

Choosing the right digital signage system

Considering digital signage?

Seven questions you need to ask.

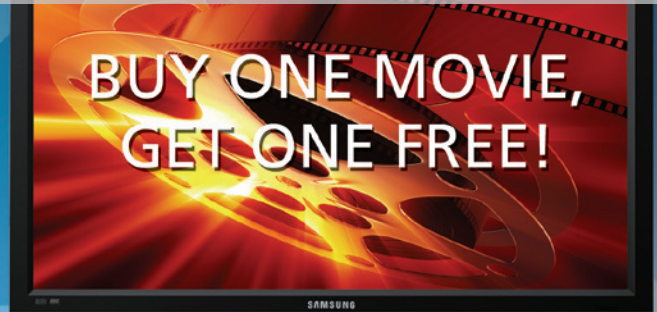


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We are here to help! If you have any questions about your application, our products, or this white paper, please contact Black Box Tech Support at 724-746-5500 or blackbox.com. You'll be live with one of our technical experts in less than 20 seconds.

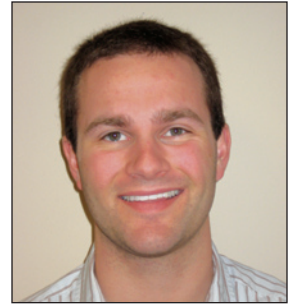
Introduction

Considering the many available digital signage solutions might seem like an overwhelming task. But taking some time to research and understand your options will be well worth the investment. Digital signage can be a very effective and affordable communications medium.

The success of any digital signage system starts, of course, with the content. Digital content must look fresh, exciting and professional. There are many resources, tools and companies you can enlist to help you with this side of digital signage.

Once you've decided on content, you need to consider the infrastructure that will deliver it. Choosing the appropriate infrastructure is also a big challenge.

That's why Black Box Network Services and *Digital Signage Today* have worked together to create this quick-start guide to choosing the right digital signage system based on application, functionality, manageability and budget.



By Bill Yackey,
Editor, *Digital Signage Today*



Get started with these five steps

Follow these key steps to ensure a successful digital signage project:

1. **Define your goals and objectives:** What do you want to achieve?
2. **Clearly define the content:** Who will create it, how it will be managed, how it will be presented, etc.? The success of any digital signage system is determined by the content and presentation. Do you have internal resources and expertise, or will you need to outsource content creation?
3. **Invest the time to understand your options:** LCD vs. plasma? Zones? RSS feeds? Live video? Dynamic content? Remote management? Playback verification? The options will seem limitless, so taking time to sort through them is imperative.
4. **Involve all the appropriate stakeholders:** The IT department might be one of the biggest ones, depending on the type of infrastructure you choose.
5. **Decide how to implement the solution:** Based on your deployment size and scope, decide if you can implement it in-house or if you need the help of a professional integrator. A number of out-of-the box solutions can be set up with relative ease. But the more dynamic and complex the system, the more complicated the implementation and ongoing management—and the more likely you'll need outside help.

Know your options

When it comes to deploying digital signage, companies have an almost unlimited amount of options. We've organized them into four major categories to help you select the most appropriate system to support your objectives, application and budget. Learn about the features, pros, cons and costs associated with each category.

- **Basic:** Single-screen/single-zone display
- **Moderate:** Single-screen/multiple-zone display
- **Intermediate:** Single- or multiple-screen/multiple zones, including live TV
- **Advanced:** Multiple-screen/multiple-display/extensive functionality

"No other medium makes it possible to deliver compelling content at the right location at the right time for maximum impact. Whether your goal is to increase sales, improve branding, encourage certain behavior or improve communications with employees, there has never been a better time to consider digital signage," said Brian Kutchma, Director of Marketing at Black Box Network Services. "Digital signage is very effective and, most importantly, it's affordable for almost every business."

The roadmap to digital signage

The next step is to ask seven basic questions that will quickly help you identify the right system and infrastructure for your needs.

In addition, we've included a more advanced checklist in a chart that cross-references these basic questions in detail and suggests the appropriate digital signage system based on your answers.

Once you have determined a system that you believe will work well, check out our detailed descriptions of each system, along with commentaries from Black Box digital signage experts.

Identify the right system for your needs

1. What type of content do you want to display (e.g., static images, video, RSS feeds, live TV, etc.)?
2. How many locations and displays do you want to run the content on?
3. Will the content be the same on each screen, or do you want to show different content on different screens?
4. How do you want to manage your content and be able to change or update it?
5. Do you want to remotely control the on/off and volume functionality of the screen or confirm when content is played?
6. Based on location displays, will you have potential security issues? (Can someone simply turn off the display, change channels, or even tamper with or remove the player?)
7. Does your existing network have the bandwidth to support digital signage traffic?

