



MediaWall

High Performance Display Wall Processors



Superb Video Quality

Dedicated Real-time Architecture

Robust 24/7 Operation

Highly Secure System without PC Vulnerabilities

Integrated Single and Multiple User KVM

Dual-link and 4K Support





Overview

RGB Spectrum's *MediaWall*® Display Processors enable high performance visualization with arrays of projectors, tiles, cubes or flat panel displays. All processors are based on a custom built architecture that dedicates processing resources for each input. The result is faster video frame updates, display flexibility, security, and an enhanced visual experience.

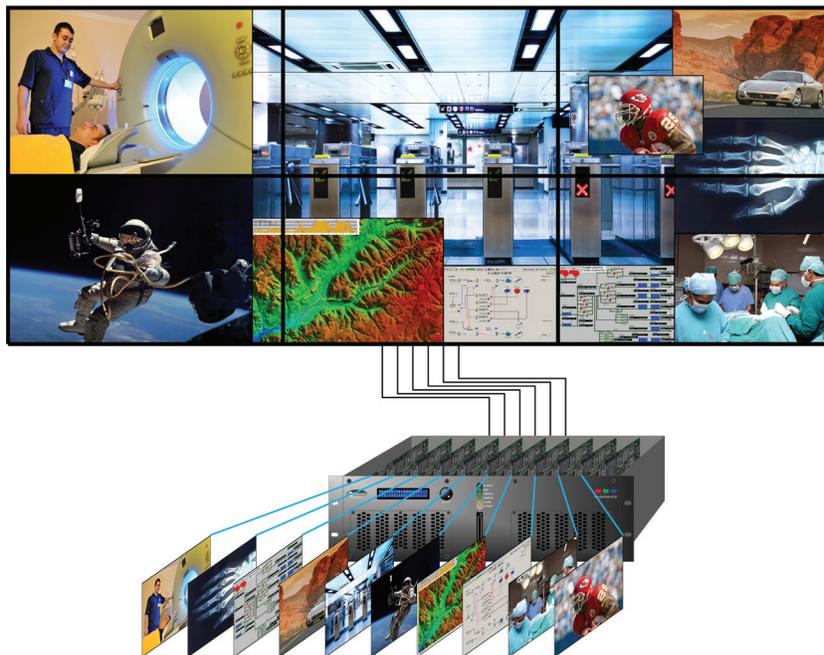
The *MediaWall* family is comprised of four models:

- *MediaWall* 4200 and 4500 processors are built on a modular chassis that offers a variety of input modules and options. The 4200 processor supports up to 8 outputs, while the 4500 processor supports up to 12.
- *MediaWall* 1900 and 2900 processors support 2 and 4 outputs, respectively.

With each *MediaWall* processor, the multi-screen array forms a display surface on which any configuration of window layouts is possible. Input options include DVI/HDMI, RGB, HD-SDI, IP, and analog video. Video images may be displayed anywhere, in any size, and within or across screen boundaries. Images can be displayed in correct aspect ratio, stretched to fit, in full screen mode, or zoomed in to emphasize details.

High Performance Video Processing

The *MediaWall* processor's hardware is purpose-built to deliver superb performance. Each input is processed at full frame rate, color sampling, and pixel rate, without common PC-based anomalies such as skipped frames or image tearing.



Parallel Processing Provides Consistent Performance

Reliability and Security

MediaWall processors offer 24/7 robustness. Each processor is packaged in a rack mountable enclosure suitable for the most demanding environments with replaceable air filters and redundant power supplies. RGB Spectrum's real-time, embedded operating system offers a high level of security, free from vulnerabilities such as viruses and malware commonly found in PC based systems.



Bezel Compensation and Edge Blending Support

MediaWall processors are designed to work with any display device — from tiles to projectors. Output resolution can be adjusted to a display device's exact native resolution. The processor offers adjustments to compensate for bezels between panels, both vertically and horizontally. When used with projectors, *MediaWall* processor outputs can be overlapped for an edge blending unit to combine and achieve the effect of a single, seamless canvas.



