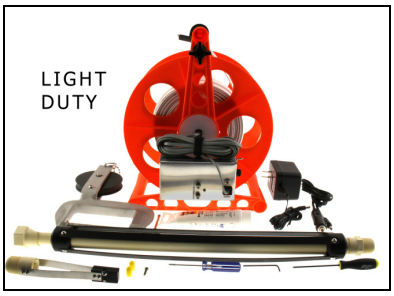
DISTRIBUTOR

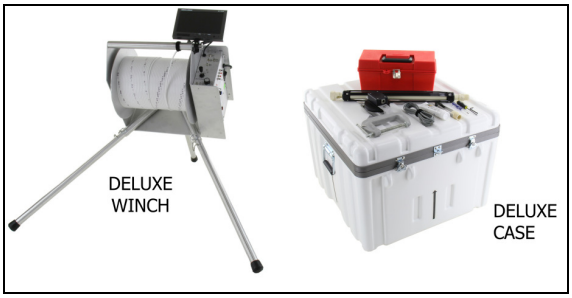
Innovative Environmental Scientific Pty Ltd
ABN: 46 611 085 842

GeoVISION Borehole Video Camera Systems

Allegheny Instrument's GeoVISION line of borehole video camera systems can be tailored for many different applications. We specialize in system portability and small diameter cameras; to inspect from 1-inch (25 mm) diameter bores to mine shafts and caverns. Depending upon your application and requirements, we can assist you in selecting a system that best fits your needs and budget. Below is a discussion of our different cameras and winch systems.

The Light Duty/Heavy Duty systems have the cable on a hand winch/reel; the camera assembly is lowered by hand down the well/bore. The ultra portable Light Duty systems are equipped with 325 feet (100 meters) of cable, and are designed for wells & boreholes in remote locations or light duty usage. The cable is marked off sequentially in feet. The Light Duty system can be ordered with a lightweight plastic reel or a sturdier steel reel. The Light Duty system can be powered by 110/220VAC 50-60 Hz with the included power adapter, or from a 12VDC source using the supplied cigarette outlet or alligator clip adapters. An inverter is not needed.





The portable Heavy Duty systems include the control box and a steel reel, with cable lengths of 325, 650 or 1000 feet (100, 200, 300 meters) and an optional clamshell-carrying case for the reel. The Heavy Duty systems include a depth encoder, which puts the footage on the monitor as the camera is lowered into the bore, in either feet or meters. The Heavy Duty control panel and 7-inch LCD monitor are mounted in a rugged carrying case. The Heavy Duty system can be powered by 110/220VAC 50-60 Hz with the included power adapter, or from a 12V source using the supplied 12V inverter. Video surveys are recorded with the included digital video recorder (DVR) with 8 GB SD card, and microphone to add verbal comments. A clam-shell carrying case is available for the reel.

Camera options for both the Heavy Duty and Light Duty systems include our standard (STD) cameras, which are 1 $^{5/8}$-inch (42 mm) in diameter; and are available in either color or black/white, and in either plastic (CPVC) or stainless steel (ss) housing. On-board LEDs provide the light source for up to 12-inch diameter bores, auxiliary lighting is available for larger bores. The STD cameras include a fixed side-viewing mirror attachment and a compass attachment. An optional accessory is the manual pan tilt camera mount - with this mount the camera assembly can be attached to a string of PVC pipe (supplied by the user) to manually pan & tilt the camera head. Another camera option is our slimline Nano camera, which is a 3/4-inch (20 mm) diameter stainless steel color camera with recessed LEDs which provide backlighting for superior image quality.


PLASTIC
STD CAMERA


STD SS
CAMERA

The portable Deluxe system includes an electric winch to raise & lower the camera assembly using a variable-speed motor drive, with cable length options of 325, 650, 1000, 1650, and 2000 feet (100, 200, 300, 500, and 600 meters). In addition to the downward-viewing cameras mentioned above, the Deluxe system can run our Pan Tilt Controller with our standard cameras, which allows the operator to remotely turn the camera head in any direction in the borehole using a joystick. The Pan Tilt assembly will fit in a 2-inch (50 mm) bore but requires 5 inches (125 mm) to fully pan & tilt the

