

Quick Installation Guide

Group Temperature Screening Camera Kit

DCS-9500T



Additional documentation is also available on the D-Link website

Contents

1

English

Before You Begin

This installation guide provides instructions for installing the DCS-9500T on your network. Additional documentation is also available on the D-Link support website.

• **DCS-9500T User Manual:** For additional information and instructions on how to configure the device using the web user interface.

Package Contents

This DCS-9500T package includes the following items:

- DCS-9500T Thermal Camera and wall mount
- Blackbody Calibrator and wall mount
- Power Adapter
- Quick Start Guide

Additional optional accessories are also available, please contact your local D-Link reseller for more information.

If any of the above items are damaged or missing, please contact your local D-Link reseller.

System Requirements

- Windows[®] operating system
- Internet Explorer 11 or later (for configuration)

Hardware Overview





#	Cable Core	Description
1	RS485	Connects to external pan and tilt
2	ALARM IN2	Connects to an alarm device
3	ALARM OUT2	
4	ALARM IN1	
5	ALARM OUT1	
6	Audio Input	Connect to microphone
7	Audio Output	Connect to speaker
8	DC12 V	Power interface, connects to the 12 V DC power adapter
9	Network Interface	Connects to a standard RJ45 Ethernet cable

Installation

The recommended installation environment is in an airless windless aisle. Please ensure the monitoring field is far away from any objects that could produce airflow, high temperature or reflection; e.g. a car. Please do not install opposite of a door, air conditioner or any place where the sun is directly shining. To ensure temperature measurement accuracy, please install the camera indoors or in a controlled environment. The measurement might deviate from the actual temperature if the camera is installed in an open-air environment.

In any installation configuration, the optimal height of the camera is 2-2.3 m from the ground. For optimal results, the blackbody should be the same height as the camera and 3-5 meters away.

Wall Mount Configuration



- 1. If mounting on the wall, the DCS-9500T should be installed anywhere from 2-2.3 m from the ground.
- 2. The Blackbody should be installed at the **same height as the camera**, but 3-5 m in front of the camera, **inside the field of view (FOV) of the camera**. The optimal distance to measure temperature is at the same distance as the blackbody is installed.

Ceiling Mount Configuration (Optional)



- 1. If mounting from the ceiling, the DCS-9500T should be installed anywhere from 2-2.3 m from the ground.
- 2. The Blackbody should be installed at the same height as the camera, but 3-5 m from the camera, inside the field of view (FOV) of the camera. The optimal distance to measure temperature is at the same distance as the blackbody is installed.

Web Management Interface (WMI)

You must use Internet Explorer 11 or later to access the web management system; otherwise some functions may be unavailable.

Logging Into the System

- 1. Open Internet Explorer.
- Enter the IP address of the camera (default IP address: 192.168.0.121) in the address box, and press Enter.
- 3. After the login page is displayed, input the user name and password. The default name and password are both **admin**.
- 4. You are prompted to modify the password after you log into the system for the first time.
- 5. You may change the system display language on the login page to a language of your choice.
- 6. Click Login. The homepage will be displayed.

Logging Out of the System

- 1. To logout of system, click the logout icon in the upper right corner of the homepage.
- 2. The login page will be displayed after you logout of the system.

Plugin Installation



- If this is your first time using the Web Management Interface, you must first download the latest plugin. If the latest plugin is not corretly installed, you will not be able to configure parameters, even if you can view video playback.
- 2. Before installing the plugin, it is recommended to temporarily exit any anti-virus software and close your internet browser.

Temperature Management

A STATE OF STATE	Live Video	Playback	Configuration		Q	
	🖻 Face D	etection				
Device Info Steam Device External Device External Device Arm Tenpersture Measurement O Parameter Configure O Tempersture Measurement O Parameter Configure O Bad Point Check O Thermal Mapping O Bad Point Check O Thermal Calibration O Bad Point Check			Cear Face	I Detection lay Trace Info w Detection Area idence Coefficient ID Pixel Min(1-2000) Pixel Max(1-2000) es Mattling Quality	Mode1 Mode1 Mod1 Mode1 Mode1 Mode1 Mode1 Mode1 Mode1 Mode1 Mode1 Mo	

- 1. Navigate to Configuration > Temperature Measurement.
- 2. There are 3 main configuration sections that need to be modified; Parameter Configure, Thermal Mapping, and Thermal Calibration.

Thermal Calibration

Ĭ	Playback	Configuration				1.1.1
皇	Thermal Calibration					
					е чала е	
205			Enable	ON		
	-		Display Area Info	ON (
			Target Temperature	40.00	7000 AN AN 200 A	Liı
	and a second second second	A DECISION AND A DECI	Emission Rate	0.98		_
			Distance	4.20		
	7 pp					
	of the second division in which the second division is not the second division of the secon					
		Clear]		
						-
			Refre	sh Apply		

Note: It necessary to configure these settings when using the Blackbody.