HDCP

The High Definition Content Protection (HDCP) option allows protected content, such as that output from a Blu-ray player, to be displayed anywhere on the wall. Although content protection was originally envisioned for use on a single screen, *MediaWall* processors supports HDCP functionality across multiple screens.

IP Input

IP stream decoding is supported via the optional DSx 264MW module, which can decode IP cameras or H.264 streams from remotely located computers. Each module can decode eight SD or two HD streams at resolutions of up to 1920x1200. The processors also offers control over remote computers via a secure Internet connection with NetOp's Remote Control solution. This software-based implementation is ideal for source computers that display high resolution content with less-than-full-motion, or which require a higher degree of security.

Control Options

MediaWall processors may be controlled in several ways. Our *Web Control Panel (WCP)* provides both local and remote operation, with a graphical representation of the video wall and "drag and drop" window positioning and scaling. Remote control commands are also available via RS-232 and Telnet. RGB Spectrum's BP-16 push button panel is available for preset recall. In addition, *MediaWall* processors can be controlled by third party control systems.

MultiPoint® Control Room Management System (MCMS)

For the ultimate in flexibility, *MediaWall* processors can be integrated into RGB Spectrum's *MultiPoint®* Control Room Management System (MCMS) — a collaborative system for addressing, displaying, and controlling shared sources and computer systems in a control room environment. MCMS features include a system of preferences and priorities that determine which operators have access to specific source computers and resources. The system offers the industry's most intuitive user interface, which adds a higher degree of efficiency to any control room's decision making process.

The result – **better decisions, faster!**



MCMS Drag and Drop Interface



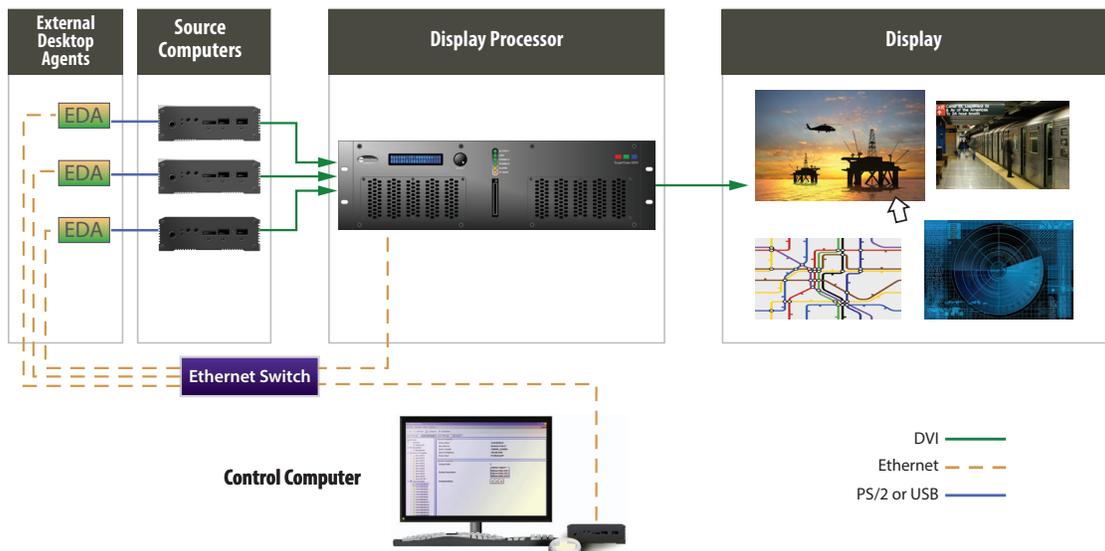
SinglePoint KvM

SinglePoint KvM™ is a powerful integrated IP KVM solution for RGB Spectrum's video wall processors. *SinglePoint KvM* enables users to control the operation of all source computers displayed on the video wall with a single mouse and keyboard.

An on-screen cursor controls the functions of the display processor (e.g., window sizing and positioning) as well as the source computers themselves. Both the visuals and the cursor movement are displayed in real-time, which results in a high level of responsiveness. With video passing directly from the source computer to the wall processor, *SinglePoint KvM* sends only keyboard and mouse commands over IP, with negligible network impact.

