



NEW

Proteus Lite

PIPELINE CRAWLER INSPECTION SYSTEM

INNOVATIVE
ALL-IN-ONE SYSTEM

DESIGNED FOR
RELIABLE
SELF-CONTAINED
INSPECTIONS





PROTEUS LITE

PROVEN RELIABILITY MODULAR CAPABILITY

Mini-Cam's NEW *Proteus Lite* brings together, the tried and trusted performance and reliability of the Proteus family, in a value for money, entry level system. Designed and developed in-house, Proteus Lite is the ideal starter kit for a one-man operation, integration into a small inspection van, or a low-cost option for larger companies to use for off-road, remote locations. Proteus Lite provides all the resources required to undertake efficient, easy to perform inspections, and with *ProPIPE+* and *WinCan Embedded* software as standard, you can deliver accurate, detailed reports, instantly on-site.

Rugged, flexible and intelligent, feature rich Proteus Lite takes your productivity to the next level, enhancing your business with a solid reputation for professional inspections and providing increased profitability from your investment. Future proof and totally modular, when your business budget allows, simply upgrade your Proteus Lite with a larger or smaller crawler, extra cameras and auxiliary lights, or one of the many other Proteus compatible accessories available.

Renowned throughout the industry, Proteus systems are making easy work out of challenging environments in 35 countries worldwide, performing rigorous pipeline inspections in harsh and remote conditions day after day, after day. Rest assured that your business is in safe hands with Mini-Cam products, and we'll be right behind you with our enviable service and impeccable after-care.



REEL

RMPL250

Designed in-house, this sturdy cable reel is Mini-Cam's latest innovation. The core of the *Lite* system, RMPL250 is engineered to the same exacting standards as our mainline Proteus equipment. Compact, space-saving design, robust construction with a powder coated finish, and equipped with easy-to-use features including a manually operated cable layering arm and meterage roller, which is easily removed for cleaning. The friction brake can be fully locked, unlocked or applied as a friction brake to avoid unwanted pay-off of the cable, and a sturdy winding handle folds away neatly to save space.

The cable reel comes complete with 250 metres of 6.8mm Kevlar reinforced cable, and sports our signature 'cow-horn' CCU locators, enabling a secure quick fit of the Proteus Lite control unit ready for work.

For added flexibility an optional Tilt Table (see page 16) allows adjustment of the control unit position, to give the user optimal screen viewing and keyboard positions.



