

BRK[®]

THE PROFESSIONAL STANDARD

Product Catalog

Electrical Distributor

Volume 3

SECURITY CAMERAS



WHY FIRST ALERT SECURITY CAMERAS?

First Alert®

Over 50 Years of Safety and Security Experience

For more than half a century, BRK Brands, Inc. has made the home-safety and security products that make your job easier. These products are marketed under the First Alert and BRK brand names. Our products are built to the highest standard which has earned the company a leadership role in the home-safety and security product categories. We are committed to serving our customers, from you, the professionals who install our products, to the families who count on them.

First Alert/BRK has introduced a line of Security Cameras targeted towards the small business owner and high-end residential market. Until now, your customer's options have been limited. Spend thousands on the design, installation and maintenance of complicated security systems or sacrifice quality and features for other entry level systems. First Alert Security Cameras have all of the important features your customers need for their small to medium security monitoring requirements.

First Alert Quality Features:

- Complete packages - Easy to install kits
- No installation or monthly maintenance fees
- Indoor/outdoor cameras with night vision
- DVR recording systems with large expandable storage capacities
- Advanced features in the BRK-Series product line
- Wired and wireless kits for added versatility
- Internet/mobile phone ready on many systems

Perfect for:

High-end Residential - New or Remodel

Light Commercial

Small Business/Retail

Small Warehouse



How many locations do you need to protect?

First Alert Security Camera systems are available in systems that can accommodate up to 16 cameras. For most residential and small business applications this is sufficient for covering a front and rear entrance along with several inside locations like the cash register, storage area, key warehouse locations or residential interior rooms.

Wired or Wireless?

Wired Systems: Wired systems provide the most secure camera monitoring and are perfect for new construction or anywhere access to an open cable run is available. In addition, the wired systems supply power to the cameras from the cable so no electrical outlets are required near each camera.

Wireless Systems: First Alert wireless systems operate on a secure 2.4 GHz digital signal using frequency hopping spread spectrum (FHSS) technology. This FHSS technology is highly resistant to narrowband interference and is difficult to intercept. However, as with any wireless transmission, it can be subject to interference, interception or jamming under certain conditions. Wireless signals can be significantly reduced depending on the structures the signal must go through. Concrete, copper and metal pipes and heating ducts tend to reduce the signal length. In addition, the camera needs to be plugged in to a 120V outlet near the camera. If no outlets are available they will need to be installed first.

What is the maximum distance you need to cover?

Longer runs may require an upgrade to RG59 CCTV Coax cable. First Alert kits ship with economical AV cable that is designed to work well up to the length of cable provided, usually around 60 feet. If longer distances between camera and DVR are required, you will need to upgrade to RG59 Coax cable. We provide several lengths up to 300 feet. In addition, if you need to run cable for in-wall installations, then you may require fire rated cable, FT-4/CMR UL approved for in-wall installations.

Do you need to monitor your system remotely?

All of our wired and some wireless systems have the capability of being monitored using an internet connection. Remote access is available via your PC or Mac computer or via a smart phone through software provided or downloaded from your smartphone app store. Access ranges from all DVR functions to just remote viewing of the live view feed depending on the model.

Do you need audio surveillance?

Our wireless systems and some of our wired cameras have the capability of audio surveillance and recording. Be aware that audio surveillance in some states is illegal or requires permission from one or both parties to record someone's voice. Laws are also different from residential vs. commercial applications. Be sure to check with state or local authorities in your area for laws that may affect your installation.



WIRED RECORDING KITS

H.264 Digital 8 and 16 Channel Color DVR Camera Systems

H.264

 VIDEO
COMPRESSION

 DIGITAL DVR
RECORDER

 MOBILE PHONE/
WEB READY

1.0TB

 DVR OPTIMIZED
SATA HDD

 INDOOR/OUTDOOR
600 TVL CAMERAS

 NIGHT
VISION

 AUTO IR
CUT FILTER

 COLD TEMP
PERFORMANCE

- Real hexaplex operation - simultaneous record, playback, mobile phone live view, backup, control, & remote access
- 16 bit true color user friendly graphical interface
- Web-ready & mobile phone compatible
- Advanced H.264 video compression for maximum storage efficiency
- Large 1TB Hard Drive installed for extended data storage (can expand up to 2TB)
- Easy power connections with 9-way power splitter - eliminates need for individual camera power supplies
- Alarm and PTZ Inputs for added flexibility and control
- Cameras
 - 600TVL Color CMOS Cameras included for clear resolution (SKU# PRO-CM600)
 - Indoor/outdoor (IP66 rating) with 36 IR LED's, 80'+ night vision
 - Auto IR Cut Filter for truer daytime colors
 - Cable Safe Bracket - Protects cable from vandalism
 - Cold temp performance: -22°F to 122°F temp range
- Monitor
 - Display Size: 18.5" (16:9) LED SLIM
 - Display Type: Active matrix TFT
 - Dynamic Contrast Ratio: 5,000,000:1
 - Pixel Pitch: 0.239
 - Resolution: 1366 x 768 @ 60Hz
 - Response Time: 2mS

