

ThermalRanger TR4000/TR4500

ULTRA LONG RANGE THERMAL SECURITY SURVEILLANCE CAMERA

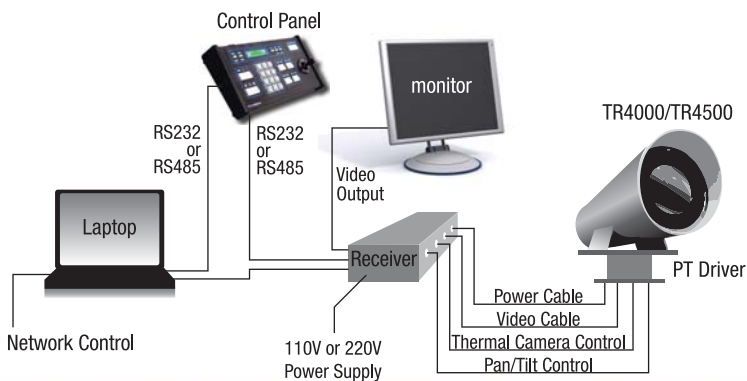


Model TR4000/4500 of Cantronic's ThermalRanger series of thermal security surveillance cameras are very high sensitivity thermal imaging cameras using either an InSb/MCT 320x256 IRFPA detector (TR4000) or an InSb 640 x 512 IRFPA detector operating in the middle infrared wavelength 3-5µm region (MWIR). The cameras are powerful long range security surveillance products with exceptional detection range, over 26km for a tank sized target and over 20km for a man sized target. These cameras incorporate advanced cooled FPA technology with either a 30 micron or 20 micron pitch and come with pressurized enclosure filled with dry nitrogen for installation and operations under demanding environmental conditions. They can be used as a standalone unit or to be integrated with user's own systems.



Typical Configuration

- All thermal camera functions including polarity, focus, lens FOV switch etc. are controlled either directly from controller or through Receiver/optional PT driver.
- Camera can be mounted either directly (fixed) or with an optional Pan-Tilt driver.



Typical wiring diagram with optional Pan-Tilt driver

Features

- Detecting distance up to 26km
- Remotely controlled
- Motorized lens
- Single FOV, dual FOV, and Triple FOV on selected model
- Plug and Play Operations
- Ge infrared optics with AR coating
- Environmentally Sealed and Pressurized housing



Showing highway bridge out 7.8 km using only TR4000 with 100mm lens

Lenses and Typical Range Performances:

The nominal aperture is F/4. The following lenses are available:

Lens (mm)	Focus Method	FOV(°)		Detection range (km) for 2.3x2.3m Target	
		TR4000	TR4500	TR4000	TR4500
50	Manual	11x8.2	14.5x12	2.2	2.9
100	Motorized	5.5 x4.1	7.4x5.5	4.6	6
250	Motorized	2.2x1.65	3.0x2.2	10.0	13
1000	Motorized	0.55 x 0.41	0.74x0.55	20.0	26
50/250	Dual FOV Motorized	11x8.2/2.2x1.65	14.5x12/2.9x2.4	10.0	13
100/500	Dual FOV Motorized	5.5x4.1/1.1x0.83	0.74x0.6/1.45x1.2	17.0	22.3
25/80/320	Triple FOV Motorized	22x16.5/4.4x3.3/1.7x1.3	29x24/6x4.5/2.3x1.8	13.0	17

Customized Lenses are available, upon special request.

Specifications

	TR4000	TR4500
Sensor :	InSb or MCT (HgCdTe) IRFPA	InSb
Resolution :	320 x 256 pixels with random window in mode, usable format 320x240	640 x 512
Pitch :	30µm	20µm
Wavelength :	3-5 µm	3-5µm
Image mode :	Snap Shot	Snap Shot
Cooling :	Stirling cooler	Stirling Cooler
Frame rate (full image):	Standard 60 Hz, NTSC, 50Hz PAL	Standard 60 Hz, NTSC, 50Hz PAL
A/D :	14 bits	14 bits
NETD:	<35mK (25 mK typical at 25°C)	<35mK (25 mK typical)
F number:	F/4	F/4
System control :	RS232 or RS422 from a remote computer or through a controller	RS232 or RS422 from a remote computer or through a controller
Video output :	CCIR (PAL) or RS 170 (NTSC)	CCIR (PAL) or RS 170 (NTSC)
Dimensions (with T320 lens):	220mm (W) x 260mm (H) x 600mm (L) including sunshield	220mm (W) x 260mm (H) x 600mm (L) including sunshield
Weight (with T320 lens):	<14kg	<15kg
Power supply:	Camera direct power input - 24VDC, 30W typical; with receiver - 110 or 220 VAC	Camera direct power input - 24VDC, 30W typical; with receiver - 110 or 220 VAC
Enclosure:	Sealed and dry nitrogen backfilled housing rated IP67	Sealed and dry nitrogen backfilled housing rated IP67
Camera Mounting:	fixed or with optional pan-tilt driver	fixed or with optional pan-tilt driver
Operating Temperature:	-20°C +55°C	-20°C +55°C
Storage Temperature:	-40°C +70°C	-40°C +70°C

How To Order

TR4000 - 100 N
TR4500 - 100 N

Lens

50: 50mm manual lens
100: 100mm motorized lens
250: 250mm motorized lens
1000: 1000mm motorized lens
D250: Dual FOV 50/250mm motorized lens
D500: Dual FOV 100/500mm motorized lens
T320: Triple FOV 25/80/320mm motorized lens

Video Output

N: NTSC (RS170)
P: PAL (CCIR)

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