

# **Technical Specification**

## **S100 Pipe Inspection Robot**

# I . Product Introduction

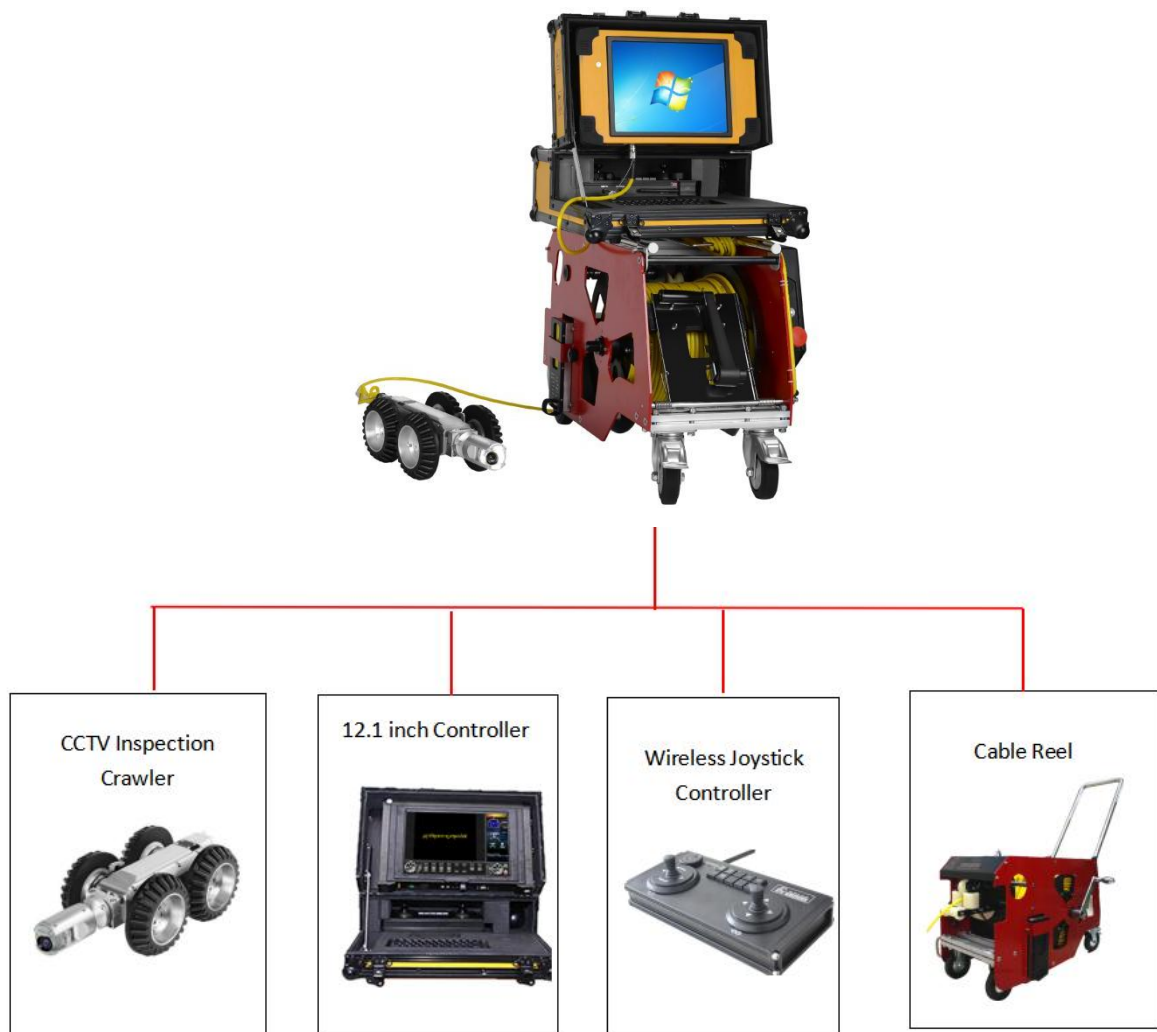
## Application Fields

WiFi - enabled model

Brief introduction: CCTV Pipe Inspection Robot is mainly used in electricity, municipal, traffic, petrification, construction and it is suitable for inspecting the boiler, pipeline, underground cable channel and places will do harm to human or forbid man-entry. The situation inside the pipe will be recorded and displayed on the monitor screen; it also facilitates working personnel for effective observation, detection, quick analysis and diagnosis.