There are two methods of remote access to source computers: via Remote Desktop Agent (RDA) software installed on the computer, or via RGB Spectrum's patented External Desktop Agent (EDA). The EDA functions as a computer's remote desktop agent using standard keyboard and mouse drivers, eliminating the need to install software on the computer.

The EDA receives keyboard and mouse commands via Ethernet and relays them to a computer via PS/2. A PS/2-to-USB adapter is available, with the PS/2 connection remaining in-line. Because PS/2 is unidirectional, commands can be passed to the computer but data cannot be accessed. This feature provides network isolation which allows *SinglePoint KvM* to run on both secure and unsecure networks simultaneously.



MediaWall System with SinglePoint KvM Installed



MediaWall 4500

MediaWall 4200

MediaWall 2900/1900

Configurations

60 inputs, 30 windows, 12 outputs

24 inputs, 12 windows, 8 outputs

24 inputs, 8 windows, 4 / 2 outputs

Inputs

	MediaWall 4500	MediaWall 4200	MediaWall 2900/1900
RGB Analog	Interlaced and progressive	Interlaced and progressive	Interlaced and progressive
Number/type	2x analog RGB/YPbPr/HD per module	2x analog RGB/YPbPr/HD per module	2x analog RGB/YPbPr/HD per module
Video level	1.0 V p-p for G and Y composite, 0.7V p-p for RB and PbPr	1.0 V p-p for G and Y composite, 0.7V p-p for RB and PbPr	1.0 V p-p for G and Y composite, 0.7V p-p for RB and PbPr
Input impedance	75 ohms	75 ohms	75 ohms
Sample clock rate	Up to 165 MHz	Up to 165 MHz	Up to 165 MHz
Horizontal scan rate	15 kHz to 125 kHz	15 kHz to 125 kHz	15 kHz to 125 kHz
Frame rate	Up to 200 Hz	Up to 200 Hz	Up to 200 Hz
Resolution	640x480 to 1920x1200, 2048x1152 720p, 1080i, 1080p	640x480 to 1920x1200, 2048x1152 720p, 1080i, 1080p	640x480 to 1920x1200, 2048x1152 720p, 1080i, 1080p
Color depth	24-bit	24-bit	24-bit
Sync type	RGsB, RGBS, RGBHV, YPbPr (tri-level or bi-level sync on Y/G)	RGsB, RGBS, RGBHV, YPbPr (tri-level or bi-level sync on Y/G)	RGsB, RGBS, RGBHV, YPbPr (tri-level or bi-level sync on Y/G)
Cable equalization	Automatic or manual, up to 164 ft (50 m) DVI	Automatic or manual, up to 164 ft (50 m) DVI	Automatic or manual, up to 164 ft (50 m) DVI
Connector type	15-pin HD	15-pin HD	15-pin HD
DVI Digital			
Number/type	2x DVI single link per module	2x DVI single link per module	8x DVI single link per frame
Resolution	640x480 to 1920x1200 and 2048x1152, 720p, 1080i, 1080p	640x480 to 1920x1200 and 2048x1152, 720p, 1080i, 1080p	640x480 to 1920x1200 and 2048x1152, 720p, 1080i, 1080p
Color depth	24-bit	24-bit	24-bit
Cable equalization	Automatic or manual; up to 164 ft (50 m)	Automatic or manual; up to 164 ft (50 m)	Automatic or manual; up to 164 ft (50 m)
Connector type	DVI-I (digital only)	DVI-I (digital only)	DVI-I (digital and analog)
HDCP	Option	Option	Compliant
HDMI			
Number/type	With HDMI/DVI adaptor	With HDMI/DVI adaptor	8x HDMI 1.3a
Resolutions	640x480 to 1920x1200 and 2048x1152, 720p, 1080i, 1080p	640x480 to 1920x1200 and 2048x1152, 720p, 1080i, 1080p	640x480 to 1920x1200 and 2048x1152, 720p, 1080i, 1080p
Color depth	24-bit	24-bit	24-bit
Cable equalization	Automatic or manual, up to 164 ft (50m)	Automatic or manual, up to 164 ft (50m)	Automatic or manual, up to 164 ft (50m)
Connector type	NA	NA	HDMI
HDCP	Option	Option	Compliant