Available Kits:


BRK SERIES

PRO-DC881060019

8 Channel System with 18.5" LED Display and 8 Cameras

Includes: PRO-D810 DVR System, 18.5" LED Display, 8 PRO-CM600 Cameras, remote control, USB mouse, 60 ft. AV BNC/DC Power Cable per camera, Power Supplies (cameras, monitor and DVR), 9-way Power Splitter Cable, 6' Ethernet cable, Camera Mounting Hardware, 2 Warning Decals, Quick Install Guide (English), Mini CD with English and Spanish Manuals and Install Software.

WIRED RECORDING KITS/DVR's

PRO-DC8810-600

8 Channel System with 8 Cameras

Includes: PRO-D810 DVR System, 8 PRO-CM600 Cameras, remote control, USB mouse, 60 ft. AV BNC/DC Power Cable per camera, Power Supply (cameras and DVR), 9-way Power Splitter Cable, 6' Ethernet cable, Camera Mounting Hardware, 2 Warning Decals, Quick Install Guide (English), Mini CD with English and Spanish Manuals and Install Software.



BRK SERIES

PRO-DC8410-600

8 Channel System with 4 Cameras

Includes: PRO-D810 DVR System, 4 PRO-CM600 Cameras, remote control, USB mouse, 60 ft. AV BNC/DC Power Cable per camera, Power Supply (cameras and DVR), 9-way Power Splitter Cable, 6' Ethernet cable, Camera Mounting Hardware, 2 Warning Decals, Quick Install Guide (English), Mini CD with English and Spanish Manuals and Install Software.



BRK SERIES

DVR's only:

PRO-D810

8 Channel DVR System

PRO-D1610

16 Channel DVR System

DVR Only Kits Include: DVR System, remote control, USB mouse, Power Supply, 6' Ethernet cable, 2 Warning Decals, Quick Install Guide (English), Mini CD with English and Spanish Manuals and Install Software.



BRK SERIES

Back Panel Configurations:



PRO-D810 Back Panel Connections/Ports:

8 BNC in, 8 Audio in, 1 VGA out, 1 BNC Main out, 1 audio out, LAN port, DC power in, PTZ/Alarm Block: 8 Alarm in, 1 Alarm out (NO, Common and Ground), RS485A & RS485B PTZ connections, 2 additional ground and +12 power. Note: 1 USB port, 1 USB Mouse on front panel.



PRO-D1610 Back Panel Connections/Ports:

16 BNC in, 2 Audio in, 1 audio out, 1 VGA out, 1 BNC Main out, LAN port, DC power in, PTZ/Alarm Block: 4 Alarm in, 2 Alarm out (NO, Common), 2 RS485A & RS485B PTZ connections, 5 ground and one +12 power. Note: 1 USB port, 1 USB Mouse on front panel. Note: 1 USB port, 1 USB Mouse on front panel.

WIRED RECORDING KITS

WIRED SURVEILLANCE

PRO-CM600

600TVL Wired CMOS Color Camera

- Indoor/outdoor color camera (IP66 rating)
- 600 TV lines for clear resolution
- 36 IR LED's for a minimum of 80' Night Vision distance
- Metal Housing
- Auto IR Cut Filter for truer daytime colors
- Cable Safe Bracket – Protects cable from vandalism
- Cold temp performance: -22°F to 122°F temp range
- Dimensions: 3.25"H x 2.88"W x 6.25"D

Includes:

1 Camera, 60 ft. AV BNC/DC Power Cable, Power Supply, Camera Mounting Hardware, Manual.



INDOOR/OUTDOOR
600 TVL CAMERA



NIGHT
VISION



AUTO IR
CUT FILTER



COLD TEMP
PERFORMANCE



BRK SERIES

PRO-CMD600

600TVL Dome Wired CMOS Color Camera

- Indoor color dome camera
- 600 TV lines for clear resolution
- 32 IR LED's for a minimum of 80'+ Night Vision distance
- Plastic Housing
- 14°F to 122°F temp range
- Dimensions: 3.625 Dia x 2.69" H

Includes:

