

Extreme CCTV and Video Foundations

Course Title:	Extreme CCTV and Video Foundations
Duration:	2.5 Days
Target Audience:	Installation, Service Technicians, Project Managers
Total Attendees:	8
Objectives:	<p>Upon successful completion of this course the participant should be able to:</p> <ul style="list-style-type: none">• Understand basic CCTV fundamentals• Understand visible light spectrum as it applies to CCTV and methods of light compensation• Identify major optical parts of CCTV cameras• Understand lens and Charge-Coupled Device (CCD) concepts and functions• Navigate Dinion camera menus• Understand infrared concepts and detection techniques• Specify the correct night vision product for the job and the correct capture device for a license plate application• Identify Bosch Infrared Illuminators and Bosch License Plate Capture devices• Install/Use Camset software for MIC series• Program and commission a Bosch MIC camera
Prerequisites:	Basic computer skills

Course Content:

Module 1: CCTV Components and Light Concepts

- National Television System Committee (NTSC) Video Standards
- CIF Resolutions
- Basic CCTV Components
- Camera Basics: Light and CCDs
- Light Basics
- Active Infrared and Thermal

Module 2: Light Color and Math

- Light and Color
- Color Rendition Index (CRI)
- White Balance
- Light Comparisons
- Measuring Light
- Measuring Reflectance

Module 3: Camera Basics

- Camera Signals
- CCD Basics
- Light Compensation
- Lighting Zones

Module 4: Lens Basics

- Defining Lenses
- Lens CCD Relation
- F-stop
- Field of View
- Back Focus
- Infrared Corrected Lenses
- C and CS Cameras

Module 5: Infrared Fundamentals

- Infrared Distances
- Standard Illuminator Types
- Types of Night Vision
- Detection Types
- Black Diamond Technology

Module 6: How to Specify a Job

- Three Leading Questions to Ask
- Four Main Questions to Ask
- Usable Line Signals
- Distance and Light
- Stacking Illuminators
- Detection, Classification, Recognition, Identification (DCRI)

Module 7: Illuminator Products

- UFLED
- Super LED
- Short Range LEDS
- UFLED White Light
- Bosch Cameras and Infrared

Module 8: Extreme Cameras

- EX30
- EX80
- EX82
- EX85
- Bullet Cameras
- Extreme Environment
- Explosion Protected

Module 9: License Plate Capture Cameras

- Capture vs. Recognition
- Partners (POS)
- Bosch Interoperability
- REG-X
- REG-L1
- REG-Z1
- Mounting

Module 10: MIC Cameras

- MIC 400 Line
- MIC Explosion Protected
- MIC Thermal
- MIC Part numbers and ordering
- MIC installation and commissioning
- Camset Software
- Connecting to Bosch Encoders

Final Exam: Passing grade is 75% or higher

Practical Content: At least 60% hands-on