

# Scala Recommended Hardware Specifications for Players

Updated: May 2011

Performance Definitions	Low End Player	Mid Range/Basic Player	High-end Player
<b>Maximum Supported Display Resolution</b>	Up to 1024x768	Up to 1366x768 or 1440x900	Up to 2x1920x1200 [up to 6x1360x768 with special design and careful consideration of systemic limitations]
<b>Video files: PAL and NTSC resolution-class formats</b>	(720x480/576i;p 25/50, 29.97/59.94, 25, 30 Hz, MPEG-2: 6-8MbpsVideo, 224KbpsAudio CBR; H.264 to 2Mbps CBR, MPEG-4SP/WMV9 to 4Mbps)	(720x480/576i;p @ 25/50, 29.97/59.94, 25, 30 Hz; 1280x720p at 50 or 60 Hz; MPEG-2: 12-16MbpsVideo, 320KbpsAudio CBR; H.264 to 8Mbps CBR, MPEG-4SP/WMV9 to 10Mbps); Two NTSC/PAL-class or a single ATSC 720p class video displaying at one time!	(720x480/576i;p @ 25/50, 29.97/59.94, 25, 30 Hz; 1280x720p at 50 or 60 Hz; 1920x1080 at 24, 25, 30 Hz; MPEG-2: 30MbpsVideo, 320KbpsAudio CBR; H.264 to 16Mbps CBR, MPEG-4SP/WMV9 to 20Mbps); Two ATSC 1080p class, or Multiple PAL/NTSC videos displaying at one time!
<b>Display</b>	Two Fractional, up to full display, Picture, (.BMP, .JPG, .PNG, .TIF), elements with up to full display transition effects	Multiple Fractional to full screen Picture, (.BMP, .JPG, .PNG, .TIF), elements with up to full display transition effects ;	Multiple Fractional to full screen Picture, (.BMP, .JPG, .PNG, .TIF), elements with up to full display transition effects
<b>Screen width text crawl feed</b>	A single 80pt full horizontal screen width text crawl feed filled by text file or RSS	Up to two 80pt full horizontal screen width text crawl feeds filled by text file or RSS	Up to four 80pt full horizontal screen width text crawl feeds filled by text file or RSS
<b>Zones</b>	Two "Zones"	Up to three "Zones"	Up to six "Zones"
<b>Channel Playback</b>	Single channel playback	Dual channel playback at: 2x(1024x768 @ 60 Hz) or 1x (1366x768 @ 60 Hz) or (1440x900 @ 50 or 75 Hz.) [With care ful design 2x1366-type displays might be supported as long as the video components are of lower, (<8Mbps MPEG-2) bit rates.	Dual channel playback at: 2x(1920x1080 @ 60 Hz) or 6x(1360x768 @ 60 Hz) with the use of EXTERNAL Matrox "Triple Head To Go" Graphics Expansion Modules!
<b>Graphics sub-system and System Memory</b>	An Integrated Graphics Processor, (IGP—also known as "Chipset, Built-in, Graphics") with 512MB of either Dual-Bank PC2-533, or Single-Bank PC2-800, system memory. At least 128MB of this "Shared Memory must be allocated to the IGP - or a dedicated, minimally with 64-bit wide video memory data bus, 128MB PCIeX16, PEG, Graphics Card.	An Integrated Graphics Processor, (IGP—also known as "Chipset, Built-in, Graphics") with 1024MB of Dual-Bank PC2-667 or better memory. At least 256MB of this "Shared Memory must be allocated to the IGP - or a dedicated, minimally with 128-bit wide video memory data bus, 256MB PCIeX16, PEG, Graphics Card.	A Discrete Graphics Processor—a "Graphics Card" with, minimally, 256-bit wide video memory data bus, 512MB PCIeX16. The system motherboard chipset and specific motherboard implementation must support a full 16 lanes to the PCIeX16, PEG, slot! System memory must be at least 2048MB of Dual-Bank PC2-667 or better—PC2-800 and PC2-1066 strongly encouraged!