1 Camera, 60 ft. AV BNC/DC Power Cable, Power Supply, Camera Mounting Hardware, Manual.



INDOOR
600 TVL CAMERA



NIGHT
VISION



AUTO IR
CUT FILTER



BRK SERIES



BRK SERIES

PRO-CM520

520TVL Wired CMOS Color Camera

- Indoor/outdoor color camera (IP65 rating)
- 520 TV lines for clear resolution
- 30 IR LED's for a minimum of 80' Night Vision distance
- Metal Housing
- Dimensions: 5.5"H x 3.68"W x 3.63"D

Includes:

1 Camera, 60 ft. AV BNC/DC Power Cable, Power Supply, Camera Mounting Hardware, Manual.



INDOOR/OUTDOOR
520 TVL CAMERA



NIGHT
VISION



BRK SERIES

PRO-CMD520

520TVL Dome Wired CMOS Color Camera

- Indoor color dome camera
- 520 TV lines for clear resolution
- 32 IR LED's for a minimum of 80'+ Night Vision distance
- Plastic Housing
- Dimensions: 3.625 Dia x 2.69" H

Includes:

1 Camera, 60 ft. AV BNC/DC Power Cable, Power Supply, Camera Mounting Hardware Manual.



INDOOR
520 TVL CAMERA



NIGHT
VISION

P-500

Mini Indoor Wired Analog Color Camera

- Discrete placement and surveillance
- Compact size can easily be positioned anywhere
- Indoor color camera with built-in microphone
- 380 TV lines
- Dimensions: 1.5"H x 1.2"W x 1.2"D

Includes:

1 Camera, 18 ft. AV/Power cable, Power Supply, Camera Mounting Hardware, Manual.



Compact Size
1-1/2" high



DISCRETE PLACEMENT
& SURVEILLANCE



INDOOR
380 TVL CAMERA



AUDIO
SURVEILLANCE

WIRED SURVEILLANCE

PRO-CDH480**480TVL Heated CCD Color Camera**

- 1/3" Sony Super HAD CCD image sensor
- Indoor/outdoor Heated Camera with Fan (IP65 rating)
- 480 TV lines for clear resolution
- 30 IR LED's: 130' Night Vision distance
- Dimensions: 11.50"H x 5.50"W x 13.50"D

Includes:

1 Camera, Power Supply, Camera Mounting Hardware, Manual.
(Note: Requires RG59 Coax Video/DC Power Cable, not included)



INDOOR/OUTDOOR
480 TVL CAMERA



NIGHT
VISION



Special Order

BRK SERIES

PRO-CDP480**Mini PTZ Wired CCD Color Camera**

- 1/3" Sony Interline Transfer CCD image sensor
- Indoor/outdoor with shockproof and weatherproof cover, built-in fan and heater (IP65 Rating)
- Pan 360° Tilt 180° (Auto-Flip), Max 360°/sec
- Built-in 10*10X Zoom with invert image
- 480 TV lines for clear resolution
- Dimensions: 8.0"H x 6.0"W x 8.5"D

Includes:

1 Camera, Power Supply, Camera Mounting Hardware, Manual.
(Note: Requires RG59 Coax Video/DC Power Cable, not included)



INDOOR/OUTDOOR
480 TVL CAMERA



NIGHT
VISION



Special Order

BRK SERIES

PRO-CD550**550TVL Wired CCD Manual Zoom Color Camera**

- 1/3" Sony Super HAD CCD image sensor
- 4mm - 9mm Manual Zoom Lens
- Indoor/outdoor Camera (IP66 rating)
- 550 TV lines for clear resolution
- 42 IR LED's: 100' Night Vision distance
- Dimensions: 5.00"H x 4.00"W x 10.25"D

Includes:

1 Camera, Power Supply, Camera Mounting Hardware, Manual.
(Note: Requires RG59 Coax Video/DC Power Cable, not included)



INDOOR/OUTDOOR
550 TVL CAMERA



NIGHT
VISION



Special Order

BRK SERIES

DECOY CAMERAS

DECOY CAMERAS



BRK SERIES

PRO-DC2

Aluminum Box Decoy Camera

- Battery operated flashing LED light
- Indoor/outdoor (IP44 rating)
- Non-functioning video camera
- Requires 2 AA batteries (not included)
- Aluminum and ABS plastic (12.875"D x 4.25"W x 12.75"H)

Includes:

1 Camera with stand, Camera Mounting Hardware, Manual.



INDOOR/OUTDOOR



BRK SERIES

PRO-DC3

Dome Decoy Camera

- Motion activated flashing LED light
- Indoor/outdoor
- Non-functioning video camera
- Requires 2 AA batteries (not included)
- ABS plastic (4.63"Dia. x 2.88"H)