IP Input Options

H.264	8 SD or 2 HD streams per optional external module	8 SD or 2 HD streams per optional external module	8 SD or 2 HD streams per optional external module
VNC	Netop remote control software	Netop remote control software	Netop remote control software

Outputs

DVI single-link	Up to 12 (on DVI-I), increments of 4	Up to 8 (on DVI-I), increments of 4	4 (MW2900), 2 (MW1900)
DVI dual-link	NA	NA	2 (MW2900)
Resolution	Up to 1920x1200 and 2048x1152	Up to 1920x1200 and 2048x1152	Up to 1920x1200 and 2048x1152 3840x2160p, 4096x2160p (MW2900)
Connector type	DVI-I (digital only)	DVI-I (digital only)	DVI-I (digital only)
Horizontal scan rate	31 kHz to 125 kHz	31 kHz to 125 kHz	31 kHz to 125 kHz
Frame rate	Up to 200 Hz	Up to 200 Hz	Up to 200 Hz
Clock rate	25 to 165 MHz	25 to 165 MHz	25 to 165 MHz (single-link) 165 to 330 MHz (dual-link)
Sync type	SRGsB, RGBS, RGBHV, YPbPr (tri-level or bi-level sync on Y/G)	SRGsB, RGBS, RGBHV, YPbPr (tri-level or bi-level sync on Y/G)	SRGsB, RGBS, RGBHV, YPbPr (tri-level or bi-level sync on Y/G)
Pin power	750 mA @ 5 VDC	750 mA @ 5 VDC	500 mA @ 5 VDC

Power

100 - 240 VAC auto ranging
50/60 Hz, 750 W maximum

100 - 240 VAC auto ranging
50/60 Hz, 325 W maximum

100 - 240 VAC auto ranging
50/60 Hz, 125 W maximum

Control

Ethernet 10/100BaseT, Telnet, RS-232
Web interface, 3rd party controllers

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Physical

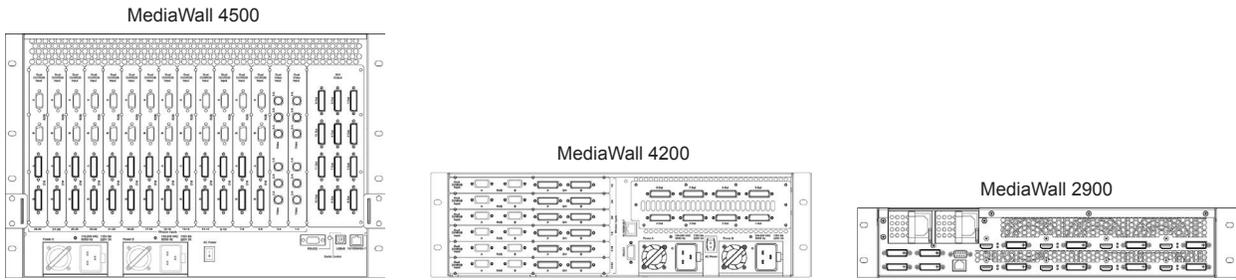
Width: 19.0 in/48.3 cm
Depth: 22.0 in/55.9 cm
Height: 12.25 in/31.1 cm (7 RU)
Weight: <70 lbs/32 kg

Width: 19.0 in/48.3 cm
Depth: 22.0 in/55.9 cm
Height: 5.25 in/13.1 cm (3 RU)
Weight: <35 lbs/15.9kg