Questions to consider when choosing a digital signage system

	Ultra-Affordable \$	Moderate \$\$	Moderate (w/TV capability) \$\$\$	Advanced \$\$\$\$
What do you want to display?				
Static content?	•	•	•	•
Static content with a couple of photos?	•	•	•	•
Static content and streaming video?		•	•	•
Static content, streaming video, and an RSS feed?		•	•	•
Corporate information, static content, streaming video, and an RSS feed?		•	•	•
Corporate information, static content, streaming video, video (TV), and an RSS feed?			•	•
Control your screens from a media player?		•	•	•
How many locations and displays do you want the content to run on?				
Content on one screen?	•	•	•	•
Content on multiple screens at one location?		•	•	•
Content on multiple screens at multiple locations at one site?		•	•	•
Content on multiple screens at multiple locations at more than one site?				•
Play different content at multiple locations?				•
How do you want to manage your content?				
Real time remote player static check?		•	•	•
System log and content reporting?		•	•	•
Remote-control features to poll the detailed player status, screen controls, volume controls, reboot players, and software upgrades?				•
Real time alerts?				•
Do you want to confirm what content is played?				
Will you need a reporting matrix?				•

The solutions

NOTE: All estimated prices for solutions include a 42-inch LCD screen, media player and digital signage software.

Prices can change depending on a number of factors.

Ultra-affordable (\$3,500 to \$5,000) — \$

Single-screen/single-zone display

This category represents the “down-and-dirty” solution — one screen, one media player, one USB or flash drive. This type of solution is not networked; instead, employees on location transfer new content to screens by inserting USB or flash drives into media players on-site. There are no instant-messaging capabilities, and the screen must be turned on and off manually. This system provides a single-zone (PowerPoint® like) presentation with looped content.

“This type of solution is ideal for a lobby, waiting area or even an employee break room. It’s a relatively low-cost method of creating and displaying messaging,” Kutchma said. “It’s a great way for small companies with a limited budget to capitalize on some of the benefits of digital signage. With a plug-and-play AC power outlet media player, an LCD or plasma screen, and a little effort to learn some out-of-the-box software, you can easily implement digital signage.”

Kutchma recommended coming up with a content strategy early in the process. “The most challenging part of any signage system is the content. It’s critical that anyone considering signage has a plan in mind and the resources in place to create and manage the content.”

Customers using ultra-affordable solutions like this one usually have a one-screen deployment, so changing content and turning the screen on and off manually isn’t an issue. Also, customers usually like the plug-and-play ease of this kind of system.

Best areas for use: Small-office reception areas, lobbies, doctor’s offices, small retail shops, employee break areas.

Content-delivery method: Removable storage devices: USB drives, compact flash, SD memory cards.

Pros: Low-cost, easy-to-manage solution for one-screen deployments and single locations; plug-and-play operation.

Cons: Low flexibility. Content must be manually changed through removable storage devices. Content is displayed in a single-zone, looped play with no instant-messaging capability. Screens must be manually turned on and off. Lack of scalability.



The solutions (cont.)

NOTE: All estimated prices for solutions include a 42-inch LCD screen, media player and digital signage software. Prices can change depending on a number of factors.

Moderate (\$4,500 to \$7,000) — \$\$

Single-screen/multiple-zone display — same content on all screens

The biggest differences between the moderate and ultra-affordable systems are that with moderate systems, you have multiple-zone presentation and live feeds.

“If you want a stock ticker or live CNN news feeds, you need RSS capability,” Kutchma said. “To have that functionality, you need an Internet connection through your network.”

Upgrading to a network connection adds complexity and requires initial and ongoing IT support. You also need to assign a dedicated administrator to maintain permissions, access and admin rights.

Being on a network enables users to have multiple screens that can be controlled from a central, connected PC or server. They can also control the content in real time and include instant-messaging capability. Some systems also give the administrator the ability to turn the screens on and off.