Includes:

1 Camera, Camera Mounting Hardware, Manual.



MOTION
ACTIVATED



INDOOR/OUTDOOR



BRK SERIES

PRO-DC4

Mini Dome Decoy Camera

- Battery operated flashing LED light
- Indoor/outdoor
- Non-functioning video camera
- Requires 2 AA batteries (not included)
- ABS plastic (3.74"Dia. x 2.75"H)

Includes:

1 Camera, Camera Mounting Hardware, Manual.



INDOOR/OUTDOOR



BRK SERIES

PRO-DC5

Barrel Decoy Camera

- Low light activated flashing LED light
- Indoor/outdoor (IP44 rating)
- Non-functioning video camera
- Requires 2 AAA batteries (not included)
- Aluminum (5.64"D x 2.28"W x 3.22"H)

Includes:

1 Camera with stand, Camera Mounting Hardware, Manual.



LOW LIGHT
ACTIVATED



INDOOR/OUTDOOR

*Tip:
Decoy Cameras act as a great
deterrent if you don't have
functioning cameras or they
can make your live system
seem to be more extensive.*

WIRELESS RECORDING KITS

DWH-Series DVR (DWH-471, DWH-472) 2.4 GHz Digital Wireless Color DVR with 7" LCD Touch Screen & Internet Access via Smart Phone

- 4 channel H.264 recording system
- Internet access via Smart Phone
- 2.4 GHz secure digital signal using frequency hopping spread spectrum (FHSS) technology
- Indoor/outdoor night vision color camera (IP66 rating)
- Auto IR Cut Filter for truer daytime colors
- Audio surveillance with Mute
- Wireless transmission up to 500 ft. line of sight
- 4GB SD card included, up to 32GB SD/SDHC compatible
- Expandable up to a total of four DWH-400 cameras

Includes:

DWH-471: 1 camera, DWH-472: 2 Cameras, 2.4 GHz wireless DVR recording system with 7" LED Touch Screen, Docking Cradle, 4GB SD card, RJ-45 Ethernet cable (6'), power supplies, camera stand & mounting hardware, 2 Window Warning Decals, English Manual, CD with English and Spanish manuals (pdf).



Internet access via Smart Phone

H.264

VIDEO
COMPRESSION



7" LCD
TOUCH SCREEN



SD CARD
INCLUDED



MOBILE PHONE
READY



AUTO IR
CUT FILTER



AUDIO
SURVEILLANCE



INDOOR/OUTDOOR
CAMERAS



NIGHT
VISION

Note:
In some states it is illegal or it requires permission from one or both parties to record someone's voice. Be sure to check with state or local authorities in your area for laws that may affect your installation

DWH-400

2.4 GHz Digital Wireless Color Camera

- Add-on Camera for DWH-Series DVR
- 2.4 GHz secure digital signal using frequency hopping spread spectrum (FHSS) technology
- Indoor/outdoor color camera (IP66 rating)
- Auto IR Cut Filter for truer daytime colors
- 25 IR LED's for 60' night vision distance
- Audio surveillance
- Wireless transmission up to 500 ft. line of sight
- Dimensions: 8.0"H x 2.8"W x 4.8"D

Includes:

2.4 GHz wireless Color Camera, power supply, camera stand & mounting hardware, English Manual, CD with English and Spanish manuals (pdf).



AUTO IR
CUT FILTER



AUDIO
SURVEILLANCE



INDOOR/OUTDOOR
CAMERA



NIGHT
VISION



WIRELESS RECORDING KITS

DWS-Series DVR (DWS-401, DWS-471 & DWS-472) 2.4 GHz Digital Wireless Color DVR with 7" LCD Screen

- 4 channel MPEG-4 recording system
- 2.4 GHz secure digital signal using frequency hopping spread spectrum (FHSS) technology
- Indoor/outdoor night vision color camera (IP66 rating)
- Auto IR Cut Filter for truer daytime colors
- Audio surveillance with Mute
- Wireless transmission up to 500 ft. line of sight
- 4GB SD card included, up to 32GB SD/SDHC compatible
- Expandable up to a total of four DWC-400 cameras

Includes:

DWS-401: 1 DWC-400 camera, 2.4 GHz wireless DVR recording system (no LED display), 1 BNC to RCA connector:

DWS-471: 1 DWC-400 camera, 2.4 GHz wireless DVR recording system with 7" LED display
DWS-472: 2 DWC-400 cameras, 2.4 GHz wireless DVR recording system with 7" LED display:

and 4GB SD card, AV cable, power supplies, camera stand & mounting hardware, 2 Window Warning Decals, English Manual, CD with English and Spanish manuals (pdf).



