VIVAX METROTECH

vCamMX-2

Technical Specifications V1.8

Worldwide Locations

World Headquarters, United States of America	**Central/South America and the Caribbean**

Vivax-Metrotech Corporation

3251 Olcott Street, Santa Clara, CA 95054, USA

T/Free : 1-800-446-3392
Tel : +1-408-734-1400
Fax : +1-408-734-1415
Website: www.vivax-metrotech.com
Email : SalesUSA@vxmt.com

Ventas para América Latina

3251 Olcott Street, Santa Clara, CA 95054, USA

T/Free : 1-800-446-3392
Tel : +1-408-734-1400
Fax : +1- 408-743-5597
Website: www.vivax-metrotech.com
Email : LatinSales@vxmt.com

Canada	**United Kingdom**

Vivax Canada, Inc.

41 Courtland Ave Unit 8, Vaughan, ON L4K 3T3, Canada

Tel : +1-289-846-3010
Fax : +1-905-752-0214
Website: www.vivax-metrotech.ca
Email : SalesCA@vxmt.com

Vivax-Metrotech Ltd.

Unit 1, B/C Polden Business Centre, Bristol Road, Bridgwater, Somerset, TA6 4AW, UK

Tel : +44(0)1793 822679
Website: www.vivax-metrotech.co.uk
Email : SalesUK@vxmt.com

France	**Germany**

Vivax-Metrotech SAS

Technoparc ‑ 1 allée du Moulin Berger, 69130 Ecully, France

Tel : +33(0)4 72 53 03 03
Fax : +33(0)4 72 53 03 13
Website: www.vivax-metrotech.fr
Email : SalesFR@vxmt.com

Metrotech Vertriebs GmbH

Am steinernen Kreuz 10a
D-96110 Schesslitz

Tel : +49 954 277 227 43
Website: www.vivax-metrotech.de
Email : SalesEU@vxmt.com

China	

Vivax-Metrotech (Shanghai) Ltd.

3/F No.90, Lane 1122 Qinzhou Rd.(N),
Shanghai, China 200233

Tel : +86-21-5109-9980
Fax : +86-21-2281-9562
Website: www.vivax-metrotech.com
Email : SalesCN@vxmt.com.cn

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	• **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: - 100 ft. / 30m - 150 ft. / 45m • **Camera Head Options:** (Type-MX reel cameras are user changeable) - D26-HDR 1" / 26 mm Self-leveling color camera - D18-HD 0.70" / 18mm Non-leveling color camera

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

639mm/25.2"   322mm/12.7"   531mm/20.9"

26mm/1.02"   35.9mm/1.41"   33.7mm/1.33"

18.6mm/0.73"   18.1mm/0.71"   25.6mm/1"   18.6mm/0.73"

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	• USB Port – Supports up to 128 GB Removable USB Drives • SD Card Slot – Supports up to 64GB Removable Class 10 SD Cards
File Format	• MP4 Video: D26-HDR @ 1280 x 720 HDR, D18-HD @ 1920 X 1080 • JPEG Still image capture: D26-HDR @ 1280 x 720 HDR, D18-HD @ 1920 X 1080 • Automatically senses PAL or NTSC and changes format
Display	8" *(20cm)* Daylight viewable TFT LCD (800x600) (diagonal measurement)
Environmental	• Water-resistant to IP65 (IEC 60529-Light shower) (lid closed) • Shock resistant (IEC 60068-2-31) (lid closed)
Temperature Range	• Storage: -4ºF to 158ºF *(-20ºC to +70ºC)* • Operating: 14ºF to 122ºF *(-10ºC to +50ºC)*
Manufacturing	Designed and manufactured under ISO 9001:2015
Battery	An Internal Lithium-ion rechargeable battery (supplied with a 12V charger)
Battery Life	• 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 70ºF (21ºC) (with a full backlight on) • Re-charging cycles are approximately 500 times the life cycle. Battery life varies with temperature.
Battery Indicators	• 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 available 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	• vCamMX-2 Control Module • Tool Bag which includes: 　- Flat Screwdriver　　- Charger with power cable 　- AC/DC Power Lead　- Fuse x 2 　- SD Card　　　　　- USB Thumb drive 　- Removal and　　　- Quick Guide 　　installation tools　- 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	Push-button control on the front panel to zero distance count* 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.

Sonde Operation	• 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	• 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	• 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 LCD, showing the battery status and power source
Recording Control	• 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 LCD when recording
Image Capture	• 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	• 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)	• OSD displays the system time, date, and distance of 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	• 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	• 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	
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 x the pushrods 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	• 1-Watt output • Locatable depth up to 9 ft *(3m)*	
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)*
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	
What's in the Box	• Type-MX Reel with Pushrod, spring and Interconnect Cable • Plastic Cable Insertion Sleeve	

D. Camera Heads for the Type-MX Reel

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

Component	Specification
Model Name	D26-HDR
Model Number	VX112-3
Application	Used with the Type-MX reel in pipe diameters from 2 to 4 inches / 50 to 101mm
Resolution	720p
Active Pixels	1280 x 720
Focus Point	6" *(15cm)*
Aperture / Field of View	114º
Light Sensitivity	12.5Ke-/Lux-sec
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: -4ºF to 158ºF *(-20ºC to +70ºC),* Operating: 14ºF to 122ºF *(-10ºC to +50ºC)*
Manufacturing	Designed and manufactured under ISO 9001:2015
Dimensions Installed	1.02" (Dia.) x 1.41" (L) / *26mm (Dia.) x 35.9mm(L)* without standard skid 1.33" (Dia.) x 1.41" (L) / *33.7mm (Dia.) x 35.9mm(L)* with standard skid
Weight	0.14lbs *(0.065kg) without standard skid* 0.16lbs *(0.073kg) with standard skid*
Options	Camera exchange program
What's in the Box	D26-HDR Camera, Standard Skid, Removal and installation tools

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	1080p HD

Focus Point	4" *(10cm)*
Aperture / Field of View	90º
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: -4ºF to 158ºF *(-20ºC to +70ºC),* Operating: 14ºF to 122ºF *(-10ºC to +50ºC).*
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)* Diameter with standard skid installed
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	• 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	• 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-HDR Camera Head	• 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	• 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	• 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 locating the camera with 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.
	Disclaimer - 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.