



VIVAX
METROTECH

vCamMX-2

Technical Specifications V1.5



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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 metallic and non-metallic pipes, drains, conduits, and ducts. The most typical application is the inspection of sewer laterals and plumbing. Digital video and JPEG picture images are viewed on the control modules LCD and recorded onto a USB thumb drive.
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 - 200 ft. / 60m – North American markets only Camera Head Options: (Type-MX reel cameras are user changeable) <ul style="list-style-type: none"> - D18-MX 0.70" / 18 mm Fixed position color camera - D26-MX 1" / 26 mm Self-leveling color camera

vCamMX-2 System	D18-MX Camera	D26-MX Camera
		

B. vCamMX-2 Control Module

Component	Specification
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 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 (NTSC: 720 x 480, PAL: 720x 576) • JPEG Still image capture (NTSC: 720 x 480, 72 dpi PAL: 720 x 576) • Automatically senses PAL or NTSC and changes format
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	Firmware is upgradeable via USB port with files available from the Vivax-Metrotech website, local distributor or factory
Options and Accessories	vCam Live View Mobile phone/tablet app for video streaming, image capturing, adding text and file sharing

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 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, then off • Push-button glows green, and the Sonde icon appears on the status bar on 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 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 battery icon appears on the status bar on 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 second time to stop recording • Push-button glows red when recording, and flashing icon appears on the status bar on 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 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	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 deployed pushrod • Option to move OSD to top of the screen, the bottom of the screen or off • Option to change the OSD colors of 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 Live View mobile app
Wi-fi	30" / 10m Wi-fi range for use with the <i>vCam Live View Mobile</i> 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 located 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
Pushrod Construction	Fiberglass rod, conductors and coax with a high-density Polyethylene Jacket
Pushrod Length Options	100ft. (30m) 150ft. (45m) 200ft. (60m) - North American markets only

Pushrod Diameter	0.39" (10mm)
Minimum Break Strength	4000lbs (1800kg)
Bend Radius	Approximately 40 x the pushrods diameter, Minimum bend radius approximately 3"/75mm
Sonde Frequencies	33kHz, 512Hz, and 640Hz. Selectable at time of control module feature setup
Sonde Output/Range	<ul style="list-style-type: none"> • 1-Watt output • Average maximum locatable depth approximately 9 feet (3m) in cast-iron pipes
Pushrod Tracing	Post 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) 200 ft. (60m): 44 lbs. (20 kg) - North American markets only
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 friction brake to slow pushrod cage, move brake lever left/right to lock/unlock pushrod drum
Options and Accessories	Drip Bag

D. Camera Heads for the Type-MX Reel

D18-MX 0.70" (18mm) fixed position camera head

Component	Specification
Application	Used with the Type-MX reel in pipe diameters from 1-1/2 to 4 inches / 40 to 100mm
Horizontal Resolution	520 TVL
Active Pixels	NTSC 704 x 480, PAL 704 x 576.
Focus Point	4.7" (12cm)
Aperture / Field of View	F2.0/55°

Light Sensitivity	0.008Lux
Lighting	17.53 Lumens
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).
Manufacturing	Designed and manufactured under ISO 9001:2015
Dimension Installed	0.70" (Dia.) x 1.2" (L) / 18.6mm (Dia.) x 29.5mm (L) without standard skid 1.22" / 31mm Diameter with standard skid installed
Weight	0.039lbs (0.018kg)
Options	Optional 2.5" skid (57mm) Camera exchange program

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

Component	Specification
Application	Used with the Type-MX reel in pipe diameters from 2 to 4" / 50 to 100mm
Resolution	700 TVL
Active Pixels	NTSC 704 x 480, PAL 704 x 576
Focus Point	PAL Standard focus: 20cm / 7.87" Order code: 1.110.03.00002 PAL Short focus: 10cm / 3.94" Order code: 1.110.03.00003 NTSC Standard focus: 20cm / 7.87" Order code: 1.110.03.00001
Aperture / Field of View	F2.0/88.4°
Light Sensitivity	0.01 Lux
Lighting	20.39 Lumens
Auto Upright	Cantilever self-leveling design
Construction	Stainless-steel housing with scratch-resistant Sapphire lens
Environmental	Water resistance up to 10 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 2" (L) / 26mm (Dia.) x 55mm(L) without standard skid 1.34" / 34mm Diameter with standard skid installed
Weight	0.205lbs (0.093kg)
Options	Optional 2.5 and 3" skids (57mm and 75mm) Camera exchange program

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).
200ft/60m System - North American markets only	<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: 48 lbs. (23 kg).
D18-MX Camera Head	<ul style="list-style-type: none"> Dimensions: 9" (L) x 5" (W) x 5" (H) (228(L) x 127(W) x 127(H) mm) Weight: 2lbs (0.90kg)
D26-MX Camera Head	<ul style="list-style-type: none"> Dimensions: 9" (L) x 5" (W) x 5" (H) (228(L) x 127(W) x 127(H) mm) Weight: 2lbs (0.90kg)

*Shipping dimensions and weights are approximate.

F. Warranty

Item	Parameter
Warranty	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. Care should always be used by actually locating the camera with a Sonde or Pipe and Cable Locator.

Shipping dimensions and weights are approximate (metric data is the most accurate).

The LCD and Hard Drive used in this product are consumer products, and models may change. Vivax-Metrotech Corporation attempts to ensure that the minimum features listed here are present in every LCD and hard drive. Some additional features may vary from model to model.

Vivax-Metrotech Corporation will continue to update and improve its products. The information in these specifications is subject to change, obsolescence, or superseding. Check with your local sales representative or Vivax-Metrotech Corporation for updates.

Disclaimer: Product and accessory specification and availability information are subject to change without prior notice.