- 1. Set Enable and Display Area Info to **On** to enable Thermal Calibration.
- 2. The Target Temperature should be set to the LED value displayed on the back of the Blackbody as seen above. 40 °C is recommended.
- 3. Emission Rate is the thermal radiation emissivity of the Blackbody. The default value is 0.98.
- 4. Distance is the distance from the Blackbody to the thermal camera.
- 5. Using the mouse, drag a square over where the Blackbody is located on the screen, as seen in the above image. **Note**: Be sure that the green square exactly outlines the Blackbody for the most accurate results.
- 6. Click **Apply** to save settings.

Thermal Mapping

Live Video		Playback	Configuration		
	₽T	hermal Mapping			
	2020-05	07.11:50:20 Ohte			
				· · · · · · · · · · · · · · · · · · ·	
		D-Link Street, A. S. Street, S	KAN TANK	and -	And To Concern Maria of
	4				
	- alter			Z	The second second
	1		A L		and the second sec
				No. of Concession, Name	
	[‡]	H 다 다 Lock Focus	s Position 🗹	[#] [#] [#] [#]	Lock Focus Position
					1
	Sce	ene Depth			5
	Ma	oping Point			Point One
					Point One Point Two
					Point Three

- 1. Thermal Mapping overlays the visible and thermal videos to synchronize the data coming from the two separate lenses, corresponding to how accurate the temperature detection results will be.
- 2. The goal of Thermal Mapping is to have the green square on the visible camera view match up with the green square on the thermal camera view that was set in thermal calibration.
- 3. Use zoom and focus controls found in the red box above to best match the zoom of the thermal camera view on the right side.
- 4. Select a Mapping Point. There are three possible points. The more points you calibrate the more accurate your mapping will be. Match the same color points on the thermal camera view to the visible camera view.
- 5. The green box will calibrate itself on the visible camera view based on the Mapping Points on both thermal and visible camera views.

Note: The closer the green square is to exactly outlining the Blackbody, the more accurate your results will be.

2

Face Detection



- 1. Under Temperature Measurement, navigate to Parameter Configure.
- 2. Enable Face Detection and Show Detection Area.
- 3. Area ID is the number of detection areas. Generally, we only need to set one detection area but we can optionally set up to 8. For each area, click points on the image to draw a frame over the target observation area.
- 4. Face Pixel Min, Face Pixel Max and Image Matting Quality refer to the quality of the face image that is saved after it is detected. All three can be adjusted according to your systems requirements.
- 5. Leave other options at their default values.
- 6. Refer to the User Manual for more detailed information on each configuration setting.
- 7. Click Apply to save settings.

Temperature Parameters

Temperature Parameters Face Alarm Linkage	
Enable	
Temperature Units	Celsius 🔻
Length Units	Meters
Ambient Temperature	25.00
Cavity Temperature	37.65
Correction Coefficient	0.00
Mount Distance	5.00
Face Color	OFF
Environment Adaptation	ON ()
Abnormal Temperature Display	OFF
Temperature Area	Mode2 🔻

- 1. Set Enable to **On** to enable temperature detection.
- 2. Swap between **Celcius** and **Fahrenheight** under Temperate Unit. Celsius is set as default.
- 3. Set the Ambient Temperature to the temperature of the camera's environment; e.g. indoor temperature of 25 °C.

- 4. Mount Distance is the distance between the camera and the target area. Set based on your own camera setup.
- 5. Leave other options at their default values.
- 6. Refer to the User Manual for more detailed information on each configuration setting.
- 7. Click **Apply** to save settings.

Alarm Configuration

	Live Video	Playback	Configuration
Device Info Stream Device External Device Intelligent Analysis			Face Detection
Alerre Terrperature Measurement O Parameter Configure O Thermal Mapping O Bod Point Check O Thermal Calibration			Continue Center Ana D Fise Paul MA(1300) Fise Paul
Neasure Verily Version Information Device Record Privacy Masking Network Service Priviloge Manager			Temperature Parameters Too Aams Lenage Output Channel Amm Teles Amm Teles Too Aams T
Protocol Device Log Maintenance Local Config			Atam Interval(1-10000) Total Atam Record Image: Comparison of the comparison of t
			Image 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 21 22 22 23 Set Image

- 1. Navigate to **Parameter Configure** > **Face Alarm Linkage**. Here you can configure input and output chanels as well as settings for the face detection alarm. Be sure to choose an output channel.
- 2. Set the Alarm Temperature which defines what body temperature and above will set off the alarm.