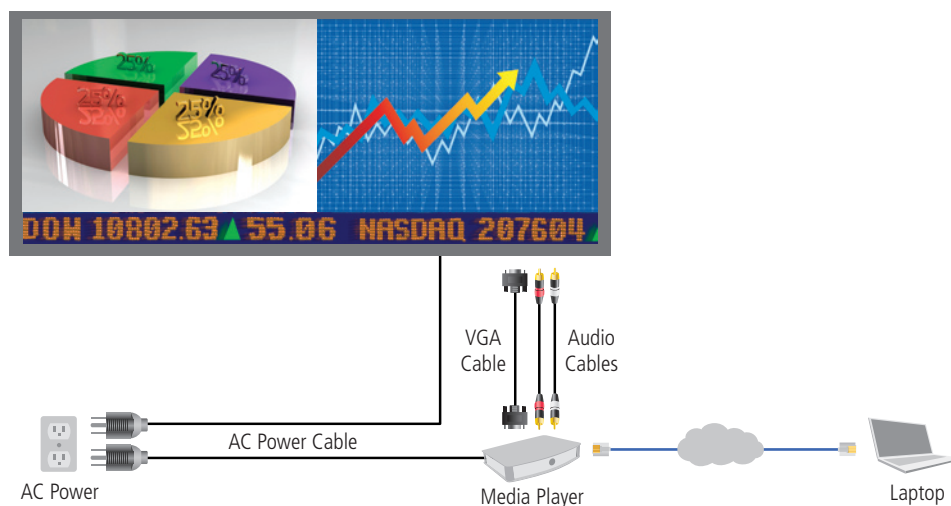
“Screens can also be controlled remotely with a browser and an IP address for additional flexibility,” said Mario Calabro, Product Manager at Black Box Network Services.

Best areas for use: Small to midsize offices, reception areas, lobbies, doctor’s offices, cafeterias, factories (areas where you have access to a network connection).

Content-delivery method: Existing or designated network infrastructure.

Pros: Multiple screens can be controlled via the network connection. Content and screen operations can be updated remotely from a central PC. Enables RSS feeds and other real-time content from the Internet, including streaming video.

Cons: Adding an IP connection means IT department involvement. More advanced software requires additional training. Potential bandwidth and network maintenance issues.



The solutions (cont.)

NOTE: All estimated prices for solutions include a 42-inch LCD screen, media player and digital signage software. Prices can change depending on a number of factors.

Moderate (with TV capability) (\$5,500 to \$8,000) — \$\$\$

Single- or multiple-screen/multiple zones, including live TV — same content on all screens

This system is very similar to the moderate system, except that this level gives users the ability to integrate live TV into the digital signage content. This is done via a TV tuner or capture card that is part of the media player. It picks up TV signals via satellite or digital cable, much like a receiver on consumer TVs.

“This becomes particularly useful if you need up-to-the-minute information,” Calabro said. “Say you’re a call center, and you need updates from the Weather Channel. You need TV capability.”

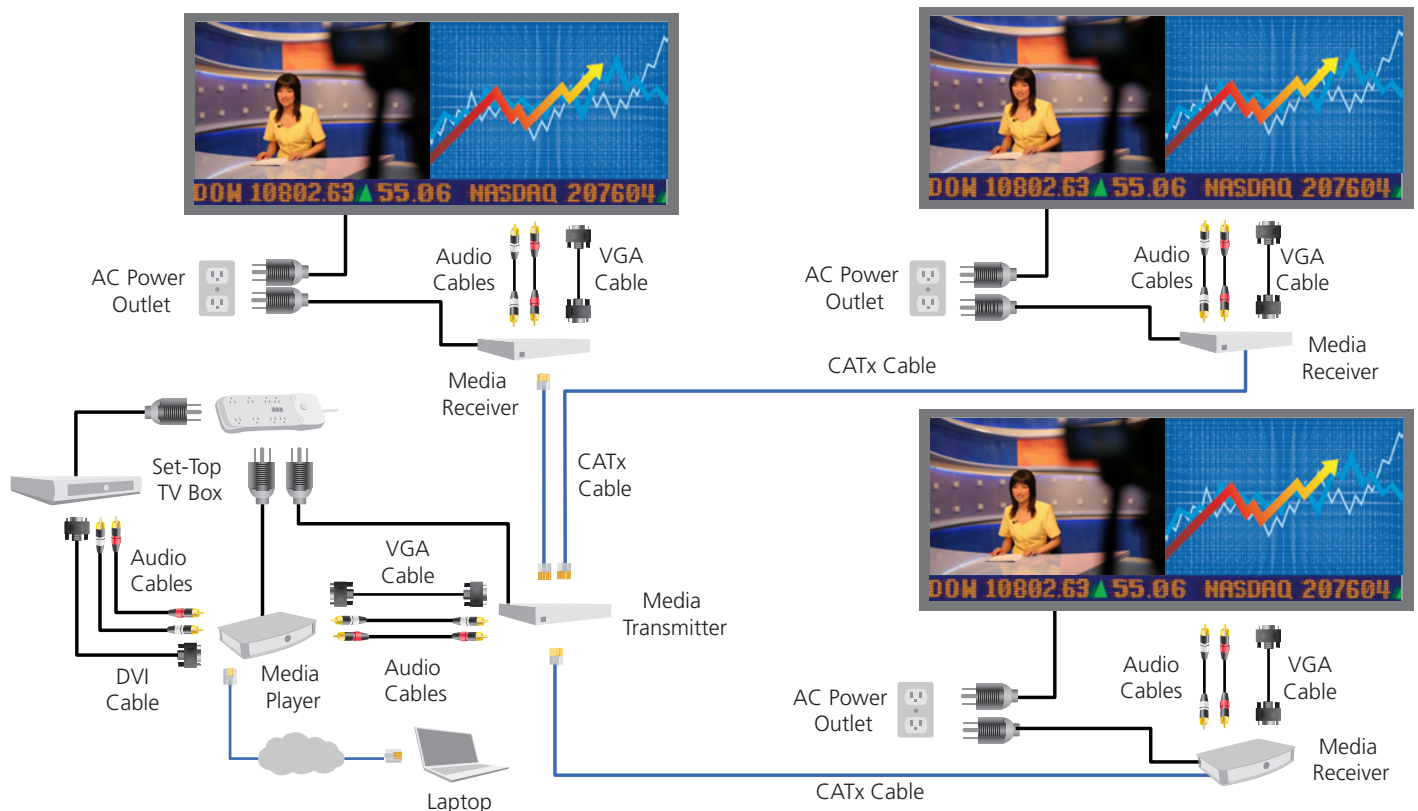
Typically, when reaching the moderate and TV-tuner level, you use a higher level of digital signage software. Higher-end software enables users to create multiple content zones on the screen. These zones can allow for news feeds, tickers, live TV and interactive elements.

