## Specification

Inst CPU & Memory     CPU: Dail Core API Crimes 40 Longer 1004:       Host CPU & Memory DBP 1060 1G8 µc     Instructure       CD Pager     Spp Image 1     Funct Loading       CD Pager     Spp Image 1     CD CD DA CDP, CDP, CDP, KDV DDP, RVW     Image 1       Darpay     77 FTI CDD, 1007 x 600 paekly "Abit comment to ext server via HDML out"     Image 1     Image 1       Mark Devel     Key SkapMum SColl DN, Remote Carefor Costmand Rennes App Cric DS and Android devices Web Interface     Image 1     Im	Model name	cocktailAudio X45	ocktailAudio X45			Remarks	
$ \begin{array}{c c c c c } \hline $$ VMD $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$		CPU: Dual Core ARM C					
CD Player     Type     Foot Landrag     CD, CDA, CDA, CDA, CDA, RUNDARW       Display     70*TFTLCD1(024:x400plos6)17 slot to connect to ext, screen Vai HDM out)	Host CPU & Memory	Main Memory: DDR-10					
CDHayer     Supported media     CD, CD-AC, CD-R, CD-R, CD-RW       Display     7/0" TFLCD(1):024 x600pdb(h" able to connect to excerne via HDMI oud.							
***     Supported metala     CDS (CDA) CDA) CDA) CDA) CDA WW       Display     70°TELCD1 (2024 x00)xeekly*able to concert to ext. some with DMI out)     ************************************	CD Playor	Туре		Front Loading			
Interface     Key & Jog MultiumeScottlik, Researce Control. Customized Remote App for OS and Advalid devices, Web Interface     XIR, Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR, Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR, Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR, Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR, Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; Stereo) THD + N: 00004% (PRE-OUT)     XIR: Dynamic Range: 130dB (Max 45Vms; THD + N: 00004% (PRE-OUT)     XIR: Dy	CD Player	Supported media		CD, CD-DA, CD-R, CD-I	RW, DVD-R/RW		
Interface     and Andioid devices (Web Interface     N.R. Dynamic Range: 13:0dB (Max 45Vms, Storeo) THD +N:000046       Analog Out (Sabe <sup>10</sup> ES9018K2M Dual DAG     Balancid (ME-OUT)     N.R. Dynamic Range: 13:0dB (Max 24Vms, Storeo) THD +N:000046       Unbainced (Marbol-Fibed)     Headphone Out     635701575chm RCA Symple rate: up to 24bit/1924b2     1       Digital Out (Variable/Fibed)     EGNIM X:1     54701575chm RCA Symple rate: up to 24bit/1924b2     1       Digital Out (Variable/Fibed)     EGNIM X:1     110bhm, Smple rate: up to 24bit/1924b2     1       Asystem X/RR x 1     110bhm, Smple rate: up to 24bit/1924b2     1     1       Analog Input     LNE In x 1     128 Audio Class 20 Output     1     1       Analog Input     LNE In x 1     188 RCA at the rais default Xms(controllable 1-34mm)     1       Digital Input     GONUL x 1     Sample Rate: up to 24bit/1921b3     1     1       Digital Input     GONUL x 1     Sample Rate: up to 24bit/1921b3     1     1     1       Digital Input     USB PAG One Not 1     MIR Input default Xms(controllable 3-57-15m/ms)     1     1     1     1     1     1     1     1     1     1 <t< td=""><td>Display</td><td></td><td colspan="2"></td><td></td></t<>	Display						
Analog Out (sbei <sup>16</sup> (S5018/CMDual DAQ (Sbei <sup>16</sup> (S5018/CMDual DAQ PEC-OUT)     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) FHD + N: 00004%       Pise_OUT)     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%       Pise_OUT)     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%       Pise_OUT)     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%       Pise_OUT)     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%       Pise_OUT)     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%     RCA. Dynamic Range 13048 (Max 2Vms, Stereo) THD + N: 00004%       Analog Input     TOSI.NK x.1     Stereo Thorace up to 24bit/19204z     RCA. Dynamic Range Rate up to 24bit/19204z       Analog Input     CONUL x.1     Sample Rate up to 24bit/19204z     RCA. Dynamic Range Rate up to 24bit/19204z       Digital Input     CONUL X.1     Sample Rate up to 24bit/19204z     RCA. Dynamic Range Rate up to 24bit/19204z       Digital Input     CONUL X.1     Sample Rate up to 24bit/19204z     RCA. Dynamic Rate up to 24bit/19204z       Digital Input     CONUL X.1     Sample Rate up to 24bit/19204z	Interface						