# II . Main parts technical parameters

## System composition



### • 50mm PT Camera System

- 1) Image sensor: HD CMOS; Illumination: 0.01 LUX;
- 2) Resolution: 1280\*720;
- 3) Focus : Motorized focus ;
- 4) Light source: 20 High brightness LED lights;
- 5) Axial-rotation(pan) 360°, Radial-rotation(tilt) 180°;
- 6) Material: aluminum;
- 7) Working temperature: -20°C-55°C;
- 8) Diameter: 50mm;
- 9) Weight: 0.5KG;
- 10) Waterproof level: IP68.



### • 90mm PTZ Camera System (optional)

- 1) Image sensor: HD CMOS;
- 2) Resolution: 1920\*1080; Illumination: 0.01 LUX;
- 3) Motorized focus: 120 times (10X optical, 12X digital);
- 4) Light source: High luminance LED, 8 \* 2W;
- 5) Axial-rotation 360°, Radial-rotation 270°;
- 6) Auto level, auto focus
- 7) Working temperature: -20°C-55°C;
- 8) Diameter: 99mm, length: 167mm;
- 9) Weight: 1.6KG;
- 10) Waterproof level: IP68.

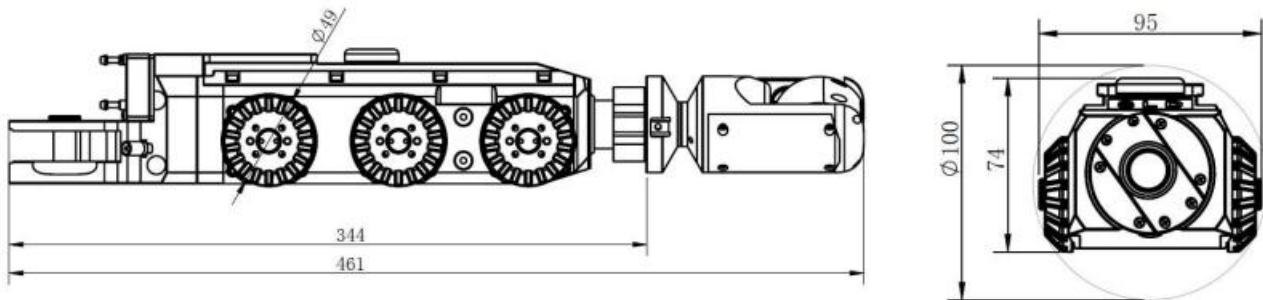


### • S100 Crawler System

- 1). For 100-600mm diameter of pipes with 3 types of tires, manual lifting platform optional;
- 2). Wireless control unit ,convenient to operate;
- 3). Two kinds of power supply :adapter,battery;
- 4). Move forward/backward,turn left/right;
- 5). Anti overturning design, climbing ability: ≤30°;
- 6). Injected with 12PSI pure gas, workable underwater 10 meters,IP68 waterproof level;

7). Working temperature: -20℃-55℃;

Size (mm)



Wheels



50mm tires(6pcs)



65mm tires(4pcs)

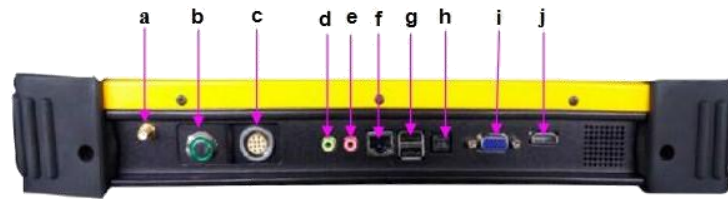


130mm tires(4pcs)