DWS-471 and DWS-472

DWS-401

MPEG-4
VIDEO
COMPRESSION

7in
7" LCD
SCREEN

4GB
MICRO SD
CARD INCLUDED

AUDIO
SURVEILLANCE

INDOOR/OUTDOOR
CAMERAS

NIGHT
VISION

DWC-400

2.4 GHz Digital Wireless Color Camera

- Add-on Camera for DWS-Series DVR
- 2.4 GHz secure digital signal using frequency hopping spread spectrum (FHSS) technology
- Indoor/outdoor color camera (IP66 rating)
- Auto IR Cut Filter for truer daytime colors
- 25 IR LED's for 60' night vision distance
- Audio surveillance
- Wireless transmission up to 500 ft. line of sight
- Dimensions: 8.5"H x 2.75"W x 6.2"

Includes:

2.4 GHz wireless Color Camera, power supply, camera stand & mounting hardware, English Manual, CD with English and Spanish manuals (pdf).

AUDIO
SURVEILLANCE

INDOOR/OUTDOOR
CAMERA

NIGHT
VISION

WIRELESS RECORDING KITS

WIRELESS RECORDING KITS

DWB-740

Indoor 2.4GHz Digital Wireless Family Surveillance Camera & 2.5" LCD Monitor

- 4-channel digital wireless recording system
- VOX voice activated recording
- 2.4 GHz secure digital signal using frequency hopping spread spectrum (FHSS) technology
- Indoor night vision color camera with audio surveillance
- Wireless transmission up to 750 ft. line of sight
- 3 Musical Lullabies, Playing Time 5 - 7 Minutes Each
- 2GB SD card included, up to 32GB SD/SDHC compatible
- Expandable up to a total of four DWB-700 cameras

Includes:

2.5" Monitor/Receiver, 1 digital wireless camera, 2GB SD card, power supply, camera stand & mounting hardware, manual.



2.5" LCD
SCREEN



INDOOR
CAMERA



MICRO SD
CARD INCLUDED



AUDIO
SURVEILLANCE



NIGHT
VISION



Tip:
Perfect for placement in
Lighting Showrooms or
at the counter area for
impulse sales.

DWB-700

Indoor 2.4GHz Digital Wireless Camera

- 2.4 GHz secure digital signal using frequency hopping spread spectrum (FHSS) technology
- Indoor night vision color camera with audio surveillance
- Wireless transmission up to 750 ft. line of sight
- Use with First Alert DWB-740 family surveillance kit

Includes:

1 digital wireless camera, power supply, camera stand & mounting hardware, manual.



INDOOR
CAMERA



AUDIO
SURVEILLANCE



NIGHT
VISION



BNC-50, BNC-100, BNC-300 RG59 CCTV COAX VIDEO & DC POWER CABLES

- Combined video and DC power in one cable
- Solid copper conductor for less voltage drop and better signal over longer distances - easier to handle
- Double shielded with copper clad aluminum braiding
- BNC Male connections on video cable and 1 jack male, 1 plug female on DC power cable (2.1mm I.D./5.5mm O.D.)
- Two adaptor plugs provided to extend lengths
- 50' (BNC-50), 100' (BNC-100) and 300' (BNC-300) lengths

Notes:

BNC-50: 50' cable, BNC-100: 100' cable, BNC-300: 300' cable.

Tip:
Need longer runs? Upgrade
to RG59 CCTV COAX cable
for a better signal over
longer distances



BNC-100F RG59 FIRE RATED CCTV COAX VIDEO & DC POWER CABLE

Same features as above plus:

- FT-4/CMR UL approved for in-wall installations
- 100' length

YS-1 FIRST ALERT SIGN

- Inform potential intruders your premises are under 24 hour surveillance with First Alert security cameras
- Indoor/outdoor use
- Includes sign, post and (4) anti-theft deterrent stickers



CAMERA KNOWLEDGE

RECORDING TIME CAPACITIES (H.264)

Recording Times for NTSC Video Format @ 30 Frames/Second

Resolution	Video Quality	Bit Rate (Kbps)	Space Used (MB/h)	For 1TB Hard Drive		
				# Hours/Channel	# of Days/Channel	# of Days w/ 8 Channels
CIF	Low	384	172.8	5,787.0	241.1	30.1
	Medium	512	230.4	4,340.3	180.8	22.6
	High	768	345.6	2,893.5	120.6	15.1
HD1	Low	512	230.4	4,340.3	180.8	22.6
	Medium	768	345.6	2,893.5	120.6	15.1
	High	1,024	460.8	2,170.1	90.4	11.3
D1	Low	896	403.2	2,480.2	103.4	12.9
	Medium	1,024	460.8	2,170.1	90.4	11.3
	High	1,280	576.0	1,736.1	72.4	9.0

