

## firmCHANNEL™ Frequently Asked Questions

Article No.	Question	firmCHANNEL™ Response
<b>BASIC SOFTWARE/SERVICE ARCHITECTURE:</b>		
1	Are your interfaces and player technology designed today for easy roll outs up to 10,000 players?	Yes, our solution is designed for absolute scalability.
2	Is your network operation and content management solution for the user fully web-browser based, without any software needing to be installed?	Yes. The firmCHANNEL™ Platform is entirely web based and can thus be accessed centrally from any browser. No software installations are ever required.
3	Is it browser-independent? (user can use IE, Mozilla, Safari, and other browsers)?	Yes, we offer full support across all browsers.
4	Is it OS platform-independent (user can use Windows, Mac, Linux, and other platforms)?	Yes, users can use any Operating System.
5	Is it secure (HTTPS rather than HTTP)?	firmCHANNEL™ utilizes an automatic fault detection scheme that will automatically drop any data that has been modified before reaching the destined player. After researching the network infrastructure and firewall requirements of many corporations utilizing Digital Signage, it was determined that operating over the common HTTP port 80 would be the most ideal network access point. firmCHANNEL™ developed the fault detection scheme to operate effectively and safely over HTTP using a combination of data signing and hash calculation to ensure that the data sent to a Player is not only secure, but also complete with no loss of integrity.

<b>6</b>	Is your software offered as a service ("SaaS"), with an easy upgrade to an in-house Enterprise model if required?	Yes, Enterprise Server is a hosted SaaS model, with the option to purchase and manage the Enterprise in your data center. The enterprise hosting packages are staged to grow parallel to the size of your network.
<b>7</b>	If your software is offered as a service, for how long has it been offered? And how often has it been "down" (unavailable) since its inception?	SaaS was introduced in January 2007. Our system has never had any down time since its initial inception in January 2006. We guarantee 99.999% uptime for the life of the product.
<b>8</b>	Does your solution have players that "call out", so they can be behind a NAT firewall, do not need a static IP, and are impervious to attempted incoming connections?	Players "call out" to Enterprise from behind NAT and/or proxy.
<b>9</b>	Is your system also a "Pull" vs. "Push" system for the delivery of all content?	All data is transmitted via Player "Pull" scenario. Because our systems are server based, they do not maintain open connections with the network at all times. The local player will only initialize communication with the network Server at times defined by the user. This allows for low bandwidth requirements, advanced security, and local content editing capabilities.
<b>10</b>	Does all content come from central servers, or do you have an option for "edge" servers, to minimize content download traffic?	Bandwidth utilization is minimized with firmCHANNEL™ technologies and we will soon offer an edge server for clients utilizing mostly HD video content.
<b>11</b>	What operating system do your players use?	Players run on an optimized version of Windows XP Professional.
<b>12</b>	What operating system do your servers use?	Enterprise runs on firmCHANNEL™ Linux (Custom based on Gentoo Linux)

<b>13</b>	Are security/bugfix updates provided by you and can they be automatically implemented using the web interface, or do we need to do upgrades ourselves?	Security patches can be installed by users, although we recommend waiting until we have fully tested updates as we can apply them automatically through our update system.
<b>14</b>	Are feature updates provided by you and can they be automatically implemented using the web interface, or do we need to do upgrades ourselves?	Every firmCHANNEL™ system connects to firmCHANNEL™ Automatic updates and will automatically process new updates. New updates are downloaded seamlessly and do not interrupt playback or require involvement from network operators.
<b>15</b>	Is your web interface available in other languages than English? Can additional languages be easily added?	New languages can be added for the Interface, although the content engine can handle multiple languages.
<b>16</b>	Does RSS text work in other character sets than English, e.g. French or Chinese?	RSS will function in most languages.
<b>17</b>	Can network/technical reports be generated by the network operator? Please describe the range of such reports, if available.	Technical reports are available in the reporting section of Enterprise as Event Logs for each player. Communications logs are also available for each player.
<b>18</b>	Can play affidavits (“proof of play”) be generated by the network operator? Please describe the range of such reports, if available.	Proof of play is generated as Player Playback logs with timestamps. Players with RS-232 can guarantee proof of play and validation of displays attached.
<b>19</b>	If a player fails to connect for a period, will its proof-of-play records be stored and be sent at the next successful connection?	Yes, proof of play is stored and uploaded when a connection is available.
<b>20</b>	On your system, can we see a player's last snapshot, or can we go back in time to see full history, e.g. for all of the last month?	Full history is always maintained via event and playback logs by day.

