



VIDEO SURVEILLANCE SYSTEM (CCTV) DL 2101TCA



INTRODUCTION & DESCRIPTION OF A VIDEO SURVEILLANCE SYSTEM

A **video surveillance system (CCTV - Closed Circuit Television)** A video surveillance system (CCTV - Closed Circuit Television) can be designed for different types of environments such as homes, businesses, parking lots, buildings, etc. It is a set of cameras and electronic equipment that allows remote filming, recording, and monitoring of locations for security, deterrence, or control purposes. It consists of cameras connected to recorders and screens.

Four main categories of CCTV cameras distinguish it:

- Analog video surveillance, where the cameras are analog, meaning they are connected to a recorder via a coaxial cable and distribute the video stream continuously.
- A wired video surveillance system similar to an analog surveillance system, but the cameras are connected to the network via cables and use the internet.
- An internet video surveillance system allows you to view the images captured by the cameras via an internet connection. The cameras are IP cameras and are connected to a computer. The images are captured and transmitted over the internet and can be viewed live or on a delayed basis.
- A Wi-Fi video surveillance system relies on the use of a Wi-Fi connection via an internet router for image transmission. The camera system is connected to a receiver that transmits the images to a recorder or control screen.

Other features can be added to a video surveillance system. These include access control, intrusion or motion detection options, motion or opening detectors, etc.



ELECTRICAL INSTALLATIONS



The installation of a video surveillance system, whatever the system adopted, consists of securing and preventing the risks of accidents or malicious acts in a given location.

MAIN FEATURES & COMPOSITION OF THE DL 2101TCA SYSTEM

Our system is designed for the study of a real video surveillance system in order to put into practice its applications in fields such as residential, small businesses, large industry, city control and traffic regulation.

It is modular and consists of educational panels fixed to a vertical frame. It allows teachers and students a direct and immediate approach to the issues related to video surveillance, offering them the opportunity to carry out various real-life experiments.

Below is the list of system components:

Code	Description	Quantity
DL 2101TCD1	CCD video camera module	2
DL 2101TCD2	IR CCD Video Camera Module	1
DL 2101TCD3	IP camera module	1
DL 2101TCD4	Wireless Camera Module	1
DL 2101TCD5	Speed Dome Camera Module	1
DL 2101TCPS	Power supply module	1
Monitor	18.5" LED Color Monitor	1
Recorder	Digital video recorder	1
PoE Switch	Four-port PoE switch	1
Wireless Access Point	Wireless N Range Extender	1
DL 2100-2M	Two-level frame	1
TL 2101T	Cables	1



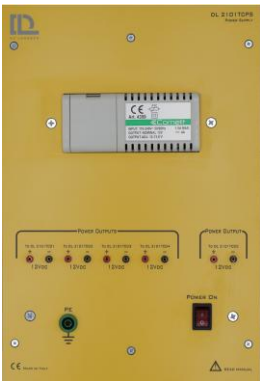
TECHNICAL SPECIFICATIONS OF THE DL 2101TCA SYSTEM

Module/Device	SOME TECHNICAL SPECIFICATIONS
DL 2101TCD1 CCD video camera module 	• 2MP miniaturized color CCD video camera. • Optical lens dimensions: 3.7 mm. • Lens type: Pinhole. • Video output: AHD/TVI/CVI/CVBS (960H). • Video resolution (H x V – pixels): 1920x1080 (Full-HD 1080p). • Housing type: Miniaturized. • Power supply: 12 Vdc. • Two 2 mm terminals for power supply. • Output signal type selector. • BNC video output.
DL 2101TCD2 IR CCD Video Camera Module 	• 2MP miniaturized color IR CCD video camera. • Optical lens dimensions: 3.6 mm. • IR filter: mechanical. • Video output: AHD/TVI/CVI/CVBS (960H). • Video resolution (H x V – pixels): 1920x1080 (Full-HD 1080p). • Housing type: Minidome. • Power supply: 12 Vdc. • Two 2 mm terminals for power supply. • Output signal type selector and zoom controller. • BNC video output.
DL 2101TCD3 IP camera module 	• 5MP bullet IP video camera. • Lens optical dimensions: 3.6 mm. • Lens type: F2.0. • IR filter: mechanical. • Video compression: H.264, H.264+, H.265, H.265+, JPEG, AVI, MJPEG (dual stream). • Video resolution (H x V – pixels): 2592x1944 (5MP). • Housing type: Bullet. • Power supply: 12 Vdc. • Power supply type: PoE, external power supply. • 2 x 2 mm terminals for power supply. • LAN/PoE port.