Best areas for use: Hotels, schools, university or corporate campuses; higher-end reception and lobby areas; call centers and emergency notification areas that need information from live TV; reception areas, lobbies, doctor’s offices.

Content-delivery method: Network infrastructure, satellite feeds, cable, cellular.

Pros: Provides live TV feeds to complement on-screen content. Can provide instant messaging and emergency notification. Usually includes more content-management capabilities and functionality.

Cons: Maintenance of a satellite or TV feed and IP connection. More advanced software training required. Potential bandwidth and network maintenance issues. Additional ongoing maintenance and software licensing costs.



The solutions (cont.)

Note: All estimated prices for solutions include a 42-inch LCD screen, media player and digital signage software. Prices can change depending on a number of factors.

Advanced (\$8,000 and up) — \$\$\$\$

Multiple-screen/Multiple-display — extensive functionality with individual screen messaging

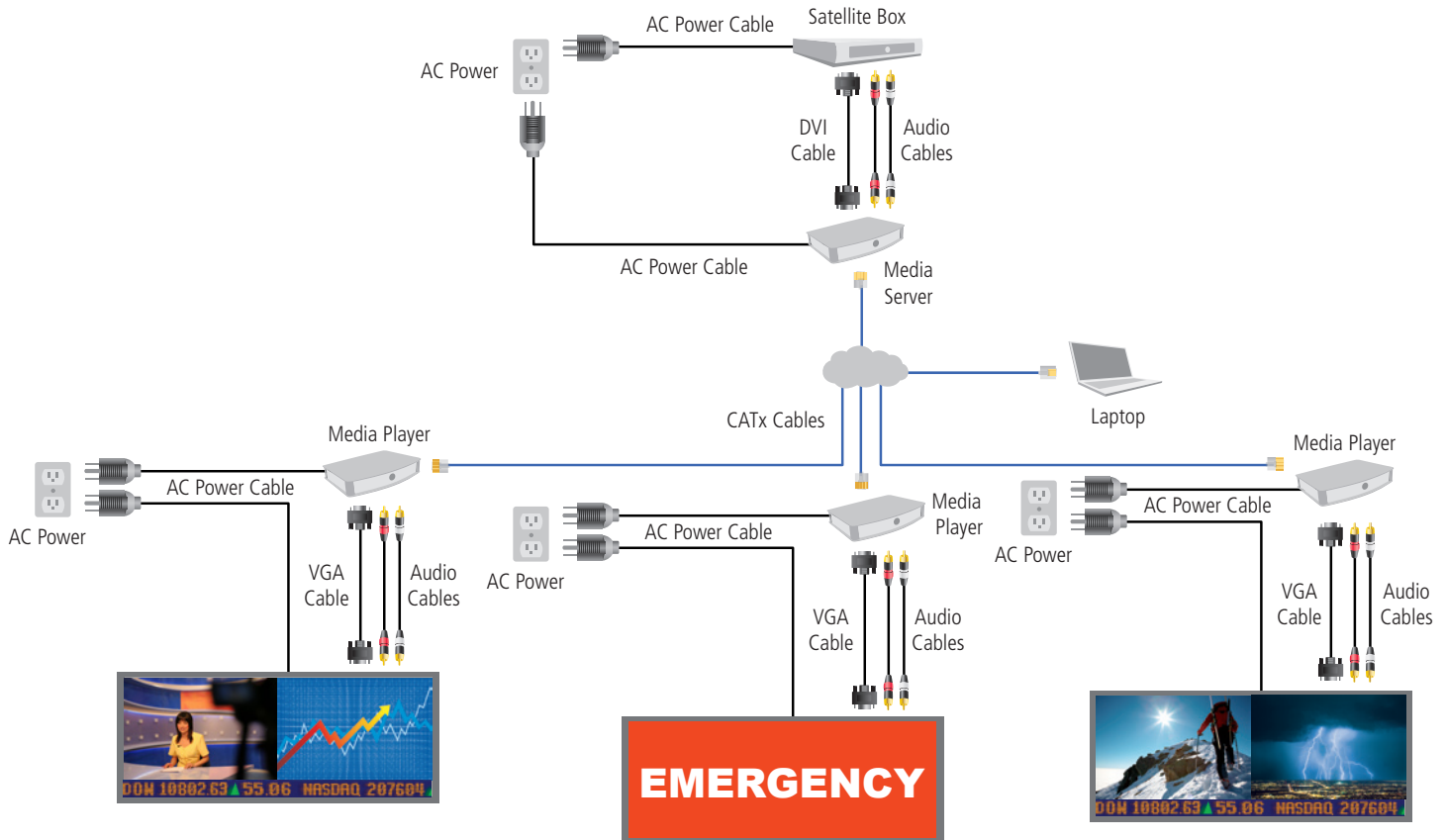
Advanced digital signage systems can deliver the ultimate in management, control and functionality. These state-of-the-art systems are fully networked, large-scale enterprise solutions that are designed for scalable, multiscreen and even multilocation deployments. Some systems can even be integrated into POS systems.

The actual cost per screen and total cost of ownership can vary greatly, but the general rule of thumb is that cost per screen decreases as the number of screens increases.

“This stage adds a video server residing on the network, which means you can add live video through the use of connected cameras as well as streaming and stored video capability,” Calabro said.

The price of these systems is really infinite, as you have the ability to add as many screens as possible. But once you go into multiple locations, you want immediate central management capabilities.

“Once you get into more sophisticated systems, you want play logs for advertising, etc., but most of all you want the remote-management capabilities to know if screens are on, if the media delivery system is working and the content is being displayed,” Kutchma said. “You also want the full capability of making real-time changes to react to business or other conditions. Literally within seconds, changes can be made, deployed and seen in one location or over the entire network in many locations.”