(sberv <sup>a</sup> ES9018K2M Dual DA) (PRE-CUT)     IVDA alreed (PRE-CUT)     RCA. Dynamic. Range: 130dB (Max 2Vms, Stereo) THD - Nk 00004%)       Headphone Out     635mm Jack, 100mW(+				XLR, Dynamic Range: 130dB (Max 4.5Vrms, Stereo) THD +N: 0.0004%			
Digital out (Variable/Tixed)     COAXIAL x1     SPDIE 75shm RCA, Sample rate: up to 24bit/192KHz        Digital out (Variable/Tixed)     TOS.INK x1     SPDIE 7shm RCA, Sample rate: up to 24bit/192KHz        Analog Input     ASEMBU/XR x1     1100hm, Sample rate: up to 24bit/192KHz        IVER In x1     USB Audio Class 20 Output         Analog Input     IVER In x1     USB Audio Class 20 Output        Analog Input     IVER In x1     USB Audio Class 20 Output        Digital Input     IVER In x1     Sample Rate: up to 24bit/192Khz        Digital Input     OXXIAL x1     Sample Rate: up to 24bit/192Khz        Digital Input     TOSLINK x1     Sample Rate: up to 24bit/192Khz        USB Audio Input (USB DAC)     USB B type connector: USB Audio Class 20 Input (Support up to PCM 384Khz/33Bit, DSD Native 256, and MQAIIe)     *     *       Supported Storage     Fard Disk     25*SATA, up to ZBB     *     *       Supported Storage     USB Host     USB 2005/VTIA x1 at rear      *       UNR     DAB+/FM Radio     Selectable for DAM/DABA tor TM Radio				RCA, Dynamic Range: 130dB (Max 2Vrms, Stereo) THD +N: 0.0004%			
Digital out (Variable/Fixed)     TOSUNK x 1     SPDIF, Sample rate: up to 24bit/192KHz     Image: constraint of the second of the secon		Headphone Out		6.35mm Jack, 100mW+100mW@1Khz, 600ohm, 0.1% THD			
Digital out (Variable/Fixed)     AES/EBU/XRL x 1     1100hm, Sample rate-up to 24bit/1924/tz		COAXIAL x 1					
(Variable/Fixed)     Absted/Abst X1     100mm_sample rate up to 2400 (Jask 20 Output     Image rate up to 2400 (Jask 20 Output)       Analog Input     LINE In x1     L&R Kn x1 the rear, default 2/mms(controllable 12/mms)     Image rate up to 2400 (Jask 20 Output)       Analog Input     Axx In x1     L&R Kn X1 the rear, default 2/mms(controllable 3-5-1/smVms)     Image rate up to 2400 (Jask 20 Output)       Digital Input     COAVAL x1     Sample Rate up to 2400 (Jask 20 Output)     Image rate up to 2400 (Jask 20 Output)       Digital Input     COAVAL x1     Sample Rate up to 2400 (Jask 20 Output)     Image rate up to 2400 (Jask 20 Output)       Digital Input     COAVAL x1     Sample Rate up to 2400 (Jask 20 Output)     Image rate up to 2400 (Jask 20 Output)       Digital Input     USB Audio Class 20 Input     Sample Rate up to 2400 (Jask 20 Output)     Image rate up to 2400 (Jask 20 Output)       USB Audio Input     USB Audio Class 20 Input     Sample Rate up to 2400 (Jask 20 Output)     Image rate up to 2400 (Jask 20 Output)       Supported Storage     Hard Disk     25' SATA up to 21B     Image rate up to 2400 (Jask 20 Output)	Digital out	TOSLINK x 1		S/PDIF, Sample rate: up to 24bit/192KHz			
USB Audio X1     USB Audio Class 20 Cutput     Image: Constraint of the	2	AES/EBU/XRL x 1		· · ·	110ohm, Sample rate: up to 24bit/192KHz		