UNIQUE COW-HORN LOCATORS FOR EASY-FIT CCU

250m 6.8mm KEVLAR REINFORCED CABLE

FRICTION BRAKE

REMOVABLE SPACE-SAVING FOLD-AWAY HANDLE

METERAGE ROLLER REMOVABLE FOR EASY CLEANING

STURDY POWDER COATED FRAME WITH RUBBER FEET

SPRING LOADED CONNECTOR NO TOOLS REQUIRED



Easy-fit Control Unit



Manual Cable Layering Arm



2-Step Quick Release Rollers



Friction Brake / Hand Brake



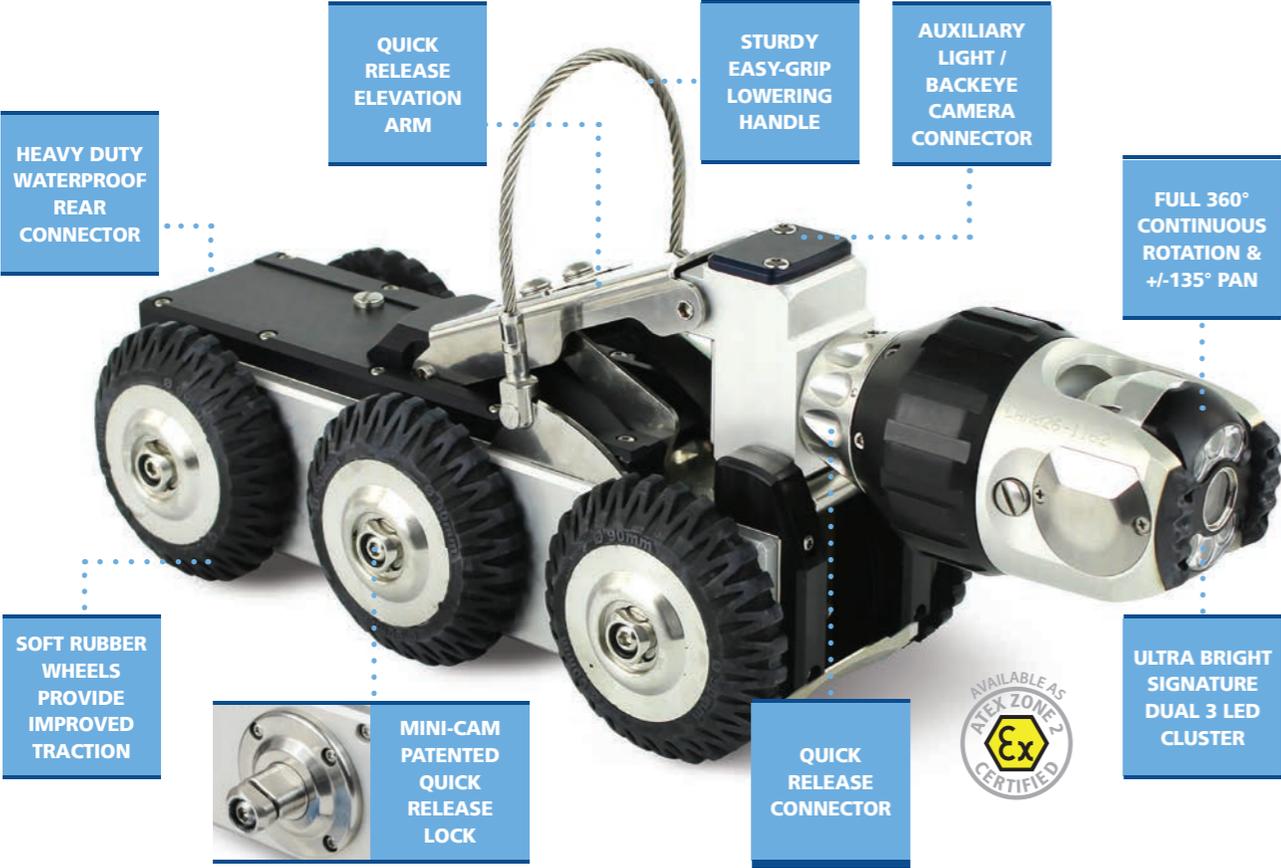
Sturdy Winding Handle



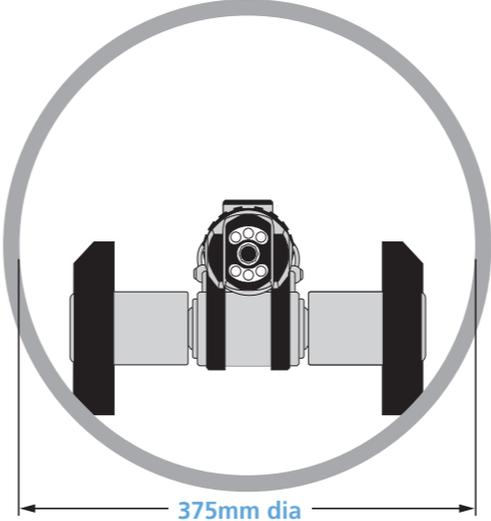
Fold-away Handle

CRAWLER

CPL150



150mm dia
CPL150 with 90mm Wheels
Elevator Down



375mm dia
CPL150 with 140mm Extra Large Wheels
Elevator Fully Raised

Modelled on our best selling Proteus CRP150 crawler, this *Lite* version is the perfect companion to the RMPL250 Cable Reel. CPL150 has the same professional grade quality, reliability and accuracy that our customers expect from Proteus products, and features a specially designed quick release elevator arm, sturdy lowering handle and in-built connector for an optional auxiliary light or auxiliary light with backeye camera.

Mini-Cam's water resistant camera connectors and rear cable connectors come as standard, as does our quick release wheel lock, and soft rubber wheels, engineered for improved traction. Built to perform reliably in harsh conditions, the modular configuration of the Proteus Lite system means CPL150 can be enhanced with cameras and accessories to extend its inspection capabilities.

Integration with additional Proteus wheels and accessories enables the CPL150 to be used for pipe inspections from 150mm upwards.