21	Is a full user administration available, where each user gets specific rights only?	Granular full administrative rights are configurable for each player and enterprise including local editing and content creation with rule sets, and pre-authorization of created content.
<b>System Monitoring and Notifications:</b>		
22	Does your software monitor, and raise alarms as needed, for Player connection status? (eg no connection on time -as set flexibly- raises an alarm)	Yes. Players can be configured for monitoring with custom thresholds and alerts.
23	Does your software monitor, and raise alarms as needed, for Player download status?	Yes. Enterprise displays the current activities of each player in real-time.
24	Does your software monitor, and raise alarms as needed, for Player diagnostics, including reason for connection, player uptime, software version, memory and disk free, player temperature, content errors, etc	All diagnostics are available, with the exception of temperature, which can be added. Players will also display their RS-232 display information.
25	Does your software monitor, and raise alarms as needed, for Player play log status	Playback logs track every played media clip by name with start and end timestamps and with RS-232 remote device validation, verifying that the display(s) were actually turned on during playback.
26	Does your software monitor, and raise alarms as needed, for Network errors	Network errors are tracked in the Player Event logs and stored on both Local server and Enterprise
27	Does your software monitor, and raise alarms as needed, for Screen status (on/off and volume)	Players are able to transmit and apply rules for RS-232, including recovering a preset RS-232 setting. (ex. Turn display power back on if it is detected off)

**STANDARDS AND INTERFACES:**

28	Do you use standard protocols for data transfer, eg FTP or HTTP?	HTTP, and FTP are used in firmCHANNEL™'s communication processes.
29	Is the player control protocol fully transparent to the system administrator?	Yes, Player control is fully transparent.
30	Does your software include interactivity (e.g. using motion sensors)?	firmCHANNEL™ supports touch-screen, and can work with add-ons to support other interactivity.
31	Do you provide documented APIs for developers?	We can provide APIs for specific parts of the firmCHANNEL™ system.
32	Does your software solution provide serial controls for the display monitors?	Yes, serial controls are included offering full RS-232 monitoring, diagnostics, and auto recovery.
33	Is your software fully documented?	The firmCHANNEL™ Solution includes a full user help system which documents and discusses in detail each available feature.

**MEDIA AND CONTENT:**

34	Does your system content creation capabilities?	Yes. firmCHANNEL™ is designed as a full service digital signage platform. firmCHANNEL™ uses professionally designed template to allow users to create agency style content in seconds. The ease of which content can be created allows dynamic content to be created by beginners and experts alike.
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		<p>Content is created by selecting from our hundreds of professionally designed dynamic templates and adding the text, images, videos, RSS Feeds and/or logos you desire.</p> <p>Click <a href="#">here</a> to view a tutorial on how easy it is to create content.</p>
<p><b>35</b></p>	<p>Does your system charge for each media clip created.</p>	<p>No. The dynamic content creation capabilities of the firmCHANNEL™ Platform are included and free for the life of ownership. Further, the database of available templates expands daily and will continue to offer attractive and effective media for firmCHANNEL™ Users.</p>
<p><b>36</b></p>	<p>Is your system able to edit photos within the content creation process?</p>	<p>Yes. firmCHANNEL™ includes a full built-in photo editor. Resize, crop, sharpen, add overlaying text, and apply filters to your photos with the integrated firmCHANNEL™ Photo editor. No External photo editing software is needed.</p>
<p><b>37</b></p>	<p>Can your players play MPEG-1, MPEG-2, and MPEG-4 video (the latter including DivX, AVI, etc)?</p>	<p>Yes, all of the requested formats are fully compatible with firmCHANNEL™. We support almost all video formats. MPEG-1, MPEG-2, MPEG-4, DivX, Xvid, AVI, FLV, SWF, WMV, etc.</p>
<p><b>38</b></p>	<p>Can your players play Adobe/Macromedia Flash?</p>	<p>Flash is among the acceptable video formats. Further, our internal content creation engine develops media in Flash output.</p>
<p><b>39</b></p>	<p>Is your player officially and formally licensed to play Flash?</p>	<p>Our architecture is tied to the browser plug-in licensing, and not subject to library licensing.</p>
<p><b>40</b></p>	<p>Does it use Flash as a browser plug-in or as a software library?</p>	<p>Flash is utilized as a browser plug-in.</p>