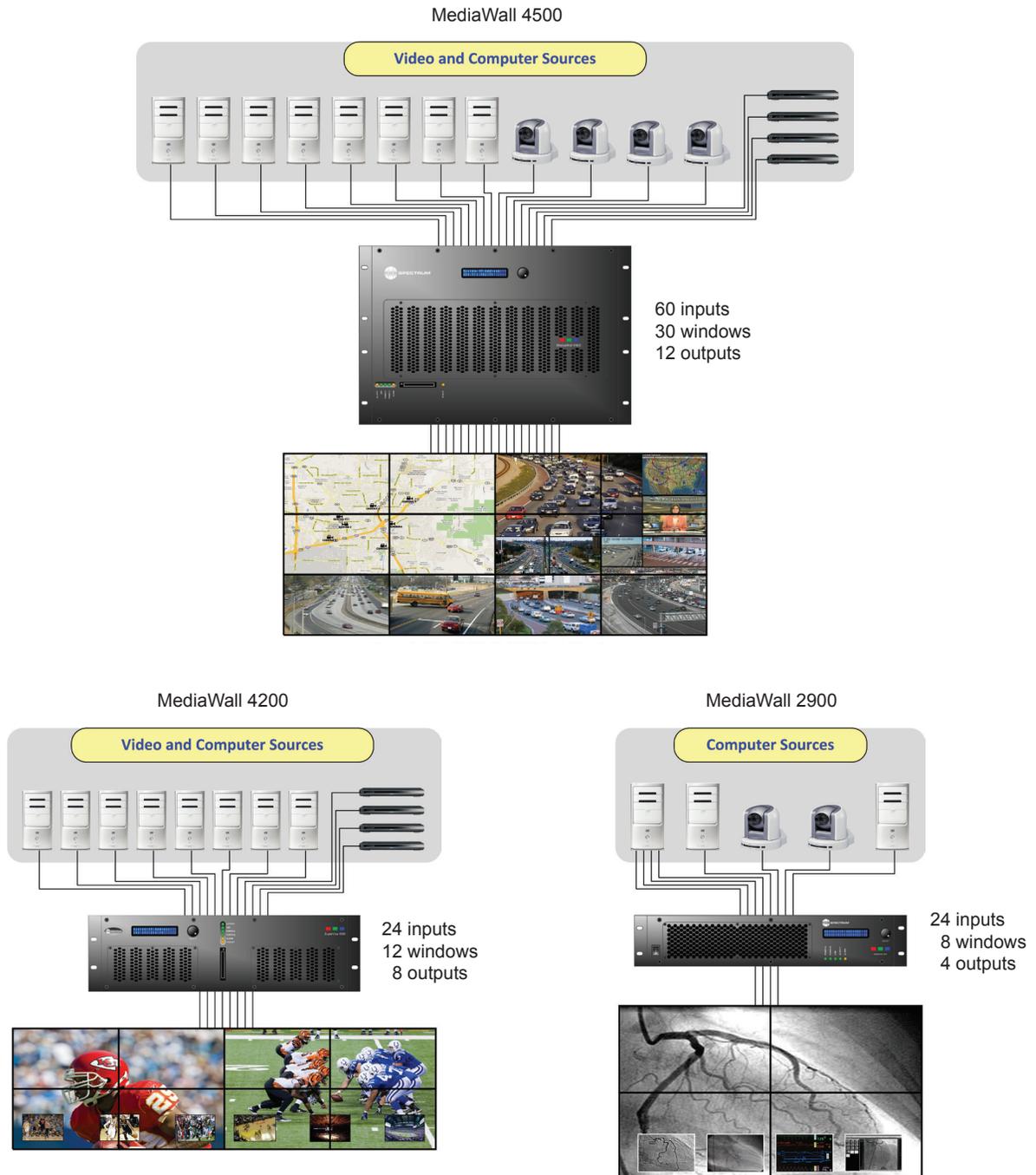
Width: 17.0 in/43.2 cm
Depth: 18.0 in/45.7 cm
Height: 3.5 in/8.9 cm (2 RU)
Weight: 25 lbs/11.4 kg



Back Panels



Configuration Examples





RGB Spectrum Products

MultiPoint Control Room Management Systems

A collaborative system to display and control shared computer and visual resources, MCMS integrates a state-of-the-art multi-user KVM system with RGB Spectrum hardware, including video walls, multiviewers, codecs and switchers. Better decisions. Faster.