Quick Release Elevator



Raised Elevator



Lowering Handle



Heavy Duty Rear Connector



Optional Aux Light & Backeye Camera



Soft Rubber Quick Release Wheels

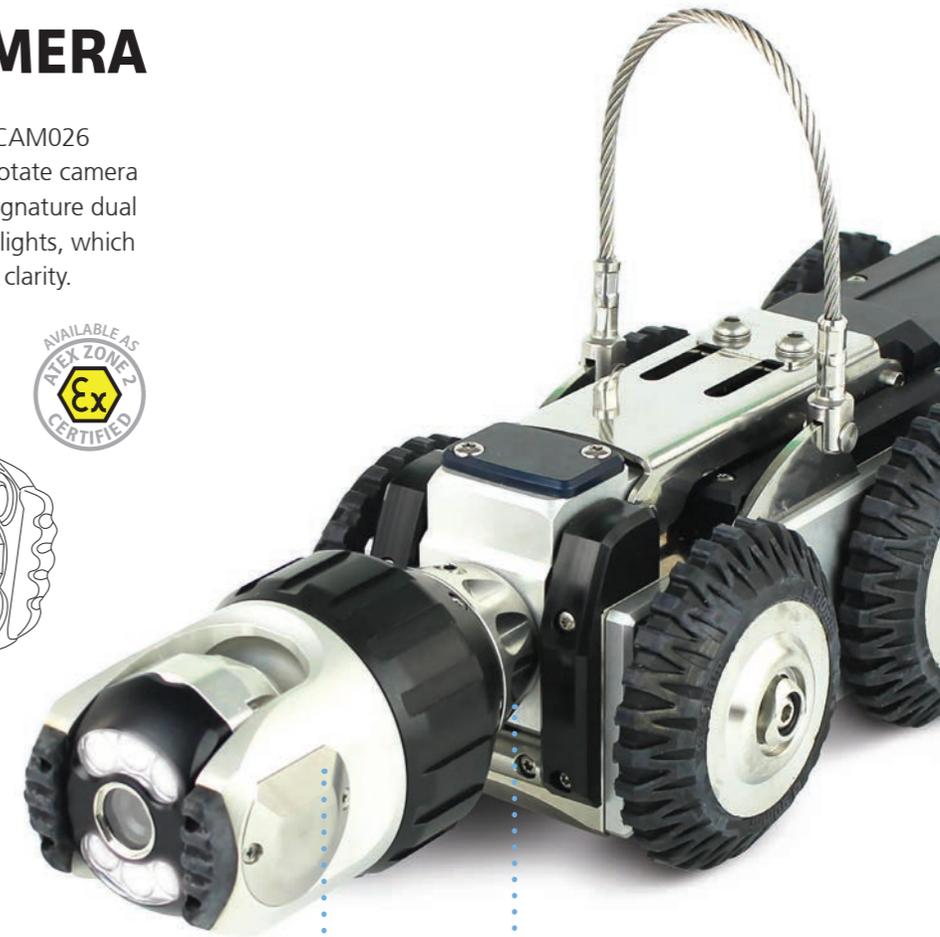
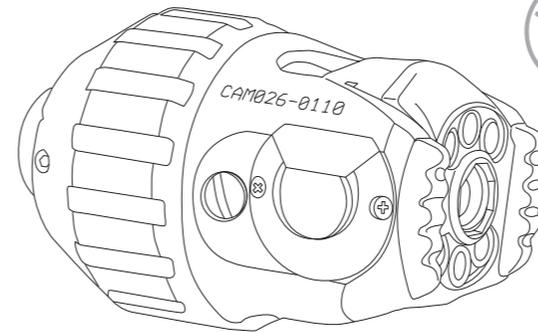
CAM026

Highest quality components are used in our camera designs, and our skilled technicians assemble and rigorously test the cameras at our UK production facility. Built for longevity the cameras are rugged, with robust and precise connectors, and are engineered to perform with excellent optical qualities.



PAN & ROTATE CAMERA

The Proteus Lite system comes complete with CAM026 as standard. This precision engineered Pan & Rotate camera features 360° rotation, +/- 135° pan and our signature dual three LED cluster of high powered ultra-bright lights, which provide optimum illumination for better image clarity.



