



Installation Instructions for Hybrid Digital Video Recorder models: CH-AHDVR4 - CH-AHDVR8 - CH-HDVR4-4



Important notice:

- These instructions are intended as a guide to assist in the installation of the DVR systems and assumes that the installer has sufficient knowledge of auto electrical principles and practices to competently carry out all work required. Should any part of the work required not be clearly understood this installation should be ceased and a suitable installer engaged.
- If you are not familiar with these DVR systems it is strongly recommended that before commencing installation on a vehicle that a bench test is done with all components to confirm connections and operation. Once this has been done you may proceed with the vehicle installation with clarity.
- Any damage to equipment during installation is not covered by warranty and no work should be attempted without first determining that this is the most appropriate method of installation as certain parts of the work will require drilling holes to mount equipment.
- The position of cameras should be determined prior to any cables being run and then cable paths will need to be mapped out to ensure that these can be installed without the likelihood of damage and that cables are sufficiently long enough to reach the main DVR.
- Cables should be run through standard channels and grommets where possible. Protection such as split conduit may be used to provide mechanical protection if necessary. Cutting plugs off cables or cameras to assist in installation is not recommended as signal loss or interference may be present after re-connection.
- If using HDD the DVR should always be mounted horizontally as the vibration dampening mechanism will not afford suitable protection for the hard drive in other positions. Users mounting the DVR in other ways do so at their own risk. If unable to mount horizontally it is recommend to use SSD.
- Never mount the DVR where it cannot get airflow as the device requires air for cooling. Covering the DVR while in use or mounting in a location where no airflow is possible may cause damage to the DVR.
- Never mount the DVR where it can be affected by water.
- Never mount the DVR where it will be subjected to excessive heat and vibration.
- If the DVR is to be used with components or accessories which are not supplied as standard equipment this shall be at the user's own risk. Any fault caused by the use of equipment not supplied with the system will not be covered by warranty.
- Do not clean the equipment with solvents or other chemicals. Never use high pressure air to attempt to clean inside the device.
- Should any repairs be required, please return the equipment to the place of purchase.

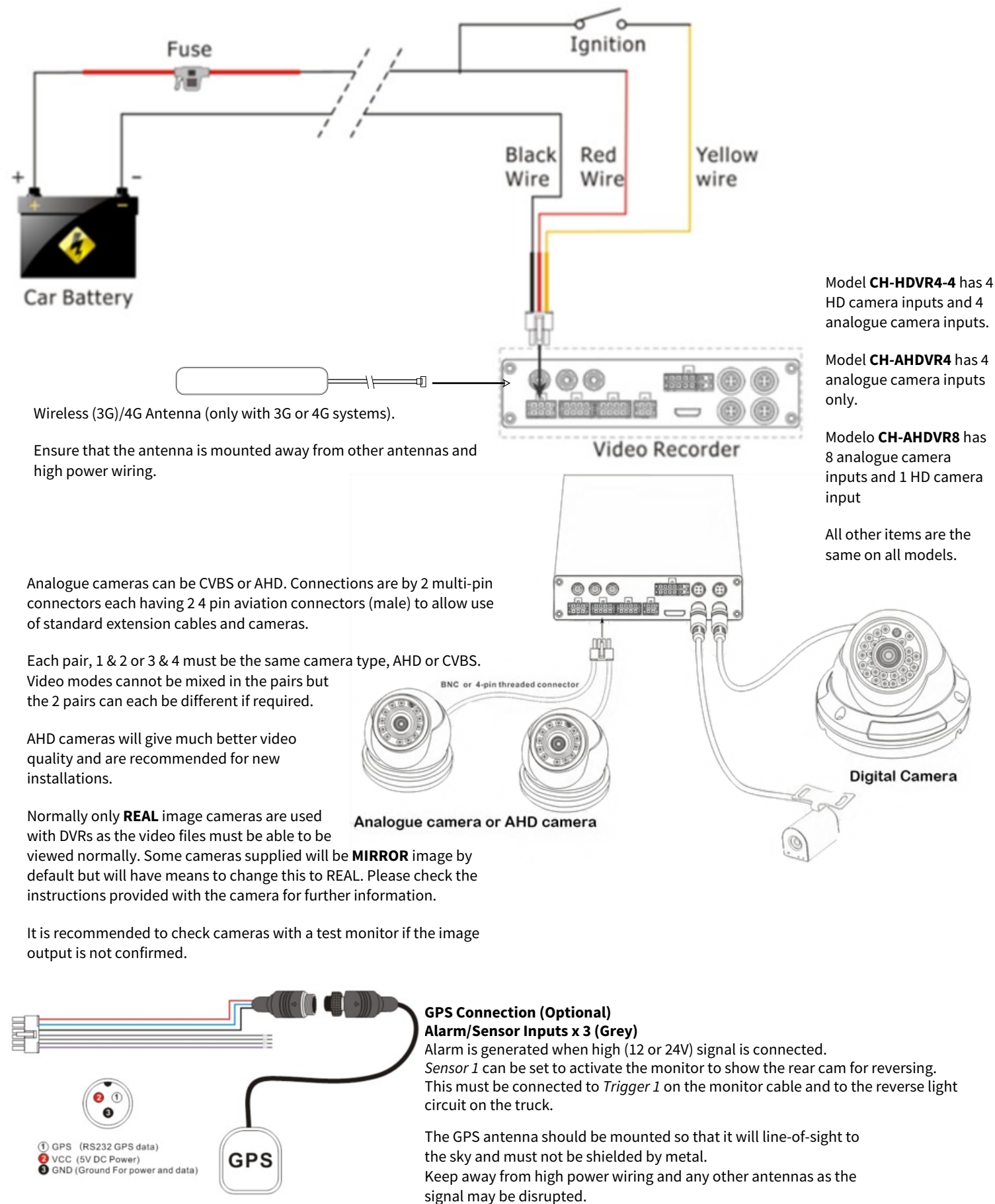
Please refer to the Quick Start Guide and User Manual for further details and information, Manual is included or may be downloaded from www.chipatronic.com.au website.