Total Recording Capacity = Used space per hour (MB/h) x Recording time (hour) x number of channels

RECORDING TIME CAPACITIES (M-JPEG)

SD Card Capacity	320 x 240 (QVGA)	640 x 480 (VGA)	1,280 x 720 (HD)
1GB	29 min 30 sec	10 min 40 sec	2 min
2GB	1 h	21 min 40 sec	8 min 20 sec
8GB	4 h 1 min	1 h 27 min	33 min 33 sec
16GB	8 h 5 min	2 h 55 min	1 h 7 min
32GB	16 h 14 min	5 h 51 min	2 h 15 min

RECORDING TIME CAPACITIES (SD Card)

SD Card Capacity	Single Camera (480 x 272)	Multiple Cameras (320 x 240 QVGA)
1GB	200 Minutes (3.3 hours)	130 Minutes (2.2 hours)
2GB	400 Minutes (6.7 hours)	260 Minutes (4.3 hours)
8GB	1,600 Minutes (26.7 hours)	1,040 Minutes (17.3 hours)
16GB	3,200 Minutes (53.3 hours)	2,080 Minutes (34.7 hours)
32GB	6,400 Minutes (106.7 hours)	4,160 Minutes (69.3 hours)

Note: All numbers are approximate and are for estimating only. Many factors influence actual storage capacities including size of data, quality, aspect ratio and compression used.

INGRESS PROTECTION (IP RATINGS)

The IP rating is used to specify the strength of the enclosure that surrounds electronic equipment and is determined by specific tests. Each IP rating consists of using two separate measures. The first is protection against solids; the second number is protection against liquids. So therefore an IP rating of 65 is totally protected against dust and is protected against low pressure jets of water from all directions with limited ingress permitted.

IP Ratings	
Level of Protection against solid objects, materials or dust	Level of Protection against water or liquids
0 No protection	0 No protection
1 Protected against solid objects down to 50 mm	1 Protection against vertically falling drops of water (e.g. condensation)
2 Protected against solid objects down to 12 mm	2 Protection against direct sprays of water up to 15 degrees from vertical
3 Protected against solid objects down to 2.5 mm	3 Protection against direct sprays of water up to 60 degrees from vertical
4 Protected against solid objects down to 1 mm	4 Protection against water sprayed from all directions – limited ingress permitted
5 Protected against dust, limited ingress (no harmful deposit)	5 Protected against low pressure jets of water from all directions – limited ingress permitted
6 Totally protected against dust	6 Protected against low pressure jets of water, limited ingress permitted (e.g. ship deck)
	7 Protected against the effect of immersion between 15cm and 1m
	8 Protected against long periods of immersion under pressure

MECHANICAL PROTECTION (IK RATINGS)

The IK rating is an international numeric classification (EN/IEC 62262) for the degrees of protection provided by enclosures for electrical equipment against external mechanical impacts. For cameras this can be a measure of vandal resistance of the housing. Not all cameras have an IK rating. This mechanical impact is identified by the energy needed to qualify a specified resistance level, which is measured in joules (J).

IK Code		
IK Code	Impact energy (joules)	Equivalent impact
00	Unprotected	No test
01	0.15	Drop of 200 g object from 7.5 cm height
02	0.20	Drop of 200 g object from 10 cm height
03	0.35	Drop of 200 g object from 17.5 cm height
04	0.50	Drop of 200 g object from 25 cm height
05	0.70	Drop of 200 g object from 35 cm height
06	1.00	Drop of 500 g object from 20 cm height
07	2.00	Drop of 500 g object from 40 cm height
08	5.00	Drop of 1.7 kg object from 29.5 cm height
09	10.00	Drop of 5 kg object from 20 cm height
10	20.00	Drop of 5 kg object from 40 cm height