OPTIONAL CAMERAS FOR PROTEUS LITE



Axial CAM027



Aux Light & Backeye ALB300



Pan, Rotate & Zoom CAM028



CAM026 360° Rotate & +/- 135° Pan

ULTRA BRIGHT
SIGNATURE
DUAL 3 LED
CLUSTER

FULL 360°
CONTINUOUS
ROTATION &
+/- 135° PAN

HEAVY DUTY
QUICK
RELEASE
CONNECTOR

CONTROL UNIT

CCU208

MUCH MORE THAN MEETS THE EYE.

Feature rich, Mini-Cam's CCU208 Control Unit has twin integral joysticks for camera control and crawler manoeuvrability, and an ergonomic soft-touch keypad. User friendly multi-function hot keys control an intuitive on-screen display, to enable quick and accurate navigation of the numerous features which all come as standard on the brain of the Proteus Lite system.

Functionality at your fingertips.



FUNCTIONALITY AT YOUR FINGERTIPS

Use the Proteus Lite control unit to view, record and annotate inspection footage from any composite video source.

Control Meterage

Accurately set the meterage zero offset using the meterage key.

00.0

Sonde Settings

Set the frequency of the sonde transmitter to 33kHz, 512Hz or 640Hz.



Hot Keys

User friendly, multi-function hot keys control an intuitive on-screen display of the numerous features.



Survey Features

Access embedded reporting software to create detailed on-site reports



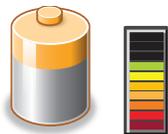
Generate Reports

Use ProPIPE+ Reporting software to create a detailed inspection report with a pipe graph to pinpoint defects.

PDF

Internal Batteries

The Proteus Lite CCU includes internal batteries so that it can be used autonomously to view inspection reports and video.



Setup & Configure Preferences

Easily and quickly configure the Proteus CCU to your specific requirements using the various menu options. Set language, date and time; establish file formats and naming conventions; adjust camera parameters; choose interface theme, enable power saving options and update firmware.



Capture Footage

Record MPEG video and JPEG images, and zoom up to 3X on video playback.

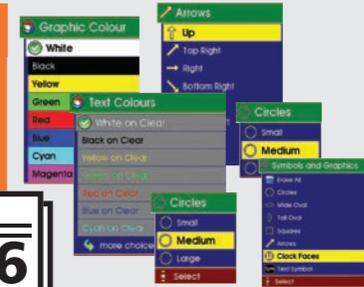


Write Screen Text

Type and store up to 16 pages of on-screen text. Customize text colour, position and background colour.

T

16



Joystick Controls

The left hand joystick controls crawler direction. Movement of the Pan & Rotate camera is smooth and effortless using the right hand joystick control. Perform a 360° endless rotation and pan the camera +/- 135°.



Share Files

WiFi enabled to allow remote access to stored images and data. Users can instantly share PDF reports, images and footage via email.



Offload Data

Copy reports, video and images to USB or SDHC media for easy transfer to PC and seamless integration with WinCan reporting and querying capabilities.



Illumination

Increase or decrease the intensity of the ultra-bright camera LEDs

Alternative Languages

Proteus is currently available with keyboards in English, French, German and Russian



Screens Intensity

The brightness, colour and backlight intensity of the internal display can be adjusted to suit the environment in which the system is being used.



Review Footage

Organize videos and images into folders, then find them using the thumbnail gallery. Review media using standard controls.



CABLE GUIDE PULLEY

For smooth guiding of inspection cable during survey

Reduces wear by preventing kinks and chaffing, and assists in the smooth guiding of inspection cable during your survey. Comes complete with 12metres of rope and features a quick release mechanism to aid feeding the cable through the rollers.



| Technical Specifications | |
|--------------------------|------------------|
| Product Code | CGP01 |
| Dimensions LxWxH | 485 x 75 x 105mm |
| Rope Length | 12metres |
| Weight (inc rope) | 2.8kg |

CCU TILTING TABLE

Customise the CCU position to suit the needs of the user

Quick and easy to attach, the Tilting Table allows adjustment of the control unit position, to give the user optimal screen viewing and keyboard positions. The table can be tilted 35° forwards and 75° backwards, with a full unobstructed 360° horizontal rotation. No tools are required, simply attach using the adjustable clamps.



You Tube

View on our YouTube Channel [MinicamTubeUK](https://www.youtube.com/channel/UCMinicamTubeUK)

| Technical Specifications | |
|--------------------------|-------------------|
| Product Code | TTC01 |
| Dimensions LxWxH | 350 x 300 x 270mm |
| Weight | 3kg |

COMPATIBLE COILER

Push rod coiler CCP60R with removable self levelling camera head. Designed to plug directly into the Proteus Lite CCU. Also available as CCP60D (Duo) allowing the Pan & Rotate camera (CAM026) supplied with the Proteus Lite crawler to be attached. Robust construction with a powder coated finish. Can be used autonomously with the CCU on internal batteries.

