



# The Spark Series

Technical Overview

# Contents

## 01 Canvas specifications

Technical specs for Spark Series Canvases

## 02 Network requirements

Necessary outbound ports and protocols

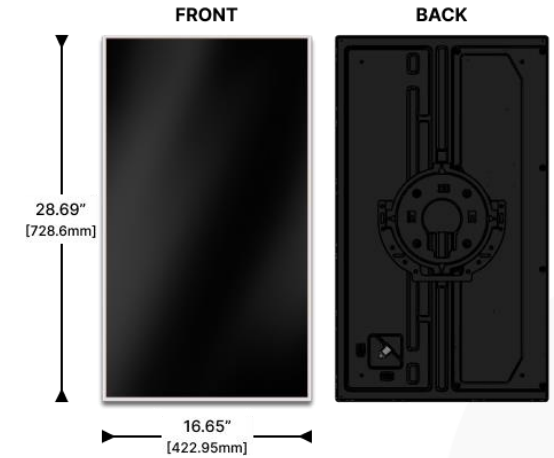
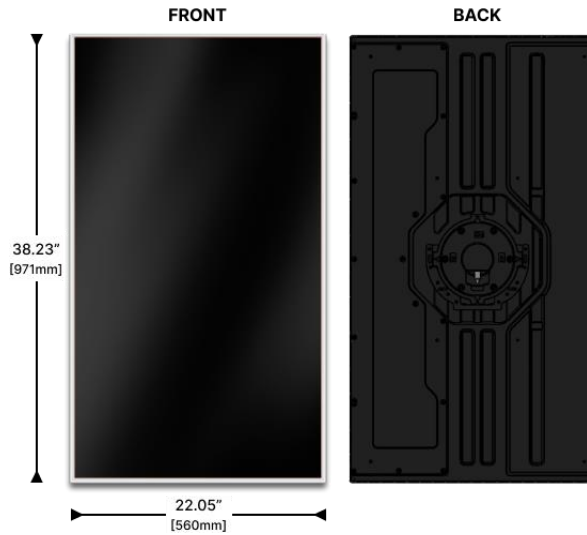
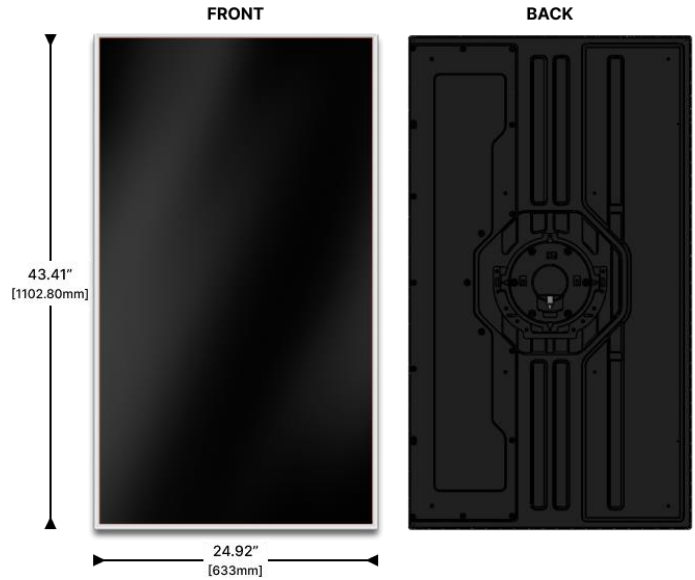
## 03 Backend architecture

How VLE 3.0 operates behind-the-scenes

## 04 Features

A selection of our feature set

# Canvas Specifications

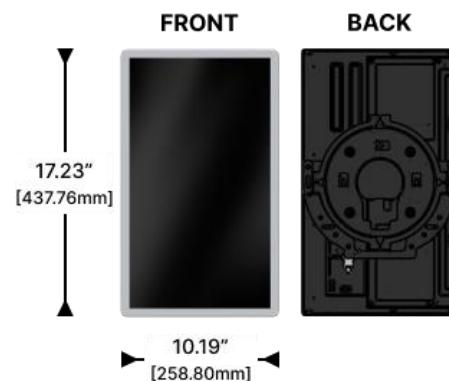
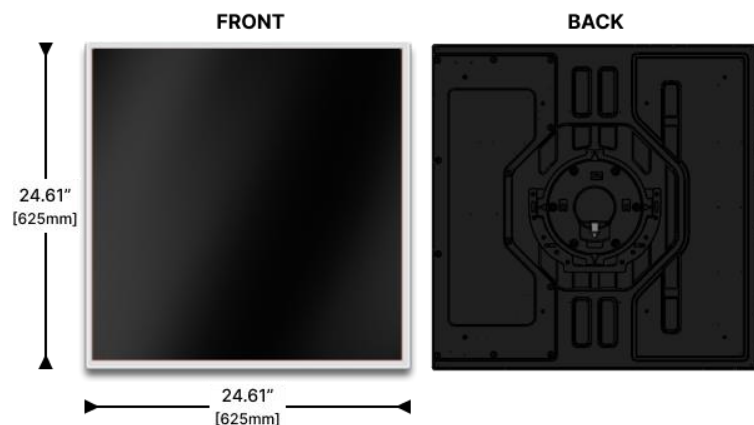


