

What is cable compensation?



Security Systems



Cable compensation is a feature in the High end Dinion^{XF} cameras that gives the possibility to adapt the video output of the camera in such a way that the losses in the cable are minimized. Special the high frequency components, that are responsible for the fine details in the picture, are enlarged so that the frequency losses in the cable are compensated at the end of the cable without extra compensation amplifiers. To compensate for the resistance of the cable also the DC and lower frequency components are compensated to get a correct synchronization of a bright picture.

To provide the best possible picture quality also over a longer distance all the cameras that are provided with Dinion^{XF} technology are supporting the cable length compensation feature.

How can I adjust the right cable compensation?

1 Manual on the camera.

The cable compensation menu is accessible in the installer menu of the camera in the section I/O.

To access this menu press and hold the central button of the camera key path for more than 5 seconds.

The following screen will appear:

INSTALL I/O	(SELECTIONS)
SYNC IN 75 OHM	(HIGH / 75 OHM)
COMM ON	(ON / OFF)
CABLE COMP OFF	(OFF / DEFAULT / RG 59 / COAX 12 / COAX 6)
COMP LEVEL 0	(0-15)
ALARM \	
EXIT	

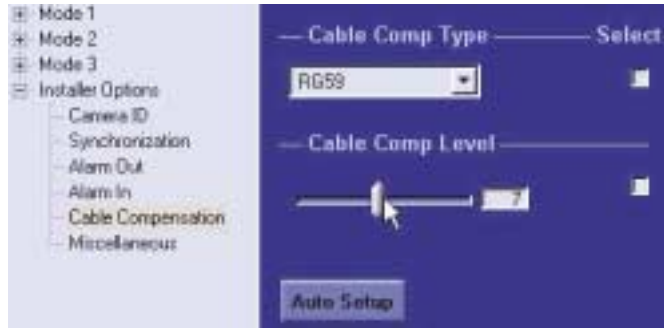
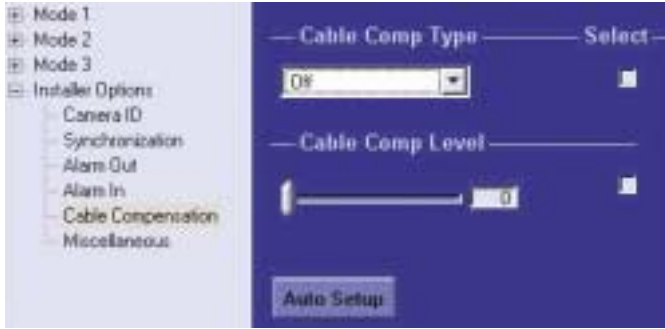
For manual adjustment of the cable compensation, first select the camera type that is used in the installation. Then adjust the cable compensation according to the table on the last page.

2 Automatic or manually via the configuration tool for imaging devices.

The camera is also equipped with an interface IC for control communication via the coaxial cable. With the control communication protocol it is possible to set the cable compensation automatic. Automatic set-up of the cable compensation can only be done via control communication software with the configuration tool connected at the far end of the cable.

First the configuration tool for imaging devices software has to be loaded on the computer prior to the physical connection of the configuration tool for imaging devices. When the configuration tool for imaging devices adapter is connected, Windows will automatically install the new hardware. For more details on the configuration tool for imaging devices set-up and remote configuration see the application note "Remotely setting up Dinion^{XF}".

The configuration tool for imaging devices: When the 'configuration tool for imaging devices' program is started, the camera will be detected automatically what device is connected and will download the settings of the camera to the computer. When the function Cable Compensation is selected the following screen will be displayed:

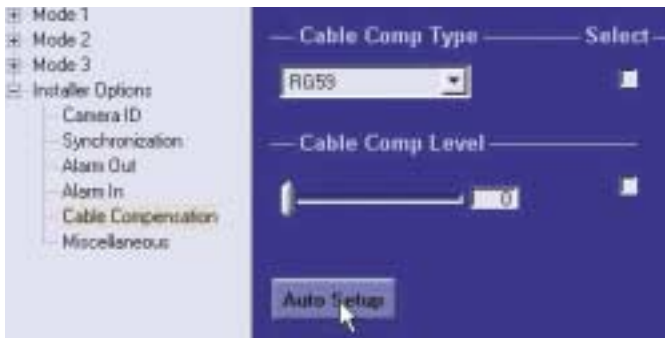


2-1 Automatic cable compensation set up

For automatic cable compensation set up, first select the type of cable from the drop down box as shown in the picture:



To activate the automatic cable compensation set up, press the 'Auto Setup' button as shown in the picture below:



When the measurements are finished and the set up is done, the correction value is displayed in the grey level window.

2-2 Manual cable compensation set up

When the setup of the camera is done in the workshop it is also possible to do the adjustment of the cable compensation manually according the settings given in the table.

When you know the length of the cable from camera to destination, the setting can be done following the next table:

Distance/Cable	DEFAULT	RG 59	COAX 12	COAX 6
50 meter	1	1	1	1
100 meter	1	2	2	1
150 meter	1	4	2	1
200 meter	2	5	3	2
250 meter	2	6	4	2
300 meter	2	8	5	2
350 meter	3	9	6	3
400 meter	3	11	6	3
450 meter	4	13	7	4
500 meter	4	14	8	4
600 meter	5	15	9	5
700 meter	6		11	6
800 meter	7		13	7
900 meter	7		14	7
1000 meter	8		15	8
1200 meter	10			10
1400 meter	12			12
1600 meter	13			13
1800 meter	15			15
2000 meter	15			15

If the cable type is known, always take that column, if the cable type is not known, select the DEFAULT cable type. The DEFAULT cable is an expected cable that normally will be used for the distance mentioned in the first column, taking care that the cable compensation will never causes problems due to overcompensated.

Please remember that the configuration tool has a maximum reach of 1000 meter, all cameras connected to a longer distance need to be configured prior to installation.