AVAILABLE WITH 60 METRE OR 100 METRE ROD LENGTHS



A – Compatible Coiler with Pan & Rotate Camera CCP60/ CAM026 B – Compatible Coiler with Axial Camera CCP60R/ CAM025

| Technical Specifications | |
|--------------------------|-------------------|
| Product Codes | CCP60/CCP100 |
| Temperature Range | -20°C ~ +50°C |
| Dimensions H x W x D | 890 x 360 x 690mm |
| Weight (without CCU) | 21.3kg |
| Environmental Protection | IP54 |

PROTEUS POWER BATTERY PACK

Portable power... where will it take you?

No need to rely on vehicle or mains power. Mini-Cam's unique Proteus Power Battery Pack enables pipeline inspections in the most remote locations with in excess of 5 hours inspection time*. The rugged pack is quick and



easy to connect and features output short circuit protection and LED charge status indication, It is charged using the standard Proteus power supply unit.



View on our YouTube Channel **MinicamTubeUK**



Please Note: Charging unit shown above for illustration only, not included with Proteus Power Pack. Charging Unit purchased separately. *Battery life dependant on operating conditions.



OPTIONAL EASY ACCESS CARRY CASE



| Technical Specifications | |
|--------------------------|-------------------|
| Product Code | BPP24 |
| Dimensions L x W x H | 280 x 100 x 120mm |
| Weight | 4kg |
| Optional | Carry Case |

Dangerous goods shipping conformity required - please contact us for details

CRAWLER CRADLE

Improved inspection capabilities

The crawler cradle adapts Mini-Cam's CPL150, CRP140 and CRP150 crawlers for use in large diameter pipes. Versatile, quick and easy to attach, the cradle provides extra ground clearance enabling improved inspection capabilities in pipes and culverts up to 1000mm in diameter.

This robust, steerable, 4-wheel drive cradle is driven by the crawler, and features a unique gear selector, enabling the user to change between high speed and high torque operation. Exclusively compatible with Proteus CPL150, CRP150 and CRP140 crawlers, PCC01 comes supplied with four 220mm balloon wheels.



View on our YouTube Channel **MinicamTubeUK**



UNIQUE GEAR SELECTOR



For heavily silted pipes we recommend the optional 250mm Balloon Wheel (QRW250/140/150), which are also required to centralise the crawler in 1000mm pipes.



| Technical Specifications | |
|--------------------------|-------------------------|
| Product Code | PCC01 |
| Compatibility | CPL150/CRP150/CRP140 |
| Dimensions LxWxH | 410 x 265 x 220mm |
| Weight | 7.6kg |
| Fixings | 2 Axle Adaptors & Bolts |

CRAWLER WHEELS

Our specially designed wheels offer significant performance benefits in various pipe diameters and for specific operating conditions.

SOFT BLACK RUBBER

Black, soft rubber tyres developed to provide improved traction in regular pipes.

Available in four sizes and Wide Axle



IMPROVED TRACTION



CARBIDE

Fragmented copper particles fused to an heavy duty stainless steel body.

Available in four sizes and Wide Axle



FOR PLASTIC PIPES



EXTRA WIDE

Extend the capability of your crawler. Quick and easy to attach, wide axle wheels provide instant extra width for inspections in wider pipe diameters.

Available in Soft Rubber, Carbide and High Grip



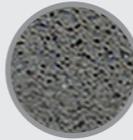
HIGH GRIP

Hard wearing carborundum manufactured with a deep bevel profile to provide improved traction in wet and greasy pipes.

Available in three sizes and Wide Axle



FOR WET & GREASY PIPES



PNEUMATIC BALLOON

Heavy duty, 250mm wide tyres designed to improve performance on our large Proteus CRP300 crawler. Optional for Crawler Cradle PCC01.

Available in one size and Wide Axle



RUGGED HEAVY DUTY

QUICK RELEASE LOCK

Proteus crawlers feature Mini-Cam's unique, patented wheel lock device. This makes it easy to change the crawler wheel type to suit the size and condition of the pipe. Using the supplied 4mm Hex T-Bar driver, the operation is quick and simple with no other tools required.

