Smart City Signage Powered by BoldVu®



Smart City Initiatives

Improve

Traffic management, public safety, waste management, parking, connectivity & mobility Business investment, education, talent, leisure & tourism, citizen engagement

Attract

Optimize

Revenue generation, waste reduction, public services, job creation, data collection, city communication



Smart City Kiosk System Architecture

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| | CLIENT | | | EDGE | | CLOUD | | |
|---|--------------------------|--------------------------|------------------------------------|-----------------|-------------------------------|--------------------------|----------------------------------|----------------------------|
| | Wayfinding VoIP | | Sensor & Safety Analytics | | Dashboard – Remote Management | | | |
| | Environmental Sensing | Audience Analytics | Media Playback | Aggregate Au | dience Analytics | Environmental Metrics | Audience Analytics Metrics | Conte Manager Syster |
| | OS Platform | | | Content Storage | | Cloud Server | | |
| | Media Player | | High-End Compute | | | | | |
| | Speaker/Mic | Display | Camera | FPGA | RAID | | | |
| | Beacon | Environmental Sensors | Personal Tablet / Touch Display | | | | | |
| | USB Charging | Ethernet Switch | Small Cell / WiFi Access Point | | | | | |
| Carlo | | | | | | | | |



Smart City Alignment

Long Contract Lengths (5-25 years)

BoldVu Panels perform reliably and consistently for 10+ years

Strongly Funded by Advertising

BoldVu Panels carry the industry's best performance track record and the only visual performance guarantee

BoldVu Panels ensure that advertising rate cards are maximized and consistently maintained for the full duration of the municipality contract



BoldVu[®] Panels

- Engineered for outdoors & direct sunlight
- Single/Double-sided configurations
- Touchscreen options
- Sealed chassis, no air filters, no regular maintenance
- House, power, and cool connected devices
- Designed, engineered, fabricated and assembled in the USA





Westfield Century City

3:43 PM

FOUCH SCREEN TO BEGIN







BoldVu[®] Panel Design

- Up to two display faces can share a common electronics chassis and thermal management system
- Unit is weather-proof, vandal-proof, self-cooled, and has its own power conditioning center
- Capacity to house, power, and cool peripheral devices inside the electronics chassis – no need for additional chassis
- Externally housed devices can be powered through the display







BoldVu[®] Panel Design

Hinges open on both sides for internal access



Center mounting rack & I/O for peripheral devices (2) RETMA 1U Rack Units



Side Assembly



Core panel circuitry mounted to Side Assembly



removeable/replaceable



Peripheral Integration

Media player

Modem

WiFi Access Point

M2M device

Fiber to ethernet

Camera(s)

Ethernet router

Ethernet switch

Environmental sensors

USB charging station

Small cell

Personal touchscreen

Mount space and power available inside BoldVu chassis

Housed outside and powered through BoldVu panel



Display side 2



15-Year Backlight Performance Analysis

Location: New York City

Luminance: 3500 nits (day) 500 nits (night)

Environment: **Fully-exposed outdoor** East/West facing

Product: 55" BoldVu Double-sided









15-Year Backlight Performance Analysis



Display maintains luminance capacity over 15 years

<4% increase in power consumption over 15 years







Smart City Benefits

Media Advertising

Generate jobs and revenue

Location-based, digital advertising revenue

Jobs created to build, install, and maintain kiosks

Self-sustaining digital network

Citywide Alerting Promote public safety

Real-time emergency messaging

Security cameras available

Emergency calling

Public information

Public high-speed internet

LTE small-cell support

Bluetooth beaconing

VOIP



Connectivity Enable access to **Data &** Analytics Value-added insights

Environmental sensors

Pedestrian and traffic analytics

Parking, lighting, waste management optimization

Concierge & Information Citizen

engagement

Transit information

Real-time arrival & departures

Interactive wayfinding

City events and points of interest





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