## • 12.1 Inch Display Controller

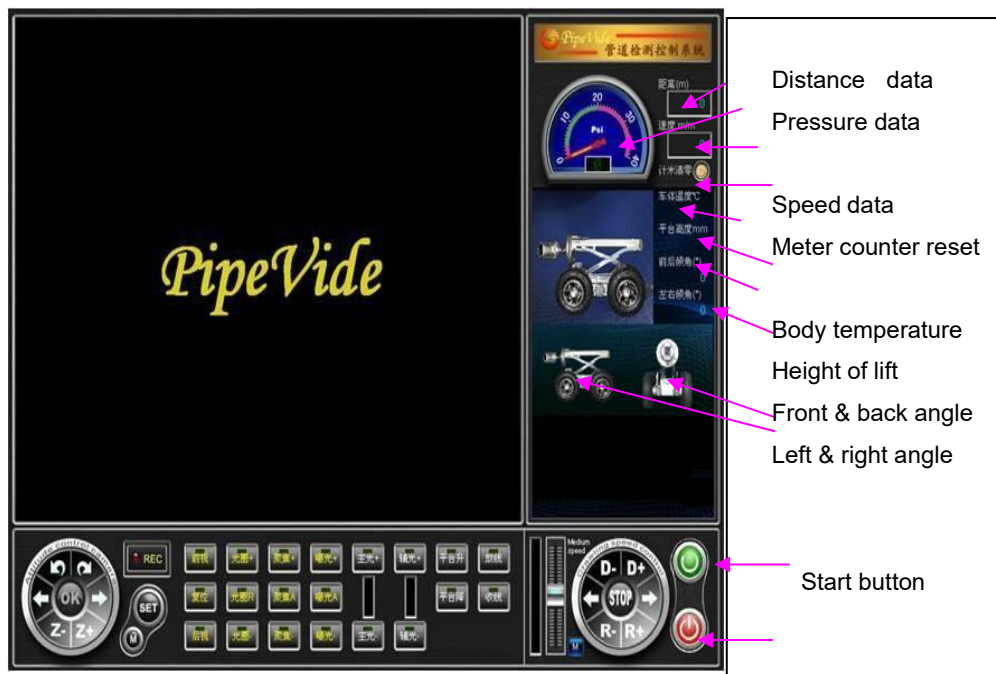
- 1). Touch screen: High precision touch screen, the operating system more convenient.
- 2). Display: 12.1 inch high bright display equipped with 256G hard disk.
- 3). Display data: speed, distance, pressure , Inclination sensor, time can be displayed on the screen.
- 4). Resolution: 1024\*768.
- 5). Picture format: JPG
- 6). Video format: AVI/MPEG4
- 7). Can generate a pipe report directly.





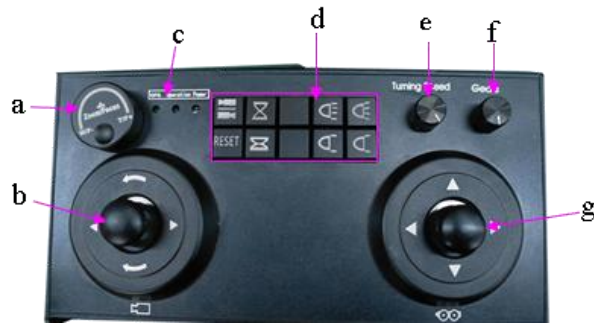
- |                  |           |               |                |               |
|------------------|-----------|---------------|----------------|---------------|
| a. Antenna       | b. switch | c. cable port | d. video out   | e. microphone |
| f. internet port | g. USB    | h. SPDIF      | i. serial port | j. HDMI       |

## Operation Interface



## • Wireless joystick Controller

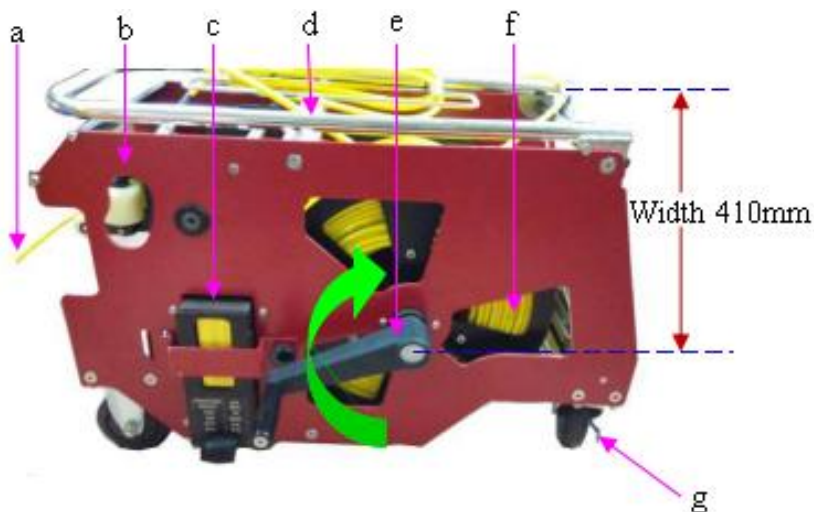
- 1). Push-button encoder control image zoom in and out more precisely;
- 2). Joystick controls the front camera motion crawling movement offer more flexible and convenient operation;
- 3). Working within 10 meters.