DVR are supplied fully configured and tested and should not need further setup. It is not recommended that untrained users have access to the system menu. If system parameters changes are required, please ensure that only the selected parameters are altered and that changes are tested before returning the system to normal use.

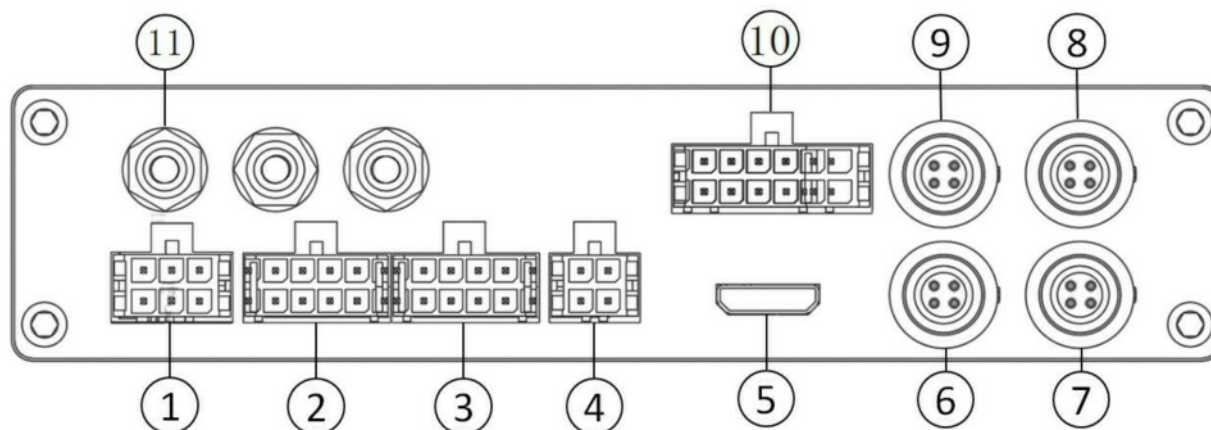
The only electrical connections required are shown below. Always ensure that the power is supplied through a fuse, either the one provided or other fuse of the same rating.
Ensure that earthing is well bonded to the main battery earth system.

12 or 24V power is suitable, there is no need to select voltage.

A CVBS Video Output cable is supplied and should be connected to the V^{out} port and can be left in place with the connection accessible from the front to allow for a monitor to be connected when necessary.
HDMI output is also available for use with HDMI monitors and may provide higher quality images.