The solutions (cont.)

Note: All estimated prices for solutions include a 42-inch LCD screen, media player and digital signage software.

Prices can change depending on a number of factors.

Advanced (\$8,000 and up) — \$\$\$\$ (cont.)

Many enterprise organizations have implemented digital signage as part of their emergency-notification system.

Obviously, the more complex the network, the higher the initial and ongoing cost of ownership. You will also need to consider ongoing costs, such as licensing fees, maintenance fees, software upgrade fees and additional system training.

“Today, just about anything is possible with digital signage. It really comes down to what you want to do today, what your vision is for the future and the investment you are prepared to make,” Kutchma said.

Best areas for use: Digital menu boards in chain restaurants, department stores, casinos, stadiums, multilocation companies.

Content-delivery method: Network infrastructure, satellite, cable, cellular.

Pros: Highly scalable — network has the potential to grow as big as it needs to be. Can provide extensive features, including live videoconferencing, dynamic content delivery, extensive management, monitoring and control. Most systems include extensive and customizable reporting.

Cons: High startup costs. Usually will require dedicated personnel. Ongoing licensing, training, etc.

If you are considering digital signage, start by developing a plan like the ones outlined here. For small-scale deployments, consider an out-of-the-box solution. For a relatively small investment, you can implement a very good system. If you’re considering a larger deployment with a fully integrated network solution, enlist the help of a seasoned digital signage professional.

About Black Box

Black Box Network Services is a “behind the screens,” end-to-end digital signage and multimedia source for more than 118,000 video, voice, data, audio, networking and infrastructure solutions. You’ll find everything from cabling, splitters and extenders to switches, converters and multimedia products all supported by free, live 24/7 Tech Support available in 20 seconds or less.

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