 View the Changing Wheels "HOW-TO" video at [MinicamTubeUK](https://www.youtube.com/watch?v=MinicamTubeUK)

PROTEUS LITE

| | | | |
|-----------------------|-----------------------------------|--|-------------------------------------|
| CCU208 CONTROLLER | Video Format | PAL | <input checked="" type="checkbox"/> |
| | Battery | Lithium-Ion (CCU stand alone) | 6 hours |
| | Battery | Lithium-Ion (CCU and Compatible Coiler) | 3 hours |
| | Charging | Mains power (100-240 Vac) or vehicle power (12 or 24 VDC) using supplied adaptors | <input checked="" type="checkbox"/> |
| | Display | 10.4" XGA (1024 x 768 pixels) Sunlight viewable | <input checked="" type="checkbox"/> |
| | Keyboard | Full QWERTY [®] style membrane keyboard with arrow keys for navigation and separate joysticks for camera and crawler control. | <input checked="" type="checkbox"/> |
| | Video Recording | MPEG4 (WinCan compatible) | <input checked="" type="checkbox"/> |
| | Image Capture | JPEG (live or from recorded video) | <input checked="" type="checkbox"/> |
| | Text Overlay | 16 page (selectable text and colours) | <input checked="" type="checkbox"/> |
| | Internal Memory | 32 GB (expandable to 128 GB) | <input checked="" type="checkbox"/> |
| | External Media | SDHC and USB 2.0 Memory Stick | <input checked="" type="checkbox"/> |
| | Language Support | Multiple | <input checked="" type="checkbox"/> |
| | Connections | Power and Cable Reel | <input checked="" type="checkbox"/> |
| | Environmental Rating | IP54 | <input checked="" type="checkbox"/> |
| Weight | | 5.5 kg | |
| Dimensions | (W x H x D) mm | 430 x 280 x 150 | |
| RMPL250 REEL | Construction | Welded Steel | <input checked="" type="checkbox"/> |
| | Finish | Powder Coated | <input checked="" type="checkbox"/> |
| | Distance Counter Units | Feet, Metres | <input checked="" type="checkbox"/> |
| | Controls | Friction Brake | <input checked="" type="checkbox"/> |
| | Weight | | 29.3kg |
| | Dimensions | (L x W x H) cm | 550 x 385x 700 |
| CPL150 CRAWLER | Pipe Diameter | 150mm and larger | <input checked="" type="checkbox"/> |
| | Pressure Depth Rating | 1 bar (14.50psi) | <input checked="" type="checkbox"/> |
| | Built-in Elevator | Manual | <input checked="" type="checkbox"/> |
| | Quick Change Wheel Lock | | <input checked="" type="checkbox"/> |
| | Optional Large Wheels | 4 size options | <input type="checkbox"/> |
| | Multi-Frequency Sonde Transmitter | | <input checked="" type="checkbox"/> |
| | Inclination Sensor | | <input checked="" type="checkbox"/> |
| | Heavy Duty Connector | | <input checked="" type="checkbox"/> |
| | Weight | | 9.25 kg |
| | Dimensions | (L x Wx H) mm | 320 x 85 x 100mm |
| ATEX Zone 2 Certified | | <input type="checkbox"/> | |