International State Une Value Pightek Configuration © Internation Image Value Image Value Image Value © Internation Image Value	IP CAMERA			
Boals Market B	1 CAINERA	Live Video	Playback	Configuration
Book MA Book MA <td< td=""><td></td><td></td><td></td><td>🕏 I/O Alarm Linkage</td></td<>				🕏 I/O Alarm Linkage
Bann Sama Charles Family Sama Control Sama Sama Sama Sama Control Sama Sama Control Sama Sama Sama Sama Sama Sama Control Sama Sama	Device Info			
Constantiant C	- B Stream			(Hour band
Extended Address Exte	- Device			
Ander Staden A	8 4 External Device			
Anno	é 👙 Intelligent Analysis			Name
A dam Note On Main	- 🔊 Alarm			Trigger Mode Connect V
¹ O Martin	- O Alarm Output			Alarm Input
Constrained and the second secon	- O Disk Alarm			Output Channel
Containing C	- O Network Alarm			0771 (Minute
Image: Second	O DIN Switch Alarm			P 12 Calebra Contraction
I Markan INTP I Markan I Markan <td>- UO Alarm Linkage</td> <td></td> <td></td> <td>Alarm Record</td>	- UO Alarm Linkage			Alarm Record
	- O Motion Alarm			SMTP
Bita Matter Image Matter </td <td>- 0 Pust Message</td> <td></td> <td></td> <td></td>	- 0 Pust Message			
Thomas in the second	Carlorian Internometer			
Watch Store In Control Store In Control Store In Control Store In Control	Concernation			0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Andre Marine Marine Marine Marine Marine Marine	Natural Sanira			Sen 🔞
Produit et al 2 Pobula et al 2 Admana et al	Phylene Mananer			
ي Deneta من المن المن المن المن المن المن المن ا	Protocol			
E dataman A B Control A Co	Device Log			
a controls	Maintenance			fm 🔯
Ruftweb Apply	Local Config			ar 🔯
Rated				
Refrech Apply				
				Refresh Apply

- 3. Navigate to Alarm > I/O Alarm Linkage. Here you can configure your output channel and settings for the I/O alarm. Be sure to choose an output channel.
- 4. Set Trigger Mode to **Connect**.



- 5. Connect your external alarm device to one of the Alarm Out connections on the camera. This should correspond to the channel selected in Step 1.
- 6. The diagram above shows how your alarm device should be connected to the output of the camera. The output does not supply power to the device. Your alarm device's external power can be connected in series with the circuit or connected separately to the device. Please see the above DI/DO diagram above for more information on how to connect your external alarm device.

IP CAMERA				🚑 admi
	Live Video	Playback	Configuration	ê L
	🖻 Alarm Output			
Device Info				
- Device	Alarm Output			1
External Device	Name			
- S Alarm	Valid Signal			Close
- O Alarm Output	Alarm Output Mode			Switch Mode
— O Disk Alarm	Alarm Time(ms)(0:0	Continuous)		5000
O Network Alarm Day Night Switch Alarm	Timing Alarm Output	t		OFF
O I/O Alarm Linkage O Motion Alarm O Push Message	Manual control			Start Stop
Temperature Measurement				Refresh Apply

- 7. Navigate to Alarm > Alarm Output.
- 8. Enter a channel name, set Valid Signal to Open, choose an Alarm Output Mode, set the length of the Alarm Time and optionally enable Timing Alarm Output.
- 9. Test whether or not you correctly configured the alarms by using the Manual control function.

Content Management System (CMS)

System Installation



- 1. Double-click on the installation file. The above installation window will pop up.
- 2. Click Term of service and read the documentation, then check Agree.
- 3. Click **Setup** to start the installation and follow further installation instructions.

Client Login

V1.4.3.0.7.7.0_20200401		×
	👤 admin	
	A •••••	
CMS	🖬 127.0.0.1 👻 10086	
	🗹 Remember Password 🗌 Auto Login	
	Login	

1. Default account and password are both set to **admin**.

- The default IP address is 127.0.0. Alternatively, enter the IP address of your central management server. If the central management server is deployed on another server, please input the server's IP address.
- 3. You can choose to remember the password or log in automatically according to the user's preference.
- 4. Click Login.

