



VIVAX
METROTECH

vCamMX-2+

Technical Specifications V1.1



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A. Typical Applications

Component	Specification
Purpose	A tool to inspect and produce digital video recordings and JPEG images of the interior of small-diameter drains, conduits, and ducts. The most typical application is the inspection of sewer laterals and plumbing.
System Components	<ul style="list-style-type: none"> • Viewing & Recording Device: vCamMX-2+ Control Module (supplied with a battery charger, accessory kit, and manual) • Reel Options: (all reels include pushrod, spring assembly, camera head (if ordered) and pipe insert sleeve) Type-MX Reel pushrod options of: <ul style="list-style-type: none"> - 100 ft. / 30m - 150 ft. / 45m • Camera Head Options: (Type-MX reel cameras are user-changeable) <ul style="list-style-type: none"> - D26-HD 1" / 26 mm Self-leveling color camera - D18-HD 0.70" / 18mm Non-leveling color camera

vCamMX-2+ System	D26-HD Camera	D18-HD Camera
		

B. vCamMX-2+ Control Module

Component	Specification
Model Name	vCamMX-2+
Model Number	VX112-01
Dimensions	14.2" (L) x 5.91" (W) x 12.6" (H) (360mm (L) x 150mm (W) x 320mm (H))
Weight	6.6lb (3kg)
Power Supply	DC Power: 12V DC external power supply powers the unit and charges internal batteries
Fuse	10 Amp – 250 Volt, glass, quick blow

Storage	<ul style="list-style-type: none"> • USB Port – Supports up to 128 GB Removable USB Drives • SD Card Slot – Supports up to 64GB Removable Class 10 SD Cards
File Format	<ul style="list-style-type: none"> • MP4 Video • JPEG Still image capture
Display	8" (20cm) Daylight viewable TFT LCD (800x600) (diagonal measurement)
Environmental	<ul style="list-style-type: none"> • Water-resistant to IP65 (IEC 60529-Light shower) (lid closed) • Shock resistant (IEC 60068-2-31) (lid closed)
Temperature Range	<ul style="list-style-type: none"> • Storage: -4°F to 158°F (-20°C to +70°C) • Operating: 14°F to 122°F (-10°C to +50°C)
Manufacturing	Designed and manufactured under ISO 9001:2015
Battery	An Internal Lithium-ion rechargeable battery (supplied with a 12V charger)
Battery Life	<ul style="list-style-type: none"> • Internal Lithium-ion rechargeable batteries • Time to a full charge = Six hours • Runtime is typically eight hours with Sonde on, nine hours with Sonde off (at 70°F (21°C) (with a full backlight on) • Re-charging cycles are approximately 500 times the life cycle. Battery life varies with temperature.
Battery Indicators	<ul style="list-style-type: none"> • The charging indicator on the left side panel glows red while charging and glows green when fully charged • A battery icon on the status bar shows the battery level and running power source
Mounting	The control module is permanently attached to the Type-MX reel frame.
Operating System	The software is upgradeable via USB port with files from the Vivax-Metrotech website, local distributor or factory.
Options and Accessories	Smartphone/tablet app for video streaming, image capturing, adding text and file sharing
What's in the Box	<ul style="list-style-type: none"> • vCamMX-2+ Control Module • Accessory Bag which includes: <ul style="list-style-type: none"> - Flat Screwdriver - AC/DC Power Lead - Camera and spring removal and installation tools - Charger with power cable - Fuse x 2 - USB Thumb drive - Quick Guide - Manual