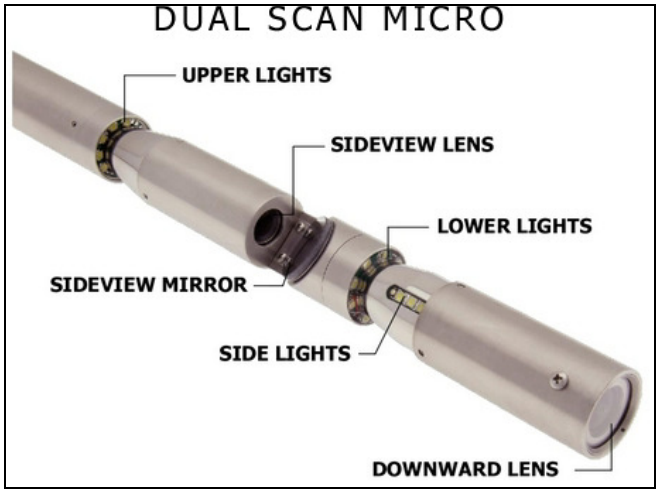
Innovative Environmental Scientific Pty Ltd
ABN: 46 611 085 842

Ph (+61 3) 9428 0199

Email **sales@ieands.com.au**
Website **www.ieands.com.au**

camera. Another camera option for the Deluxe system is the Dual Scan Micro camera, which has two on-board cameras. The operator can toggle back & forth between the downview and the sideview cameras, and has 360 degree rotational control. The Dual Scan is only 1 $^{1/8}$-inch (30 mm) in diameter, and has multiple lighting options and exposure settings to maximize video image quality.

Additional camera options for the Deluxe system:



The Deluxe system has a depth encoder for on-screen depth display, and is shipped and stored in a rugged carrying case measuring 26 x 26 x 22 (inches), which weighs from 92 lbs (325 feet of cable) to 105 lbs (2000 feet of cable). The Deluxe system can be powered by 110/220VAC 50-60 Hz with the included power adapter, or from a 12V source using the supplied 12V sine wave inverter. Video surveys are recorded with the included digital video recorder (DVR) with 8 GB SD card, and microphone to add verbal comments.

All of the cameras have on-board LED lights sources and are designed for submergence in water. The STD plastic cameras have a depth rating of 1000 feet under water, while the STD stainless steel, Nano, Dual Scan, and Pan Tilt are rated for 2000 feet submergence under water. Auxiliary lighting attachments are available for large bores and mine/cave inspections.

NANO CAMERA
http://youtu.be/M_9r22xOS_A (Nano camera in 6-inch bedrock well with pump in place)
http://youtu.be/GLy7-Z_s8sA (Nano camera in 8-inch well with pump in place)
http://youtu.be/40t06PJzpDw (Nano camera in 2-inch diameter PVC monitoring well)
http://www.geovision.org/video/UsingNanosRotatingMirror.MOV (Nano with rotating mirror in 6-inch bedrock bore)
https://youtu.be/U_HgY0c3dBY (Nano used to inspect 14-inch well screen in 18-inch well with pump in place)

MOTORIZED PAN & TILT (with Standard Cameras)
http://www.geovision.org/video/MotorizedPanTiltinPipeViewedbyNano.MOV (in a 6-inch bore filmed by the Nano camera)

IES Innovative Environmental Scientific Pty Ltd ABN: 46 611 085 842

PO Box 324
Tullamarine Victoria 3043
Melbourne, Australia

Ph (+61 3) 9428 0199

Email **sales@ieands.com.au**
Website **www.ieands.com.au**

http://www.geovision.org/video/view%20with%20pantilt%20on%20color%20jr%20camera%202006%20mpeg.mpg (the pan & tilt in a 6-inch bore)
http://youtu.be/7YWEIFTmaSY (pan & tilt in rock borehole)
http://99.198.111.115/2VideoStd (various bores with pan tilt and standard ss color camera)
https://vimeo.com/115066606 (inspecting a mine through a 36-inch pipe)

DISTRIBUTOR

DUAL SCAN
http://youtu.be/uMJT_Dz_TBc (Dual Scan sideview in 6 inch bore)
http://youtu.be/KiqGrHJbqmI (Dual Scan downview in 4 inch PVC well)
http://youtu.be/aK9fPLvqqd0 (Dual Scan sideview in 4 inch PVC well)
http://youtu.be/Wa2isgVjgiY (Dual Scan video of 8-inch rock bore)
http://youtu.be/IyrHVOU2xLk (Dual Scan video of 2-inch PVC monitoring well)

STD CAMERA - Manual pan & tilt setup (For Heavy Duty or Light Duty hand reel systems)
http://youtu.be/SHYubYhkcL8

PO Box 324
Tullamarine Victoria 3043
Melbourne, Australia

Ph (+61 3) 9428 0199

Email **sales@ieands.com.au**
Website **www.ieands.com.au**