Interface Brief

Common Functions # All Feat	ures		
Live View face recognition in five view mode	Play back Search, playback and backup the recording	Layout Add, delete and modify live video layout: Configure tour/ deal	E-Map Add and modify E-Map: Display the location of the device
RealtimeAlarm Displays the real-time alarm notification	Alarm Record Search Historical alarm events; Play alarm video	Report Statistics Onex device online rate server statususeage information	Monitoring Center Multi data spethenis, visual data statistics monitoring center
Devices Search, add, delete and modify devices	Log Gwry cliert speration log and server log	Group Add, delete and modify group information	Users Add, delete, and modify user and role
Device Config Configure devices, e.g. encode parameter, motion detection, 050. etc.	Servers Query and configure server parameters: Backup/recover server data	Alarm Mail Corfigure email policy, email address, account information and other parameters	$r_{-} = -\eta_{-}$ Card Management 1 + 1 Add or remove feature cards $u_{-} = -u_{-}^{-}$

- 1. CMS is a complete management platform with many different features and functions, all accessible from the Main Menu seen above.
- 2. You can use **Card Management** to add temperature-related functions to the Common Functions page for convenient access.

Add Device



CMS 1.4										۵	$\underline{+}$	≡	8 ·	- 0	×
gnition	O Thermal Image Co	onfig 🕲 Te	mperature Config				Main Me			6		٤.	dmin 🕕		7 10:58:19
₹ Filter								Q AL	ito Search + Ad	d Device	× Delete	Impor 🕁	t 🟦 Expor	t 🛈 Devi	e Status
🗆 No.	Device Name	IP/ID/ domain n	Device Type	Model	Online Sta	Subordinate		Protocol		Server		Op	eration		
	DCS-92007	192.168.0.121	Body-Temp Dete	DCS-P200T	• Offine	Default group	2	Private Protocol	001027143003	IAU_127.0	0.0.1,MDU-Aut	∘ ∠	×⊚		

- 1. Under All Features, click **Devices**.
- 2. Click **Add Device** at the top of the screen as seen above.
- 3. Enter your cameras details into the add device form. Device Type should be set to **Body-Temp Detector**.
- 4. Click **Add** to complete the form.



Temperature Screening

- 1. Navigate to All Features > Temperature Monitor > Temperature Screening.
- 2. Default Group displays your selectable channels; one for both visible and thermal lenses.
- 3. Drag each channel into the two panels in the middle of screen so that you can view both the thermal and visible video streams at the same time.
- 4. In the Face Recognition side panal, click 🔯 in the top right corner.



- 5. Unde<u>r Full Screen Mode</u>, select Full Screen Face Card, then click OK.
- 6. Click 🗖 to enter Full-Screen Mode.

Temperature Configuration

Abnormal temperature measurement 🔵 🧿								
Lower Temp Threshold	35.0	°C						
Over Temp Threshold	45	°C						
Alarm Interval	60	S						
Normal Body Temperature	36.0 °C ~ 37.3	°C						
Apply								

- 1. Navigate to All Features > Temperature Monitor > Temperature Config.
- 2. Set the preset values to acceptible body temperatures and alarm trigger temperatures. All these settings are based on your systems regulations.
- 3. Low Temperature Threshold represents the lowest temperature in the readible range. Body temperatures below this temperature are considered invalid and will not be recorded or displayed. The default value is 35 °C.
- 4. The high temperature threshold is the upper limit of the readible range. A body temperature higher than this temperature value is regarded as invalid and will not be recorded or displayed. The default value is 45 °C.
- 5. Alarm interval is the time between two consecutive alarms. The default value is 60 seconds.
- 6. Normal Body Temperature is the interval of accecptable body temperatures. Detected body temperatures in this interval will not trigger an alarm. If the temperature drops below or exceeds this interval, an alarm will be issued. The default range is between 36.5 °C to 37.8 °C.
- 7. After all values have been set, click **Apply** to save your settings.

Over Temperature Alarm Pop-Up Configuration

 ⊗ System 				×
Basic Setting				Î
File Path	Remember Password	Auto Login	Automatic Startup	
(key) Shortcut Key	Alarm Message	Alarm Message		
	Flicker Widget	Max Widget	Delay Widget	
(i) Snapshot Setting	OpenDialog			
Log Export	Alarm Sound	Speech		
	Language	English		
	Home Page	Show Preview Page	✓ ✓ Restore Preview Layout	
	Video Proportion	Default Ratio	O Full screen	
	Decoding Method	Hardware Acceleration		
	Video window title bar	□ display		
			Reset Save Cancel	

- 1. In order to configure alarm settings, navigate to **System** by clicking @ in the top right of the UI.
- 2. Under Alarm Message, configure what type of notification to receive when an alarm is triggered.
- 3. If your camera has sound playback, under Alarm Sound you can configure what type of sound will play when an alarm is triggered. Choose between **Ignore** to play no sound, **Speech** to play a corresponding voice prompt and **Buzzer** for a beeping alarm signal.
- 4. Click **Save** in the lower right corner to save your configuration.

TECHNICAL SUPPORT

dlink.com/support





Ver. 1.00(WW)_130x183 2020/03/06 5300-00007657-01W