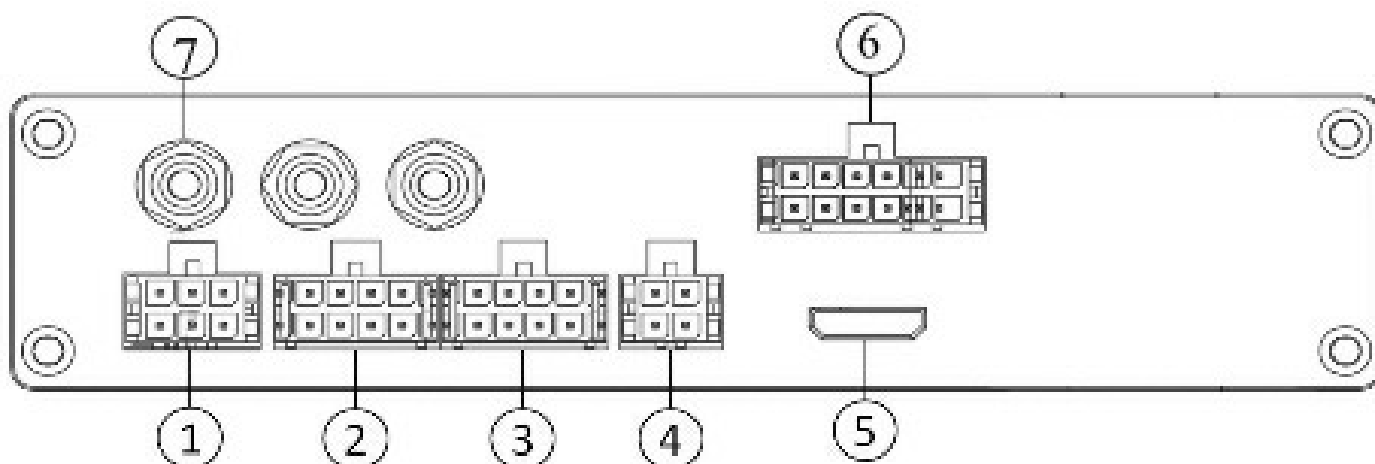


Rear Panel CH-HDVR4-4 (8 Channel)



- ①: Power (including Power, Ground, Ignition).
- ②: Camera 5 and 6(including power for camera)
- ③: Camera 7 and 8(including power for camera)
- ④: CVBS Video and Audio Out (including power for monitor)
- ⑤: HDMI Out
- ⑥: Camera 3(including power for camera)
- ⑦: Camera 4(including power for camera)
- ⑧: Camera 2(including power for camera)
- ⑨: Camera 1(including power for camera)
- ⑩: 3 sensors, 1 RS232 (For GPS), 5V DC output, 1 LANC input
- ⑪: 4G/3G antenna

Rear Panel CH-AHDVR4 (4 Channel)



- 1. Power (including Power, Ground, Ignition).
- 2. Camera 1 and 2 (including power for camera) AHD or CVBS cameras only
- 3. Camera 3 and 4 (including power for camera) AHD or CVBS cameras only
- 4. CVBS Video Out to Monitor (including power for monitor)
- 5. HDMI Out to HDMI Monitor
- 6. Sensor Connector: 3 Alarm/Sensor wires (Grey), GPS (3 pin plug), Speed sensor (Purple)
- 7. 4G/3G antenna (only on 3G / 4G models)

The CH-AHDVR8 model has 4 camera input sockets (2, 3) with 2 camera connection on each for total of 8 analogue cameras. There is 1 HD Digital camera input which can be used but this must be configured in the SETTINGS and will not normally be active unless specified at the time of order.

Regardless of the vehicle type the the normal layout of a DVR system will remain similar with the main DVR mounted in the cabin area where access to power is possible. All cameras will be connected by cables and these will need to be run through cable channels where possible and should be fixed into place so that they cannot be inadvertently caught and damaged.

Trucks with “cab over” layout will require the cables going outside of the cab to be run with other wiring through pivot points.

The DVR is supplied in a metal chassis which needs to be firmly mounted. Remove the DVR from chassis and attach using suitable fixings allowing sufficient room to access the rear panel where the connections are made.

Always ensure that the DVR is accessible so the hard drive can be removed when necessary.

Cables should be left with enough slack to allow the DVR to be removed. Do not tightly bunch the cables close to the DVR as this may place undue strain on the connectors and will hamper access in the future.

Different cameras will be used depending on the vehicle and application, it is recommended that standard cameras supplied by Chipatronic are used as these have been tested with the system and are high resolution models suitable for automotive video recording applications.