Operator Controls

Controls	Functions
Camera LED Dimmer	Push-button control on the front panel to adjust the brightness of the camera LEDs
Distance Counter	<p>Push-button control on the front panel to zero distance count*</p> <p>The approximate distance of the pushrod deployed, in feet or meters, is displayed on the LCD with the option to appear in still images or recorded video.</p>
Sonde Operation	<ul style="list-style-type: none"> • Push-button control on the front panel turns Sonde on, cycles through available frequencies, and then off • The Push-button glows green, and the Sonde icon appears on the status bar on the LCD when active
Microphone Operation	<ul style="list-style-type: none"> • Push-button control on the front panel turns the internal microphone on and off • Push-button glows red, and the microphone icon appears on the status bar on the LCD when active
Power On/Off	<ul style="list-style-type: none"> • Push-button control on the front panel turns the unit on and off • Push-button glows green, and the battery icon appears on the status bar on the LCD, showing the battery status and power source
Recording Control	<ul style="list-style-type: none"> • Push-button on the front panel, push to record, push a second time to stop recording • Push-button glows red when recording, and a flashing icon appears on the status bar on the LCD when recording
Image Capture	<ul style="list-style-type: none"> • Press the push-button on the front panel, and the image is captured to the USB drive • A JPEG icon flashes on the LCD, confirming the image capture
Video Playback control	<ul style="list-style-type: none"> • Push buttons on the front panel to pause the video, rewind/fast forward, play and stop • Icons appear on the status bar to advise which function is active
Digital Zoom	The Push-button on the front panel toggles through 2 X view zoom mode, then off.
On-Screen Display (OSD)	<ul style="list-style-type: none"> • OSD displays the system time, date, and distance of the deployed pushrod • Option to move OSD to the top of the screen, the bottom of the screen or off • Option to change the OSD colors to black, white, green or yellow
Text Overlay	<ul style="list-style-type: none"> • Use the on-screen keyboard to add text comments • Save unlimited pages of text comments • Option to use a USB keyboard or wireless keyboard dongle • Add text to the screen by using the vCam Mobile Controller app
Wi-fi	30" / 10m Wi-fi range for use with our VMC tablet/smartphone streaming and recording app.

Sockets and Jacks	Functions
Video Out	<ul style="list-style-type: none"> • Color-coded industry-standard RCA female socket for video out • Video out with OSD via mini-USB port
Microphone	The internal microphone is at the top center of the LCD.

Media Sockets	USB 2.0 and SD card socket located in the media compartment supports up to 128GB USB 2.0 Drives and 64GB SD Cards
DC Power	12V 1 Pin male circular socket for DC power cable assembly

C. Type-MX Reel Features

Component	Specification
Model Name	Type-MX Reel
Model Number	VX112-02
Pushrod Construction	Fiberglass rod, conductors, and coax with a high-density Polyethylene Jacket
Pushrod Length Options	100ft. (30m) 150ft. (45m)
Pushrod Diameter	0.39" (10mm)
Minimum Break Strength	4000lbs (1800kg)
Bend Radius	Approximately 40 times the pushrod diameter Minimum bend radius approximately 3"/75mm
Sonde Frequencies	33kHz, 512Hz, and 640Hz. Selectable at the time of control module feature setup
Sonde Output/Range	<ul style="list-style-type: none"> 1-Watt output Locatable depth up to 9 ft (3m)
Pushrod Tracing	The reel post is for connecting an external utility locating transmitter. When connected and energized, the entire length of the pushrod can be traced with a buried utility locator.
Termination Spring	Field serviceable spring assembly consisting of the spring, coiled cable, and lanyard
Distance Counter	The encoder driver is accurate to 0.33ft (0.1m) resolution*
Dimensions	20.9" (L) x 12.7" (W) x 22.4" (H) (531mm (L) x 322mm (W) x 570mm (H)).
Weight	100 ft. (30m): 30 lbs. (14 kg) 150 ft. (45m): 37 lbs. (17 kg)
Environmental	Water-resistant to IP65
Construction	Stainless-steel tubular frame with carbon fiber pushrod drum
Manufacturing	Designed and manufactured under ISO 9001:2015
Braking/Locking	Hand tightening the friction brake slows the pushrod cage. Moving the brake lever left/right to lock/unlock the pushrod drum
Options and Accessories	Drip Bag
What's in the Box	<ul style="list-style-type: none"> Type-MX Reel with Pushrod, spring and Interconnect Cable Plastic Cable Insertion Sleeve