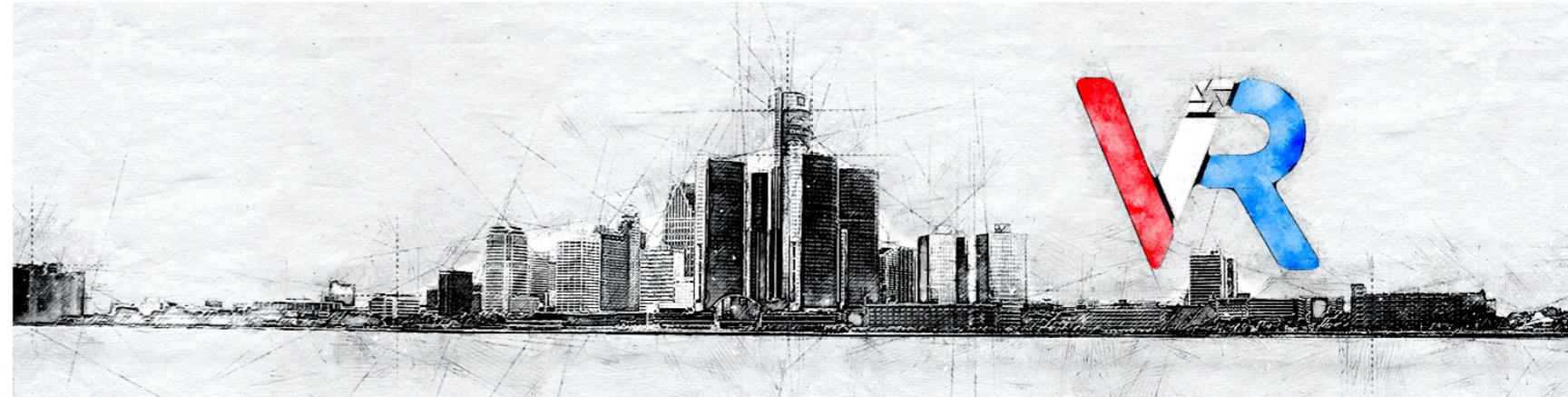
PROTEUS LITE

CONTINUED FROM PREVIOUS PAGE

| | | | |
|----------------------|----------------------------|--|-------------------------------------|
| CAM026 PAN & ROTATE | Sensor | 1/4" colour CCD with DSP | <input checked="" type="checkbox"/> |
| | Effective pixels | 512 x 582 | <input checked="" type="checkbox"/> |
| | Resolution | 470 HTVL | <input checked="" type="checkbox"/> |
| | Sensitivity | < 1.0 Lux | <input checked="" type="checkbox"/> |
| | Aperture / field of view | F2.5 / 75° | <input checked="" type="checkbox"/> |
| | Image Orientation | Auto-levelling | <input checked="" type="checkbox"/> |
| | Size | 74mm (2.9in) dia | <input checked="" type="checkbox"/> |
| | Illumination System | 6 LED | <input checked="" type="checkbox"/> |
| | Illumination intensity | Adjustable (to 12.5K Lux at 150mm) | <input checked="" type="checkbox"/> |
| | Construction | Aluminium / Stainless steel | <input checked="" type="checkbox"/> |
| | Pipe compatibility | 150mm (6") and larger | <input checked="" type="checkbox"/> |
| Pipe adaptor kit | 6" / 8" Skids | <input checked="" type="checkbox"/> | |
| SOFTWARE | ProPIPE+ Reporting | | <input checked="" type="checkbox"/> |
| | WinCan Embedded | | <input checked="" type="checkbox"/> |
| | WinCan Web | | <input checked="" type="checkbox"/> |
| ACCESSORIES | Reel-to-CCU cable | | <input checked="" type="checkbox"/> |
| | Vehicle power adaptor | | <input checked="" type="checkbox"/> |
| | Mains power adaptor | | <input checked="" type="checkbox"/> |
| | Memory | 8 GB USB Memory stick / 8 GB SDHC card | <input checked="" type="checkbox"/> |
| | Accessory case | with Centering Skids | <input checked="" type="checkbox"/> |
| | Mini-Cam Lanyard | | <input checked="" type="checkbox"/> |
| OPTIONAL ACCESSORIES | Memory Card upgrade | 16MB / 32MB | <input type="checkbox"/> |
| | Cable Guide Pulley | Product Code: CGP01 | <input type="checkbox"/> |
| | CCU Tilt Table | Product Code: TTC01 | <input type="checkbox"/> |
| | Proteus Power battery pack | Product Code: BPP24 | <input type="checkbox"/> |
| | Crawler Cradle | Product Code: PCC01 | <input type="checkbox"/> |
| | Proteus Performance Wheels | See page 20 | <input type="checkbox"/> |
| | Compatible Coiler | Product Code: CCP60/CCP100 | <input type="checkbox"/> |
| | Roller Skids | 130mm / 180mm (for use with Comp Coiler) | <input type="checkbox"/> |
| | All Terrain Wheels | Product Code: SPP-ATA (for use with Comp Coiler) | <input type="checkbox"/> |



- Standard
- Optional
- △ Alternative languages available (details on request)



CONTACT VIR

(734) 744-5557

Doug@VisualImagingResources.com

37659 Schoolcraft Rd.

Livonia, MI 48150

