: Optimizing a global satellite network

Day 5: Optimization and Troubleshooting

- Link budget optimization techniques
- Performance analysis and system trade-offs
- Troubleshooting common satellite link issues
- Final project: End-to-end satellite network design and optimization

Practical Wins for Participants

- Ability to independently perform complex link budget analyses using SatMaster Pro
- Skills to optimize satellite network designs for various applications and environments
- Expertise in identifying and resolving satellite communication system issues
- Confidence in making informed decisions for satellite communication projects

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