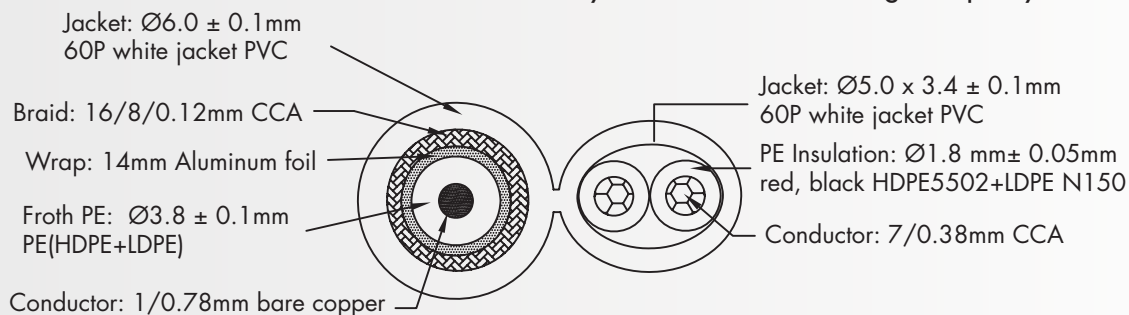
CAMERA KNOWLEDGE

CCTV COAX CABLE CONSTRUCTION

Not all coax cables are created equally. You do not want to use CATV RF coax video cable used for standard cable TV installations for your CCTV installation. This CATV cable can cause video distortion and excessive loss of video strength because of the copper-covered steel core and aluminum braiding.

First Alert's RG59 CCTV Baseband/composite coax video and DC power cables use a solid copper conductor for less voltage drop and better signal over longer distances. This also makes the cable easier to handle versus other lower quality copper clad steel cables as it is less rigid and will not remain coiled. In addition, the cables are double shielded with copper clad aluminum (CCA) braiding to help protect the video signal from interference. This offers an economical alternative to a solid copper braiding shield while still meeting industry standard requirements. Runs can be made up to 600ft without video performance loss.

Each cable comes with BNC Male connections on each end of the video cable and 1 jack male, 1 plug female on the ends of the DC power cable (2.1mm I.D./5.5mm O.D.). We also supply two adaptor plugs for your convenience. One is a BNC female to BNC female adaptor to provide a way to connect two lengths of cable together. The other is a BNC Female to RCA male connector to attach cable to a TV RCA female (Yellow Video in) input. In addition, we offer cable that is fire rated FT-4/CMR UL approved for in-wall installations. All of these features ensure your customers of the highest quality installation.



INFRARED (IR) LIGHT AND ITS EFFECT ON COLOR SECURITY CAMERAS

Color security cameras that feature night vision use IR LED's to illuminate the area. The infrared region of the color spectrum is not visible to the human eye, but is visible to night vision security cameras. Many light sources including the sun emit infrared light. Unfortunately, infrared light in the daylight to a security camera sometimes results in strange colors. The color spectrum to the naked eye can seem to shift, causing for example, the grass to look white or pink. To get around this problem some cameras contain a special component which filters out infrared light. This gives a high quality image with truer daytime colors. This component is called an IR cut filter. However, having a permanent filter in the camera renders it useless if we want to monitor in the dark using infrared light. Therefore, some cameras feature an automatic IR cut filter to move over or away from the lens when appropriate.



No IR cut filter during daylight



IR cut filter added during daylight

CONNECTING FIRST ALERT WIRELESS CAMERAS TO WIRED DVR SYSTEMS

Connecting First Alert wireless cameras to our wired DVR systems or other wired DVR systems is very easy. More importantly, all of the features and recording options in the wired DVR such as schedule recording, mask field, enhanced motion detect, remote internet and mobile phone access, e-mail alerts and alarm functions all work as they should. In addition you get the benefit of a large hard drive for extended recording time.

To make the connection you will need a Male BNC to Female RCA adaptor. This is used to allow the DWS-401 RCA cable to be connected to the BNC Video In port on the back of the DVR. One adaptor is included in the DWS-401 Kit. (See image at right).

Step 1: Install and pair the wireless camera to the DWS-401 receiver as per instructions. Do not insert the SD card. All recording will be done on the wired DVR. (Note: You must first connect the DWS-401 to a TV or monitor in order to see the setup menu to pair the camera. Only the camera video stream and not the setup menu is visible through the BNC camera connection on the wired DVR.)

Step 2: Attach the BNC Male/RCA Female adaptor described in Step 1 to one of the Video In BNC ports of the DVR.

Step 3: Connect the AV cable that ships with the DWS-401 to the AV Out port on the DWS-401 receiver. Then connect the yellow RCA plug to the adaptor on the Video In Port you just installed in Step 2. (Note: If recording sound connect the White RCA plug to the Audio In port of the same number as the Video In port. Both port numbers must be the same to sync the sound with the video image.) That's it! You're connected.

Step 4: Configure your recording settings on the wired DVR system.