Analog Input   LINE In x 1   L&R RCA at the rear, default 2V/ms(controllable 1-4V/ms)     Analog Input   Auxin x 1   3:5mm Phone, Jack on the front, default 1V/ms(controllable 0.52V/ms)     Phono In x1   MM Input, default 7:5mV/ms(controllable 0.52V/ms)     Digital Input   COAXIAL x1   Sample Rate up to 24bit/192Khz     Digital Input   TOSLINK x1   Sample Rate up to 24bit/192Khz     USB Audio Input   USB By ope connector, USB Audio Class 20 input   Sample Rate up to 24bit/192Khz     USB Audio Input   USB By ope connector, USB Audio Class 20 input   *Bigger capacity of storage will be supported by firmware update when available in the market     Supported Storage   Fard Disk   25* SATA, up to 2TB   *Bigger capacity of storage will be supported by firmware update when available in the market     TUNER   DAB+/FM Radio   Selectable for DAB/DAB+ or FM Radio   Everal     Connectivity   USB Host   USB305V/1A) x 2 at rear   USB305V/1A) x 2 at rear     Metwork   Wred   Ginga Fast Ethernet(10/100/1000Mbs)   Minware UAB damage/Diption)     HDW10vt   Connectivity   Connectivity   Res 802:11b/g/n WiFI USB dongle(Option)     HDW10vt   Connective examples server/Client/Media Renderer, Samba Server/Client, FTP Serve, Web Server, etc   Minware UAB damage/Dip		USB Audio x 1			USB Audio Class 2.0 Output		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		HDMI Out x 1		· · · · ·	HDMI Audio Out(*Shared with HDMI Out for external screen)		
$ \begin{array}{                                    $		LINE In x 1		· · · · · ·	L&R RCA at the rear, default 2Vrms(controllable 1~4Vrms)		
$ \begin{array}{ c c c c } \hline \begin{tabular}{ c c c } \hline \begin{tabuarray}{ c c c c } \hline \begin{tabuarray}{ c c c c } \hline \begin{tabuarray}{ c c c c c c } \hline \begin{tabuarray}{ c c c c c c c } \hline \begin{tabuarray}{ c c c c c c c c c c c c c c c c c c c$	Analog Input	Aux In x 1		3.5mm Phone Jack on the front, default 1Vrms(controllable 0.5~2Vrms)			
Digital Input   TOSLINK x 1   Sample Rate: up to 24bit/192Khz     USB Audio Input (USB DAC)   USB B type connector, USB Audio Class 20 input (support up to PCM 384Khz/32Bit, DSD Native 256, and MQA file)   *Bigger capacity of storage will be supported by firmware update when available in the market     Supported Storage   Hard Disk   25* SATA, up to 2TB 35* SATA, up to 2TB 35* SATA, up to 2TB 35* SATA, up to 7TB   *Bigger capacity of storage will be supported by firmware update when available in the market     TUNER   DAB /FM Radio   25* SATA, up to 7TB 35* SATA, up to 7TB   *Bigger capacity of storage will be supported by firmware update when available in the market     Connectivity   DAB /FM Radio   USB JOS/V1A) x 2 at rear USB Lost   USB JOS/V1A) x 2 at rear USB Lost     Connectivity   Network   Wired   Giga Fast Ethernet(10/100/1000/bls)     MQA, PCM 384Khz/32Bit, DSD/DSD64, DSD128, DSD256, DXD/24Bit/352.8KH2), HOM /Qut   Concect to external screen(* Shared with HDMI Audio Out)     MQA, PCM 384Khz/32Bit, DSD/DSD64, DSD128, DSD256, DXD/24Bit/352.8KH2), HOW/AV/24Bit/192KH2, HD FLAC(24Bit/192KH2), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U, PLS, etc   MAS     Network Protocols Supported   UPhP(DLNA) Server/Client/Media Renderer, Samba Server/Client, FTP Server, Web Server, etc   Supported     Internet Radio   Airable   Toroidal Transformer   For audio signal management Toroidal Tran		Phono In x 1		MM Input, default 7.5mVrms(controllable 3.75~15mVrms)			
AES/EBU XLR x 1   Sample Rate: up to 24bit/192Khz     USB Audio Input (USB DAC)   USB B type connector, USB Audio Class 20 input (support up to PCM 384Khz/32Bit, DSD Native 256, and MQA file)   * Bigger capacity of storage will be supported by firmware update when available in the market     Supported Storage   Hard Disk   2.5" SATA, up to 2TB 3.5" SATA, up to 2TB   * Bigger capacity of storage will be supported by firmware update when available in the market     TUNER   DAB+/FM Radio   Selectable for DAB/DAB+ or FM Radio      Connectivity   USB Host   USB 30(SV/1A) x 2 at rear USB20(SV/1A) x 1 at front   USB and CV/1A     Connectivity   Network   Wireless(Option)   * 802.11b/g/n WiFI USB dongle(Option)     MQA, PCM 384Khz/32Bit, DSDDSD64, DSD 128, DSD256), DXD024Bir/352.28KHz), HDWM/2Bir/192KHz), HD FLAC(24Bir/192KHz), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U, PLS, etc   Mireless(Option)   * 802.11b/g/n WiFI USB dongle(Option)     Network Protocols   UPnP/(DLNA) Server/Client/Media Renderer: Samba Server/Client, FTP Server, Web Server, etc   Internet Radio   2.5     Supported   Online Music Services   TIDAL, TDAL, MQA, Deezer, Qobuz, Napster, Spotify Connect   2.5     Supported OSD Ianguages   English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)   For audio signal management <td></td> <td colspan="2">COAXIAL x 1</td> <td colspan="2">Sample Rate: up to 24bit/192Khz</td> <td></td>		COAXIAL x 1		Sample Rate: up to 24bit/192Khz			