Canvas series	Spark5
Active display area	1073.8 x 604mm
Resolution	3840 x 2160 UHD
Brightness (NITS)	450 nits
Surface Treatment	25% Haze
Processor	RK3588
OS	Android 12
WiFi/Bluetooth	WiFi6/5.2
Vesa Pattern	200mmx400mm with M5 screws
Power Consumption	81W (typical), 0.4W (standby)
Panel Type	TFT
Storage	24GB Useable
Weight	13Kg/29lbs

Canvas series	Spark4
Active display area	941.18 X 529.42MM
Resolution	3840 x 2160 UHD
Brightness (NITS)	450 nits
Surface Treatment	25% Haze
Processor	RK3588
OS	Android 12
WiFi/Bluetooth	WiFi6/5.2
Vesa Pattern	200mmX400mm with M5 screws
Power Consumption	63W (typical), 0.8W (standby)
Panel Type	TFT
Storage	24GB useable
Weight	9.5Kg/21lbs

Canvas series	Spark3
Active display area	698.4 x 392.85mm
Resolution	1920 x 1080 FHD
Brightness (NITS)	450 nits
Surface Treatment	25% Haze
Processor	RK3588
OS	Android 12
WiFi/Bluetooth	WiFi6/5.2
Vesa Pattern	100mmx100mm with M5 screws
Power Consumption	36W (typical), 0.8W (standby)
Panel Type	TFT
Storage	24GB useable
Weight	5.5Kg/13lbs

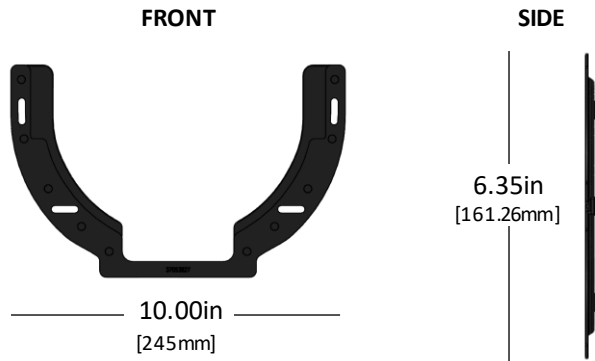
# Canvas Specifications



Canvas series	SparkQ+
Active display area	596.16 x 596.16mm
Resolution	1920 x 1920
Brightness (NITS)	450 nits
Surface Treatment	25% Haze
Processor	RK3588
OS	Android 12
WiFi / Bluetooth	WiFi6/5.2
Vesa Pattern	200mmx400mm with M5 screws
Power Consumption	65W (typical), .9W(standby)
Panel Type	TFT
Storage	24GB Useable
Weight	7Kg/16lbs

Canvas series	Spark2
Active display area	408.96 x 230.04mm
Resolution	1920 x 1080 FHD
Brightness (NITS)	450 nits
Surface Treatment	25% Haze
Processor	RK3588
OS	Android 12
WiFi/Bluetooth/Cellular	WiFi6/5.2/4G LTE
Vesa Pattern	100mmx100mm with M5 screws
Power Consumption	17W (typical), 0.9W(standby)
Panel Type	TFT
Storage	24GB useable
Weight	2.25Kg/5lbs

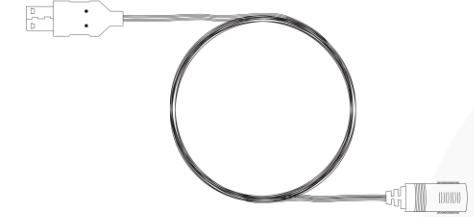
# Power & Mount



Mount Type	Horseshoe Mount
Mech Outline:	245mm x 161.26mm x 5 mm
Mounting Hardware	#8 Panhead x 1"



Power Supply	
Output Wattage	120 Watts
Output Voltage	24 Volts
DC Side Cable Length(in)	14"
AC Side Cable Length(in)	36"
Mech Outline:	5.5" L X 2.75" W X 1.125" H



Power Cable	
Output Wattage	120 Watts
Output Voltage	24 Volts
Cable Length(ft)	10'