Tip:
You need one DWS-401 receiver for every Video In Port on the wired DVR. The DWS Series receivers have the capability of pairing 4 cameras per receiver. You can pair all four cameras in one Channel of the Live View screen, however any motion or recording from any of the 4 wireless cameras will affect the recording on the one channel. You cannot separate out these four cameras. They record as one screen. It is our recommendation that only one camera be paired per DWS Series receiver for this type of setup.



CAMERA KNOWLEDGE

COMPRESSION FORMATS

The foundation of these standards is JPEG, named after the group that developed it in the mid-1980s, the Joint Photographic Experts Group. The first JPEG standard was released in 1991. Another group of developers, in the late 1980s, developed a standard for compressing moving pictures and audio - the Motion Picture Experts Group, hence the name MPEG. MPEG-4 was released in 1998. H.264/AVC (for advanced video coding), is the latest block-oriented motion-compensation-based codec standard developed by the ITU-T Video Coding Experts Group (VCEG) together with the ISO/IEC Motion Picture Experts Group (MPEG), and it was the product of a partnership effort known as the Joint Video Team (JVT). The ITU-T H.264 standard and the ISO/IEC MPEG-4 AVC standard (formally, ISO/IEC 14496-10 - MPEG-4 Part 10, Advanced Video Coding) are jointly maintained so that they have identical technical content. H.264 is used in such applications as Blu-ray Disc, videos from You Tube and the iTunes Store, DVB broadcast, direct-broadcast satellite television service, cable television services, and real-time video conferencing. The standardization of the first version of H.264/AVC was completed in May 2003. Version 13 was implemented in March 2010.

H.264

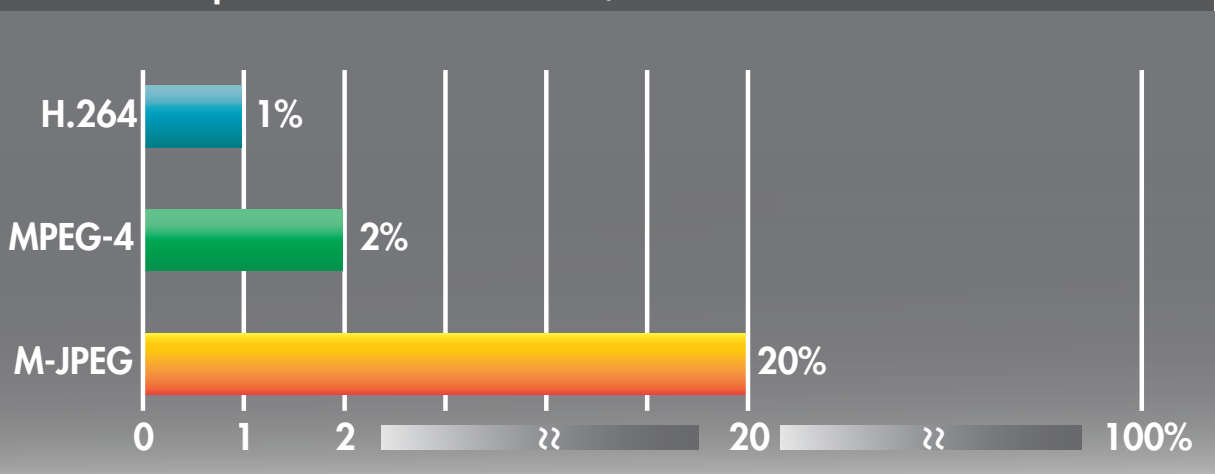


H.264 provides good video quality at substantially lower bit rates than previous standards. Basically it compares compressed images using the first compressed image as a reference frame, then it sends only the parts of the following images that differ from the reference image. This substantially lowers the amount of data that needs to be transferred making it more attractive for video network delivery and the delivery of HD video. H.264 is an open format and is available for anyone to implement.

M-JPEG is a picture compression format utilizing a video codec where each frame is separately compressed into a JPEG image. The resulting quality of video compression is independent from the motion in the image. Each individual image is a complete JPEG compressed image, unlike H.264 which uses reference images. M-JPEG technology is simpler however uses more storage space. As images are compressed, clarity can suffer. A balance needs to be drawn at reducing image size and keeping the image clear. Latest versions of H.264 improve clarity.

M-JPEG is ideal for courtroom evidence, whereas H.264 could be challenged as every frame is not a complete picture. However, due to its widespread use H.264 is becoming more accepted for courtroom evidence, depending on what is being reviewed. Consulting the District Attorney or other law enforcement authority before using any video format is highly recommended.

Compressed file size of H.264, MPEG-4 and M-JPEG



NOTES



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