- |                           |                |
|---------------------------|----------------|
| a. Encoder                | b. Y1 joystick |
| c. Status indicator       |                |
| d. Function keyboard area |                |
| e. Turning speed          |                |
| f. Gears adjust           | g. Y2 joystick |

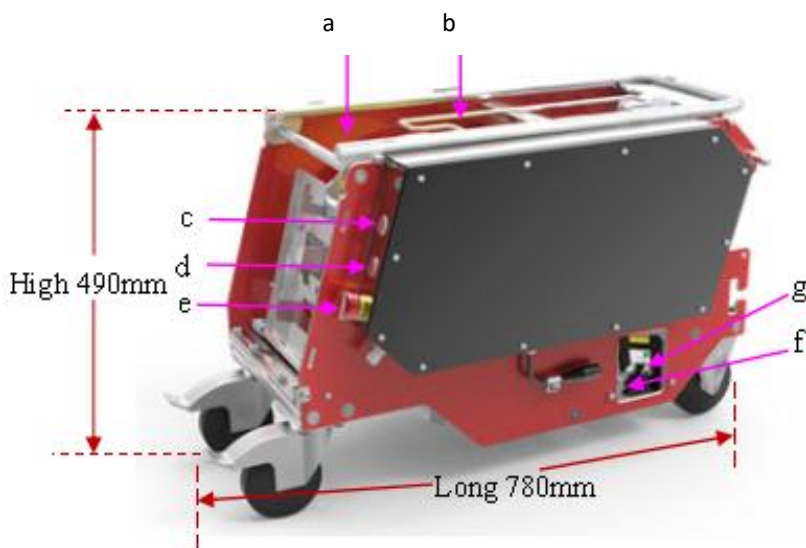
### • Manual Cable Drum(Motorized one for option)

- 1) Electronic meter counter, distance can be directly displayed on the screen.
- 2) Cable length: 120m, up to 200m( for option 200m blue cable reel)
- 3) Motorized cable reel(optional), the cable rolls in and rolls out automatically.
- 4) Size: 780mm\*410mm\*490mm.



(120m standard cable reel)

- |                       |
|-----------------------|
| a. Cable interface    |
| a. Meter counter      |
| b. Power Slot         |
| c. Push rod           |
| e. Handle             |
| f. Cable reel         |
| g. Casters with brake |



Side view of Motorized Cable Drum

- |                                                        |
|--------------------------------------------------------|
| a. Cleaning brush                                      |
| b. Cable auto collecting switch                        |
| c. Auto closing cable switch (manual cable without it) |
| d. Power                                               |
| e. Emergency stop switch                               |
| f. Power input                                         |
| g. Power outlet                                        |

## • Adapter and Battery(battery is an optional item)



48V Rechargeable lithium battery ( optional )

(One time charging can last at least 4-6 hours )

Adapter

Input: 47~63Hz AC90~132/180~264(switch )  
 Output:DC48V/12.5A

## III. Site Inspection



## IV. Items Contained of S100

| Components                                      | Picture                                                                             | QTY                        | Note                                                                                                |
|-------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------|
| S100 Crawler                                    |    | 1 set                      | 6 Wheels drive<br>50mm metal skeleton rubber tire (6 pcs)<br>65mm/130mm metal skeleton rubber(4pcs) |
| 12.1'' touch display                            |    | 1 pc                       | 256G solid hard disk<br>Flight case packing<br>Windows 7 system                                     |
| Wireless joystick controller                    |    | 1 pc                       | With a 5v charger                                                                                   |
| Wireless keyboard & Mouse                       |   | Each 1 pc                  | Wireless                                                                                            |
| Cable                                           |  | 100m-150m<br>(for options) | composite cable with 12 cores<br>DN:9mm ,>1500N                                                     |
| Manual cable reel<br>(motorized one for option) |  | 1 set                      | Cable rolls in manually<br>Handle,meter counter,etc                                                 |
| Adapter                                         |  | 1 pc                       | Yellow color, for 48V battery                                                                       |
| Tools                                           | O-rings,screws,hook,guide pulley,wrench and other small accessories,etc.            |                            |                                                                                                     |
| Optional Items of S100 CCTV Crawler             |                                                                                     |                            |                                                                                                     |
| 90mm camera head                                |  | 1 pc                       | PTZ camera, 700TVL                                                                                  |
| Battery                                         |  | 1 pc                       | DC 48V,rechargeable<br>Can be got out of cable drum for charger                                     |
| Manual lift                                     |  | 1 pc                       | Manual lift for S100 crawler                                                                        |
| 200m motorized cable reel                       |  | 1pc                        | 200m cable reel is an optional reel                                                                 |