<b>CPU</b>	At least a Single Physical Core of a minimum rated core-speed of 1.6GHz and with 512KB of L2 cache.	CPU: At least a Single Physical Core with two virtual CPU's--or two Physical Cores, with Two Physical Execution units, of a minimum rated core-speed of 1.6GHz and with at least 1024KB of L2 cache.	At least two Physical Cores of a minimum rated core-speed of 2.0GHz and with at least 4MB of L2 cache. On processors with "Front Side Bus" architectures—at least an FSB of 800 MHz.
<b>Audio</b>	Minimally conformant to the AC'97 specification.	Minimally conformant to the "HDA", (High Definition Audio—A.K.A. "Azalia" ), specification.	Minimally conformant to the "HDA", (High Definition Audio—A.K.A. "Azalia"), specification
<b>Storage</b>	At least 4 GB	At least 20 GB	At least 36 GB
<b>Hardware</b>	AMD CPU: Fusion E-240, AthlonII V160, or better. Intel CPU: Atom N270, D410, D425, or better.	AMD CPU: Fusion APU E-350, AthlonII K145, K345, Fusion APU G-Series T56N, Sempron140(Sargas), AthlonIIx2(Regor)or better. Intel CPU: Atom 330, D510, PentiumDualCore G6960, Core-i3-2###, Core-i5-2###, or better.	AMD CPU: TurionII P520, AthlonIIx2-250u(Regor-core), AthlonIIx4, PhenomIIx4, PhenomIIx6, or better. Intel CPU: Core-i5-2500, Core-i7-26##, or better. (HyperThreading should be DISABLED!)
<b>RAM</b>	512MB of DDR2-533 or better. (Dual-Bank == 2x256MB, preferable over "Single-Bank", 1x512MB)	1024MB of DDR2-667, (Dual-Bank == 2x512MB), or better.	2048MB of DDR2-800, (Dual-Bank == 2x1024MB REQUIRED), or better.
<b>Integrated Graphics</b>	Minimum memory allocation to an integrated frame buffer: 256MB. Intel Integrated Graphics: GM40, Q45, G45, GMA3150, HD2000, HD3000 are the only iGPU's supported. AMD Integrated Graphics: HD32##, HD42##, "Fusion"-APU, or better. NVIDIA: ION, ION2, GeForce9300M, GeForce9400M	Minimum memory allocation to an integrated frame buffer: 512MB. Player platforms *MUST* either have "Dual-Bank" memory *OR* a DISCRETE, dGPU, Graphics Processor with 512MB or 64-bit DDR2, or better, video memory! Intel Integrated Graphics: GM40, Q45, G45, GMA3150, HD2000, HD3000 are the only iGPU's supported! AMD Integrated Graphics: HD32##, HD42##, "Fusion"-APU, or better. NVIDIA: ION, ION2, GeForce9300M, GeForce9400M	Does not apply
<b>Discrete Graphics</b>	AMD: HD2400/E2400, with a minimum of 256MB of 64-bit DDR2 Video memory, or better. NVIDIA: GeForce G210, G310, G 102M, with a minimum of 256MB of 64-bit DDR2 Video memory, or better.	AMD: E4690, Radeon HD6450, with a minimum of 512MB of DDR3 Video memory, or better. NVIDIA: GeForce G310, G110M, GeForce 9500GT, GeForce GTS450, with a minimum of 512MB of DDR3 Video memory, or better.	For Players intended to have 3x; 4x; or 6x ouputs via Matrox GXM's or Window Wall/Matrix Controllers; 1GB of 256-bit GDDR3 should be considered a minimum. (GDDR5 strongly encouraged!) AMD: E4690, Radeon HD5750, HD6570, ATI/AMD FirePro V4800, AMD Radeon HD 6670 with a minimum of 512MB of GDDR3 Video memory, or better. (Cards with 1GB of 128-bit/256-bit GDDR5 are _strongly_ encouraged!) (AMD/ATI "CrossFire" configurations are NOT permitted!) NVIDIA: GeForce GTS 250, GeForce GTS 450, with a minimum of 512MB of DDR3 Video memory, or better. (NVIDIA SLI configurations are NOT permitted!)
<b>Video Storage</b>	Does not apply	Does not apply	This class of Player tends to be extremely "Video Data Intensive". As such, Two hard disk drives—or if RAID, two independant, minimally RAID-1, storage volumes—one for the Operating System and one for the Player Data are encouraged.