Camera mounting will be subject to the cameras used and the vehicle. Installers should check with the vehicle operator before commencing installation to ensure that these are able to capture the required views.

A portable camera tester is available to assist in setting up cameras and to connect to the DVR to check operation and setup. Contact Chipatronic for details.

Using DVR Video Out as a Reverse Camera

The DVR has 2 different video outputs; HDMI and CVBS. For a Reverse Cam application only a CVBS monitor can be used.

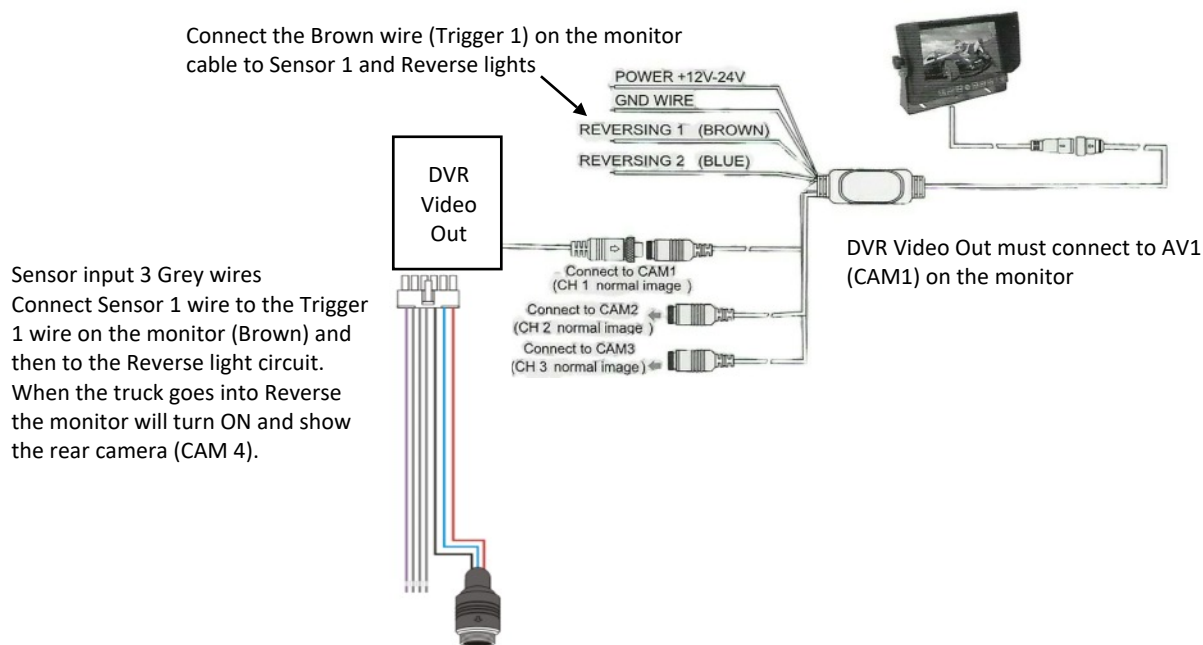


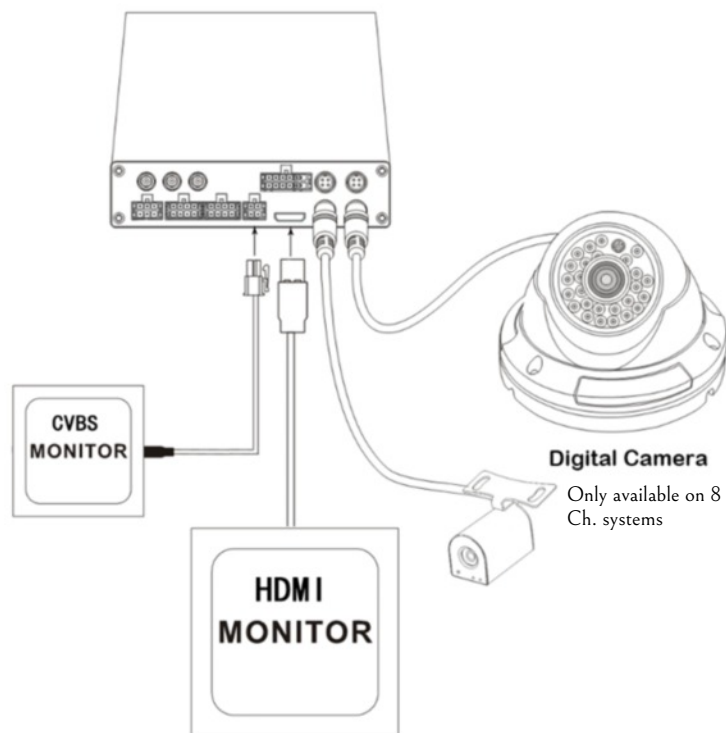
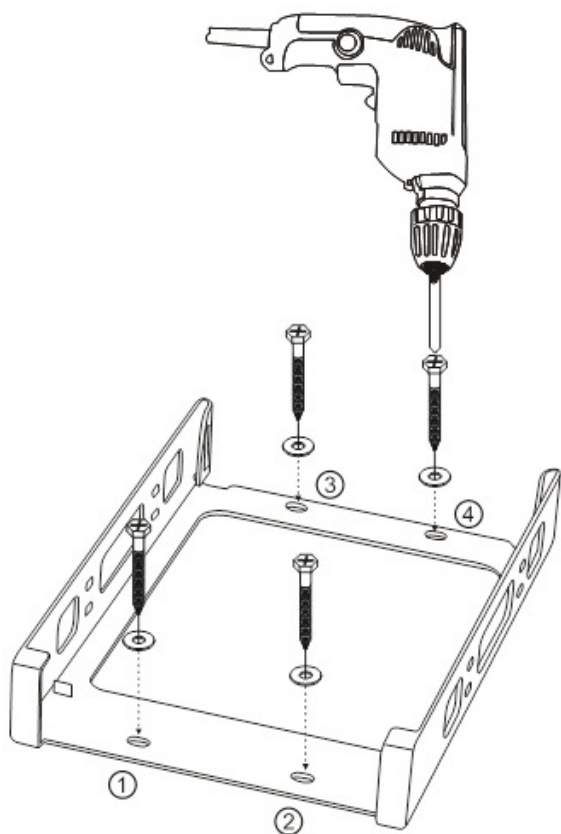
The DVR will have been configured for this functionality prior to delivery if this was specified at time of order but it is recommended that this operation is bench tested prior to vehicle installation to ensure that it works as expected as additional connection to the vehicle’s electrical system will be required which cannot be tested.

As standard, *Sensor 1* will be the DVR trigger input and this should be connected to *Trigger 1* on the monitor.

For automatic operation in reverse gear, this must be connected to the reverse light circuit so that a voltage signal is applied to both of these triggers together. The monitor will usually be in standby mode (powered off using the button on the monitor) and will turn on when voltage is applied with AV1 (Ch. 1) being displayed which will be a single camera output from the DVR, usually Ch. 4 which should be the rear camera. Please ensure that cameras are connected to the correct DVR inputs as specified or the incorrect image will be shown.