# Spark Bridge



Canvas series	Spark Bridge
Device size	4" LX 4" W X 0.5" H
Support output resolution	1080P
Output Ports	HDMI 2.0a
LAN ports	One Gigabit port
Processor	RK3566
OS	Android 11
WiFi	WiFi6
Bluetooth	5.2
Power Consumption	10W Max
Storage	53GB Useable

Canvas series	Spark Bridge Plus
Device size	7.5" LX 4" W X 1.25" H
Support output resolution	Up to 8K
Output ports	HDMI 2.1
LAN ports	Dual Gigabit ports
Processor	RK3588
OS	Android 12
WiFi	WiFi6
Bluetooth	5.2
Power Consumption	24W Max
Storage	53GB useable

Canvas series	Spark Bridge Plus Sealed
Device Size	7.5"L X 4.25"W X 2"H
Support output resolution	Up to 8K
Output ports	HDMI 2.1
LAN ports	Dual Gigabit ports
Processor	RK3588
OS	Android 12
WiFi	WiFi6
Bluetooth	5.2
Power Consumption	24W Max
Storage	53GB useable

# Network Requirements

The Canvas uses the following outbound ports and protocols:

TCP Protocol	Port(s)	DNS
HTTP	TCP 80	Any. Your Canvas can contact public websites as part of normal signage operations. DNS will depend on content.
HTTPS	TCP 443	
XMPP	TCP 5222, 5223	msg.videri.com
ICMP	ICMP	
NTP*	UDP 123	<p>The following NTP pools will be contacted:</p> <ul style="list-style-type: none"><li>time.nist.gov</li><li>0.android.pool.ntp.org</li><li>1.android.pool.ntp.org</li><li>2.android.pool.ntp.org</li><li>3.android.pool.ntp.org</li> <li>0.us.pool.ntp.org</li><li>1.us.pool.ntp.org</li><li>2.us.pool.ntp.org</li><li>3.us.pool.ntp.org</li></ul> <p><b>NOTE:</b> Each pool contains 1000s of individual servers with specific IPs. Generally, it is required to whitelist the NTP protocol rather than individual IPs.</p>

## We support the following SSID encryption modes:

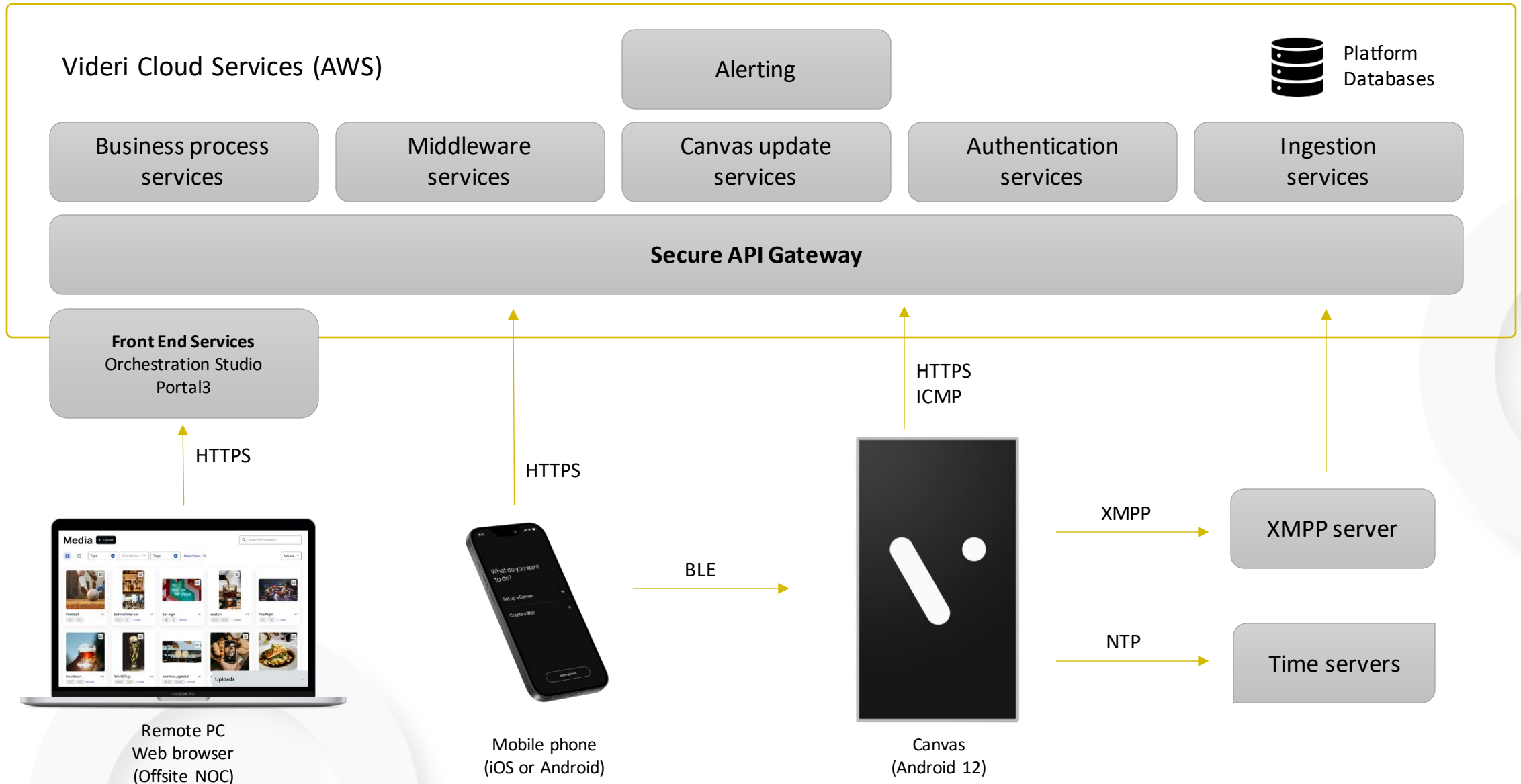
- WEP (64)
- WEP (128)
- WPA-PSK (TKIP)
- WPA-PSK (AES)
- WPA2-PSK (TKIP)
- WPA2-PSK (AES)
- WPA2-Enterprise using RADIUS