41	Can your players play JPG stills?	Jpeg and PNG images are supported.
42	Can your player play media in aspect ratios including 4:3 and 16:9?	firmCHANNEL™ fully supports output in 4:3, 16:9, and 9:16 vertical.
43	Can your player play media in portrait mode?	Yes.
44	Can your player play media at resolutions up to 1920x1080 (“1080p”)?	Content can be created and broadcast in any resolution including 480p, 720p, 768p, and 1080p.
45	Can you also support “anamorphic widescreen”?	Supported aspect ratios are 4:3, 16:9, and 9:16 vertical, as these are the aspect ratios supported by consumer and digital signage displays on the market.
46	Do you support “Split screen” modes, where the screen is divided into separate zones (adverts on the side, video in a main window, and RSS at the bottom)?	Yes firmCHANNEL™ supports split screen or segmenting of the display screen with each region or zone being fully dynamic and supportive of RSS, Flash, Video, etc in each zone. firmCHANNEL™ allows users to segment an output into multiple channels, which not only allows individual sets of content to play at the same time, but allows assignment of full dynamic playlists to operate independently in their own virtual display segment with third party blind login for content creation. firmCHANNEL™ also makes it easy to mix screen segmenting layouts with full screen playback. firmCHANNEL™ also supports local editing zones which allow an administrator to assign a specific segmented zone to be controlled by a specific user through Enterprise, or the local Player. The

		local editing zones provide much flexibility and can even be configured to require administrative approval.
<b>47</b>	If so, can certain media files be told to play "full screen"?	Yes, you can mix and match full screen media with Virtual Displays running full screen, then segmented screen in multiple layouts and mix and match at the user's discretion. All of this functionality can be scheduled in advance via our ease to use web interface.
<b>48</b>	Do you offer the option of adding live video to one of the screen zones?	We can play live video or television via a TV capture card on specific models via RF input, S-VHS, or composite input.
<b>49</b>	Can time and logos to the screen design be added also?	Yes time and logs can be added. There is also a Logo management module included to store unlimited logos so they can be embedded in any media clip simply by selecting them. There is also a logo editor to repurpose or resize logos.
<b>50</b>	Is programming needed, or is a screen-based browser interface available for screen design?	No programming is needed as a browser based interface is available.
<b>51</b>	Does your software support simple (no programming required) setup of RSS data feeds?	RSS and XML feeds are created simply and can be configured by URL by pasting or typing, or you can create your own by copying and pasting or by printing in the custom text field, which will then stream that data as a RSS.
<b>52</b>	Does your system offer individual user messaging service, where site owners can add some messages to the loop?	firmCHANNEL™ can be configured for Local Editing by the local administrators who manages content by setting the rules on the Enterprise Server. firmCHANNEL™ also accommodates full content creation permissions on the local level which allows for local administrators to maintain timely and relevant content for their respective