Up to 3 cameras can be switched in this manner to achieve specific views on selection from the DVR but must be configured in the DVR settings. This is best done prior to the system being supplied but can be done later if required.





Camera extension cables are required to connect the cameras to the DVR and a standard range of cables are available.

HD cameras (where used) require different cables to standard, analogue cameras (whether CVBS or AHD).

Please select cables of sufficient length to allow connection back to the DVR via the most suitable path to ensure the cables will not be subject to damage.

Where cables will be part of a moving system the cables must not be subjected to strain or stretching as this will lead to cable failure.

Connections can be damaged by moisture especially in coastal environments and the use of a dielectric grease or spray to prevent moisture ingress is recommended.

CAMERA TYPE	CABLE PART NUMBER	DESCRIPTION
HD	CH-HDVC3	3m extension cable for HD cameras
HD	CH-HDVC6	6.2m extension cable for HD cameras
HD	CH-HDVC10	9m extension cable for HD cameras
ANALOGUE	CL-2MA	2m 4 pin extension cable for Analogue/AHD cameras
ANALOGUE	CL-4MA	4m 4 pin extension cable for Analogue/AHD cameras
ANALOGUE	CL-7MA	7.5m 4 pin extension cable for Analogue/AHD cameras
ANALOGUE	CL-10MA	10m 4 pin extension cable for Analogue/AHD cameras
Analogue	CL-10MH	Heavy Duty 10m extension cable for Analogue/AHD cameras
ANALOGUE	CL-15MA	15m 4 pin extension cable for Analogue/AHD cameras
ANALOGUE	CL-20MA	20m 4 pin extension cable for Analogue/AHD cameras