The use of certificates or authentication via a landing and/or sign-in page is **NOT** supported.

## Wi-Fi Best Practices

- Your Wi-Fi network should have a password.
- There should be no metal beams or concrete walls between the Canvas and the access point. For the best experience, please have the Canvas in line of sight to the access point.
- Your Canvas should be on its own network and should NOT be on a network that guests use.
- All Canvases should have -70dbm or better signal strength at all times. We recommend WPA2-PSK (AES) security for the best network speeds.

# Backend Architecture





# Features

## Device Monitoring

- Device metrics
- Network information
- Content synchronization
- Content playback status
- Real-time playback screencapture

The screenshot displays the 'Canvases' management interface. On the left is a sidebar with navigation options: Hardware (Canvases, Walls), Content (Media, Apps, Playlists), Schedule (Publish), Operations (Tags), Admin Center (Users), and Workspaces. The main area shows a list of canvases with columns for Name, Tags, Orientation, and Playback Status. A detailed view of 'Lobby V4' is shown in an inset, displaying network information and system monitoring data.

Name	Tags	Orientation	Playback Status
Lobby V4	NYC, V series, Candy Store	Square	Playing
Lobby V5	NYC, V series, Candy Store	Portrait	Playing
Bar	NYC, Bar	Portrait	Playing
Canvas 1	NYC, bar	Landscape	Playing
Canvas 2	NYC	Landscape	Playing
Canvas 3	NYC	Landscape	Playing
Canvas 4	NYC, Bar, Candy Store, + 1 more	Portrait	Playing
Canvas 5	NYC, Bar	Square	Playing
Canvas 6	NYC, Bar	Square	Not playing
Canvas 7	NYC, Bar	Square	Playing
Canvas 8	NYC, Bar	Square	Playing
Canvas 9	NYC	Square	Not playing
Canvas 10	NYC	Landscape	list.item

**Lobby V4** Online Content not playing

**Canvas network**  
Information about Canvas network, including network health.

Property	Value
Name	PrettyFlyForaWiFi
IP Address	192.158.1.38
MAC Address	00-B0-D0-63-C2-26
Signal Strength	-44 dBm
Link Quality	3932 disconnects
Data transmitted	2B
Data received	2B



# Features

## Publishing

- Side-by-side schedule comparison
- Priority events & Temporary schedule overrides
- Event recurrence
- Day and hour parting
- Wireless Orchestration with content adjustment
- External URL scheduling
- Playlist creation
- Image, video and .APK publishing

The screenshot displays the 'Publish' interface for 'NY Store'. It features a search bar at the top right and a date selector for 'January 8, 2023'. The main area shows two side-by-side event schedules for 'Bar V5' and 'Bar V4'. Each schedule is a grid with time slots from 12 AM to 11 PM. Events are represented by colored bars: orange for 'Asset', blue for 'Orchestration', teal for 'Playlist', and purple for 'URL'. The events shown are 'sunrise - 0:15', 'noon - 0:30', 'sunset - 0:28', and 'party time - 1:23'. A legend at the bottom identifies the colors. A right-hand sidebar lists 'Canvases' (Bar V4, Bar V5, Basement, Lobby V3, Lobby SparkQ+, Lounge Left, Lounge Right) and 'Walls' (Bar, Lobby, Lounge, Penthouse) with checkboxes. A 'Deselect all' button is at the bottom of the sidebar. A 'Remove all events' button is at the bottom right of the main area.