- Customizable work environment
- KVM access of controlled computers without software installed
- Unique operator GUI for both local and shared resource control
- Full bandwidth, uncompressed video
- Integration with shared display walls

Multiviewers

For displaying multiple video and graphics on a single screen, the QuadView® and SuperView® product lines provide superb multiviewer functionality with the ability to move, resize and overlap images. Options include KVM control of sources, HDCP compliance, and annotation.

SuperView 4100 / 5000



QuadView HDx



- 4, 8, or 12 windows
- DVI, RGB, HD-SDI, SD/HD video inputs
- Resolutions to 1920x1200
- Smooth scaling, panning, and zooming

SuperView 4K



- 8 megapixel multiviewer
- Up to 8 windows
- DVI single-link or dual-link output
- Smooth scaling, panning, and zooming

Codecs and Recorders

For streaming and recording video, graphics and audio with the highest fidelity, RGB Spectrum offers two codec families — the DSx™ with H.264 *high* profile compression and the DGy™ with JPEG 2000 compression.

DSx



DGy



- Up to 1920x1200 resolution
- Simultaneous recording and replay
- Event marking
- Variable speed playback
- Multi-unit synchronization
- Concurrent streaming and recording
- Recording to local and network storage devices

Digital Switchers

The Linx™ Prime and Opto™ series of DVI and fiber optic switchers enable transmission without signal degradation, providing superb tools for A/D conversion, routing and control, with HDCP compliance.

Linx Prime



- Single-link and dual-link DVI, RGB, 3G/HD-SDI inputs
- Single and dual-link DVI and scaled DVI outputs
- Fiber and copper I/O
- Chassis I/O up to 32x32

Opto



- Industry highest bandwidth - 6.22 GHz
- Chassis I/O up to a giant 320x320
- Simplex or duplex operation
- Single mode or multimode fiber
- Single and dual-link DVI, RGB and 3G/HD-SDI

MediaWall™ Video Processors

Simultaneously display multiple computer and video signals across an array of high definition monitors or projectors, with the ability to interact with any source via KVM control. Windows can be custom sized, positioned and stretched across any combination of displays.

MediaWall



MediaWall 4200



MediaWall 2900

- Real-time operation, no dropped frames
- RGB/DVI, 3G/HD-SDI and analog inputs
- Smooth scaling, panning, and zooming
- Edge blending support and bezel compensation
- HDCP compliant

Extenders

For secure transmission of DVI signals over long distances, XtendView® FiberDVI signal extenders represent the state-of-the-art with the industry's smallest size housing.



- Up to 400M over a single fiber
- Resolutions to 2048x1152
- "All-in-the-headshell" design
- HDCP compliant



Worldwide Offices

Corporate Headquarters

950 Marina Village Parkway
Alameda, California 94501
TEL: (510) 814-7000
FAX: (510) 814-7026
WEB: www.rgb.com
email: sales@rgb.com

European Headquarters

Dragonder 20A
5554 GM Valkenswaard
The Netherlands
TEL: +32 11 515600
FAX: +32 11 515601
CELL: +31 6 51319730
email: europesales@rgb.com

Asian Headquarters

14F Cimic Tower
800 Shang Cheng Rd. Pudong District
200120, Shanghai, China
TEL: +86 10 5905 5776
FAX: +86 10 5905 5900
CELL: +86 1391 6213 594
email: asiasales@rgb.com

USA Offices

Somerset, New Jersey
Baltimore, Maryland
Atlanta, Georgia
Orlando, Florida
Cincinnati, Ohio
Dallas, Texas
Los Angeles, California

Middle Eastern Headquarters

Suite 302, Yes Bussiness Center
14B Street, Al Mafrq Road
Al Barsha 1, Dubai
United Arab Emirates
TEL: +971 (0) 44 46 84 16
CELL: +971 (0) 50 420 3867
email: middleeastsales@rgb.com
africasales@rgb.com

International Offices

Paris, France
Shanghai, China
Seoul, Korea
Mumbai, India
St. Petersburg, Russia
Miami, Florida for Latin America
Beirut, Lebanon
London, UK
Dubai, UAE



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