		audience. By utilizing editable templates, local users as well as Enterprise users can create full dynamic content and schedule it for playback. Text fields are also available for simple addition of messaging.
<b>53</b>	Do you offer a flexible playlist editor that supports simple looping, complex branching/interactivity, and that includes basic media analysis to minimize media errors?	No media errors should ever occur with firmCHANNEL™, and content can be looped or scheduled. Media interrupts (emergency broadcasting) are also available. firmCHANNEL™ Playlists can be configured to loop, or play in any combination of schedules and content interrupts. firmCHANNEL™ Campaigns are also a very flexible way to assign content using Meta tags to define your requested content, and utilizing firmCHANNEL™'s ability to assign tagged content based on the Campaign requirements. firmCHANNEL™ fully tests every assigned playlist to ensure playback will always operate flawlessly.
<b>54</b>	Do you offer simple-to-operate built-in weather service? Is this global or US/Canada only?	We do not offer a weather service, although many customers utilize RSS for this feature. We, upon request of the customer, can engage AccuWeather™ or other similar content providers. We include the RSS aggregator but not the feeds. The customer can find free feeds or subscribe to a pay feed of their choice.
<b>55</b>	Do you support a fully hierarchical (1:n) content group structure?	Yes, Groups can be structured to deploy content.
<b>56</b>	Do you support day-part scheduling, so that different content plays at different times of day/days of week?	Yes, content can be scheduled any number of ways including day-parting and stacking of multiple days and or times.

**MEDIA PLAYERS:**

57	Do you sell the player as a fully-working "turn on and play" appliance, or do you sell software that needs to be installed and configured on a PC/player?	The player is sold as a "turn on and play" appliance. The local server/player has all the same content creation/management software embedded as the enterprise. The system can be used as a standalone or operated in a network and controlled by Enterprise.
58	Is your solution optionally available on solid-state and/or fanless players?	firmCHANNEL™ can offer an optional solid state hard disk and fanless player upon request.
59	Is your solution available on small form factor as well as PC-sized Media Players?	Yes, we offer various sizes from mini ATX to PICO ATX sizes.
60	Does your player have an easy, web-based upgrade process for its player software?	Yes, The software is in continuous receipt of upgrades. Software upgrades occur automatically without user interaction and never affect the existing playback of media.
61	Does your player have an easy, web-based upgrade process for its Operating System (OS)?	Yes, much like the software upgrades, Operating System updates occur seamlessly when required.
62	Do your players have hardware watchdogs programmed (which would automatically reboot the player if it should ever stop running)?	Our custom Windows XP environment is capable of recovering from any and all faults without a hardware watchdog. The system has a built-in reboot, and self diagnostics program.
63	If your solution is managed (ASP), describe your network topology, server structure and hosting facility, including location and level of security?	Our hosting facility is a secure location on multiple power grids, Internet backbone links, and environmental controls. Hosting facility is located outside of Mississauga, Ontario.

64	Do you offer a certification procedure for adding support for different types of display screens?	We can offer certification as required. firmCHANNEL™ generally supports any display manufacturer and resolution.
65	Please indicate how your players are designed to work unattended on existing corporate Local Area Networks:	Players will pull from Enterprise at the configured frequency and operate without further interaction.
66	Is any local interaction needed beyond turning the player on?	No. firmCHANNEL™ is designed for absolute simplicity and ease of use.
67	Can your player be set to automatically reboot if it has not connected with its central server for a certain time (e.g. 24 hours)?	Yes.
68	Will failed downloads resume from where they left off?	Yes.
69	Are player settings easily adjusted by the customer using the online interface, without a site visit?	Yes, these settings are fully configurable from the Enterprise Server as well through firmCHANNEL™ online technical support. If requested, firmCHANNEL™ can enter a local player to assist in configuration at the local level. System administrators can make all local changes via the Enterprise web interface.
70	Can player firmware be easily upgraded by the customer using the online interface, without a site visit?	Yes, players are upgraded automatically.
71	Can players be told to “throttle” their bandwidth to any desired setting, so as not to overload the LAN?	Yes.

<b>72</b>	Can players be told to connect only during certain time intervals?	Yes.
<b>73</b>	Can players be told to download only during certain time intervals?	Yes.