ELECTRICAL INSTALLATIONS



DL 2101TCD4 Wireless Camera Module 	• 4MP Wi-Fi Bullet IP Camera. • Optical lens dimensions: 3.6 mm. • IR filter: mechanical. • Video compression: H.264, H.265. • Video resolution (H x V – pixels): 1280x720 (HD 720p), 1920x1080 (Full-HD 1080p), CIF, D1, 3MP, 4MP. • Housing type: Bullet. • Power supply: 12 Vdc. • Power supply type: PoE, external power supply. • Two 2 mm terminals for power supply. • LAN/PoE port.
DL 2101TCD5 Speed Dome Camera Module 	• 2MP PTZ (PAN/TILT/ZOOM) IP DOME camera. • Varifocal lens dimensions: 4.8 ÷ 120 mm. • IR filter: mechanical. • Video compression: H.264, H.265, MJPEG. • Video resolution (H x V – pixels): 1920x1080 (Full-HD 1080p). • Housing type: Speed dome. • Power supply: 12 Vdc. • Power supply type: PoE, external power supply. • Two 2 mm terminals for power supply. • LAN/PoE port.
DL 2101TCPS Power supply module 	• A power supply to power all previous camera modules. • AC input power from the mains. • DC output: 12 V, 4 A. • Five 12 Vdc power outputs on 2 mm terminals. • One power switch (O/I) with LED.
Monitor 18.5" LED Color Monitor	• 18.5" LED screen. • Display format: 16:9. • HD resolution. • Video source: VGA/HDMI/BNC. • Power supply: Single-phase from the mains.



ELECTRICAL INSTALLATIONS

	
Recorder Digital video recorder 	• Industrial digital video recorder. • Video inputs: 8 BNC, 8 IP. • Main video output: 1 (VGA – 1920X1080 @60Hz), 1 (HDMI – 4K @30Hz). • Audio inputs/outputs: 8 (RCA)/1 (RCA). • Video compression: H.264, H.265. • Supplied hard drive size: 1 TB. • Remote control via browser: Internet Explorer, mobile phone. • Connections/ports: 1 x Ethernet 10/100/1000 Mbps, 2 x USB 2.0, 1 x RS485. • Power supply (with external network adapter): 12 Vdc. • Power supply: Single-phase mains.
PoE Switch Four-port PoE switch 	• Industrial POE switch. • Number of LAN ports (RJ45): 6. • PoE LAN ports: 4. • Uplink ports: 2GE. • Power supply (with external network adapter): 12 Vdc. • Power supply: Single-phase mains.
Wireless Access Point Wireless N Range Extender 	• Industrial Wireless N Range Extender. • Operating Frequency: 2.4 to 2.4835 GHz. • Antennas: Two detachable 2 dBi gain omnidirectional antennas with RP-SMA connectors. • Interfaces: 802.11n/g/b wireless LAN, one 10/100BASE-TX Ethernet LAN port. • Power Supply (with external network adapter): 12 Vdc. • Power Supply: Single-phase mains power.



ELECTRICAL INSTALLATIONS



DL 2101TCA SYSTEM OBJECTIVES

The modularity of this teaching system offers the students a direct and immediate approach by allowing them to study various subjects by carrying out several experiments, as follows:

- Commissioning the CCD video camera,
- Commissioning the IR CCD video camera,
- Commissioning the IP camera,
- Commissioning the Wireless camera,
- Commissioning the Speed Dome camera,
- Wireless connection to the Speed Dome camera,
- Creation of a video surveillance system.

Comes with a detailed practical manual, software, and all necessary accessories.