D. Camera Heads for the Type-MX Reel

D26-HD, 1-inch (26mm) self-leveling color camera

Component	Specification
Model Name	D26-HD
Model Number	VX112-3
Application	Used with the Type-MX reel in pipe diameters from 2 to 4 inches / 50 to 101mm
Resolution	720p
Focus Point	5" (13cm)
Aperture / Field of View	114°
Lighting	103 Lumens Measure at 1 meter in 4-inch cast iron pipe
Auto Upright	Cantilever self-leveling design
Construction	Stainless-steel housing with scratch-resistant Sapphire lens
Environmental	Water resistance up to 11 BAR pressure
Temperature Range	Storage: -4°F to 158°F (-20°C to +70°C), Operating: 14°F to 122°F (-10°C to +50°C)
Manufacturing	Designed and manufactured under ISO 9001:2015
Dimensions Installed	1.02" (Dia.) x 1.45" (L) / 26mm (Dia.) x 36.8mm(L) without standard skid 1.34" (Dia.) x 1.45" (L) / 34mm (Dia.) x 36.8mm(L) with standard skid
Weight	0.15lbs (0.066kg) without standard skid 0.17lbs (0.077kg) with standard skid
Options	Optional 2.5 and 3" guide skids (57 and 75mm) Camera exchange program
What's in the Box	D26-HD Camera, Standard Skid

D18-HD 0.70" / 18mm fixed position camera head

Component	Specification
Model Name	D18-HD
Model Number	VX113-2
Application	Used with the vCam Drain in pipe diameters from 1-1/2 to 3 inches / 38 to 75mm
Resolution	720p
Focus Point	5" (13cm)

Aperture / Field of View	90°
Lighting	69 Lumens Measure at 1 meter in 4-inch cast iron pipe
Auto Upright	None, fixed position, non-leveling camera
Construction	Stainless-steel housing with scratch-resistant Sapphire lens
Environmental	Water resistance up to 11 BAR pressure
Temperature Range	Storage: -4°F to 158°F (-20°C to +70°C), Operating: 14°F to 122°F (-10°C to +50°C).
Dimension Installed	0.73" (Dia.) x 0.71" (L) / 18.6mm (Dia.) x 18.1mm (L) without standard skid 1.0" (Dia.) x 0.73" (L) / 25.6mm (Dia.) x 18.6mm (L) with standard skid
Weight	0.029lbs (0.013kg) without standard skid 0.035lbs (0.016kg) with standard skid
Options	2.25" / 57mm Guide Skid, Camera exchange program
What's in the Box	D18-HD Camera, Standard Skid, Removal and installation tools

E. vCamMX-2+ System Shipping Weights*

Model	Dimensions and Weights (Includes control module, accessory kit, charger, reel with pushrod, spring assembly, and insert sleeve)
100ft/30m System	<ul style="list-style-type: none"> Dimension: 22.8" (L) x 15" (W) x 28" (H) (580(L) x 380(W) x 700(H) mm). Weight: 42lbs. (19 kg)
150ft/45m System	<ul style="list-style-type: none"> Dimension: 22.8" (L) x 15" (W) x 28" (H) (580(L) x 380(W) x 700(H) mm). Weight: 45 lbs. (21 kg)
D26-HD Camera Head	<ul style="list-style-type: none"> Dimensions: 3.5" (L) x 3.5" (W) x 4.9" (H) (90(L) x 90 (W) x 125(H) mm) Weight: 0.26lbs (0.12kg)
D18-HD Camera Head	<ul style="list-style-type: none"> Dimensions: 3.5" (L) x 3.5" (W) x 4.9" (H) (90(L) x 90 (W) x 125(H) mm) Weight: 0.13lbs (0.06kg)

*Shipping dimensions and weights are approximate.

F. Warranty

Item	Parameter
Warranty	<ul style="list-style-type: none"> Control module: One year Reels & Pushrod: One year Camera heads: One year Accessories: One year

G. Note



*The distance count shown on the LCD is designed to provide an estimate. The camera should always be located with care using a Sonde or Pipe and Cable Locator.

Shipping dimensions and weights are approximate.

This product's LCD is a consumer product, and models may change. Vivax-Metrotech Corporation attempts to ensure that the minimum features listed here are present in every LCD, and some additional features may vary from model to model.

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