**COMPANY AND OPERATIONS BACKGROUND:**

<b>74</b>	Do you currently have your software running in networks of at least 1,000 players, that have worked reliably for at least 2 years?	<p>firmCHANNEL™ was initially introduced to the market in 2006. As such, we cannot claim to have full two years of reference. We do however have full confidence in our product development and rigorous testing procedures which indicate that firmCHANNEL™ has no long term disadvantages. Further, continuous software upgrades are downloaded to the active players automatically to ensure long term sustainability.</p> <p>3<sup>rd</sup> party validation of the firmCHANNEL™ Digital Signage Solution is available through respected industry analysts, Frost &amp; Sullivan. Their objective analysis of the firmCHANNEL™ Solution is available <a href="#">here</a>. FirmCHANNEL™ has also been fully vetted by Ingram Micro and is SKU by Ingram Micro</p> <p>firmCHANNEL™ currently powers approximately 500 Server Players with approximately 1000 displays and over 50 separate Enterprise systems hosted on our server farm throughout North America and Europe .</p>
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75	Do you currently have your software running commercially in North America, Europe and Asia?	Yes. firmCHANNEL™ operates through an established distributor network with operations throughout North America (Canada and USA) and Europe. We have yet to establish an Asian presence.
76	How often is the software updated and what is the process to update the players and central server?	Software is updated bi-monthly or as required with features and patches after a rigorous testing process. Players and Servers are updated automatically when a new module has been released. We continue to develop new features and functionality and release on average 6-8 new modules a year. We do not sell versions of our software, all firmCHANNEL™ end-users automatically get updated when new updates are available to ensure that they are always using the latest software version
78	Are these updates well documented? Please enclose the Software Release Note of the last two player software updates.	Yes, updates are well documented with a detailed list of software modules and patches released. As a fully web based solution, all network diagnostics and reports can be viewed through a web browser for any access point. Reports are generated on both the player and enterprise level.
79	Do you offer optional custom development for specialized functionality?	firmCHANNEL™ is designed from the core as a user-centric solution. The demands of consumers have guided the solution development to this point and will continue to do so going forward. Custom development is a regular practice and is negotiable.
80	Does your software have a well thought out and documented long term 'roadmap' of where it is going in the future?	eliquidMEDIA remains a rapidly evolving web application development company in constant pursuit of the vision and values which guide development. Our technical staff and infrastructure are postured for fluid product development. We have in place an exhaustive

		<p>list of initiatives both in the research and development stages.</p> <p>firmCHANNEL™ software is built on a backbone that allows for great flexibility and continuous development. The web based solution was designed for absolute ease of use and dynamic content creation capabilities. Going forward, eliquidMEDIA will continue to develop a user-centric platform which continues to innovate and lead the industry in functionality and practicality.</p>
<p><b>81</b></p>	<p>Do you offer project management assistance?</p>	<p>Yes. eliquidMEDIA and its partner firms provide full service operations. We have extensive experience in new media, application and structural architecture, as well as systems integration, and project management etc.</p>
<p><b>82</b></p>	<p>Do you offer commissioning assistance?</p>	<p>eliquidMEDIA requests that the customer elaborate on this request before we confirm our level of commitment to fulfilling this end.</p>
<p><b>83</b></p>	<p>Do you offer pro-active call-center support? If so, please explain how this works?</p>	<p>firmCHANNEL™ diagnostics alert the technical support staff if a server player has lost functionality or if a player has not connected to enterprise over a set period of time. In this event, technical support will query into the situation and provide network administrators with solutions, if required.</p> <p>Users always have the option to contact firmCHANNEL™ technical support by phone or via the internet. Through this process, support staff has the ability to log into both the firmCHANNEL™ Server Player and the User's workstation using Citrix Go-To-Assist Technology. firmCHANNEL™ support has full view of the user's desktop as well as the Server Player interface to properly and thoroughly troubleshoot the problem.</p>