USB Audio Input (USB DAC)   USB B type connector, USB Audio Class 20 input (support up to PCM 384Khz/32Bit, DSD Natve 256, and MQA file)   * Bigger capacity of storage will be supported by firmware update when available in the market     Supported Storage   Hard Disk   2.5* SATA, up to 2TB SSD   * Bigger capacity of storage will be supported by firmware update when available in the market     TUNER   DAB+/FM Radio   Selectable for DAB/DAB+ or FM Radio      Connectivity   USB Host   USB30/SV/1A) x 2 at rear USB20/SV/1A) x 2 at rear USB20/SV/1A) x 1 front      Connectivity   Network   Wired   Giga Fast Ethernet(10/100/1000Mbs)      HDMI Out   Connect to external screen(* Shared with HDMI Audio Out)       Codec & Format supported   WPnP(DLNA) Server/Client/Media Rendere: Samba Server/Client, FTP Server, Web Server, etc      Network Protocols   UPnP(DLNA) Server/Client/Media Rendere: Samba Server/Client, FTP Server, Web Server, etc      Supported OSD   English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)   Toroidal Transformer   For audio signal management      12vTrigger Out   Max 200MA, 12v   AC 220v - 240v, 50/60Hz        2vTrigger Out   Max 200MA, 12v   AC 210v - 120v,	Digital Input	TOSLINK x 1					
$ \begin{array}{ c c c c } (USB DAC) & (support up to PCM 384Khz/32Bit, DSD Native 256, and MQA file) & & & & & & & & & & & & & & & & & & &$		AES/EBU XLR x 1					
Supported Storage   Hard Uisk   3.5° SATA, up to 8TB   **Bigger capacity of storage will be supported by firmware update when available in the market     SD   2.5° SATA, up to 2TB   firmware update when available in the market     TUNER   DA8+/FM Radio   Selectable for DA8/DAB+ or FM Radio   Image: USB 0.05V1A) x 2 at rear     Connectivity   USB host   USB 0.05V1A) x 1 at from   Giga Fast Ethernet(10/100/1000Mbs)     Metwork   Network   Wired   Giga Fast Ethernet(10/100/1000Mbs)     MOL   Connect to external screen(* Shared with HDMI Audio Out)   Image: Not 2000 (Stritt) at at from     Codec & Format supported   MQA, PCM 384khz/32Bit, DSD(DSD64, DSD 28, DSD256), DXD(24Bit/352.8KHz), HD WAV(24Bit/192KHz), HD FLAC(24Bit/192KHz), APE/CUE WAV, FLAC, ALAC, AIFF, AIF, AAC, MAA, MP3, WMA, CAF, Ogg   Vorbis, PCM, M3J, PLS, etc     Network Protocols   UPnP(DLNA) Server/Client/Media Render: samba Server/Client, FTP Server, Web Server, etc   Internet Radio   Airable     Internet   Internet Radio   Airable   Internet Sortify Connect   Internet Sortify Connect     Supported OSD   English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese   Internet Sortify Connect   In							
SSD2.5" SATA. up to 2.7"Image: Constraint of the second se	Supported Storage	Hard Disk		3.5" SATA, up to 8TB			
$ \begin{array}{c} \label{eq:connectivity} \\ \begin{tabular}{ c c c c } \label{eq:connectivity} \\ \end{tabular} \\ ta$				2.5" SATA, up to 2TB			
$ \begin{array}{c c c c } \mbox{Connectivity} & \begin{titzement{figure}{ \line \end{titzement{figure}{ \li$	TUNER	DAB+/FM Radio		Selectable for DAB/DA	B+ or FM Radio		
Network     Wireless(Option)     ¥ 802.11b/g/n WiFi USB dongle(Option)       HDMI Out     Connect to external screen(* Shared with HDMI Audio Out)       Codec & Format supported     MQA, PCM 384Khz/32Bit, DSD(DSD64, DSD128, DSD256), DXD(24Bit/352.8KHz), HD WAV(24Bit/192KHz), HD FLAC(24Bit/192KHz), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U, PLS, etc       Network Protocols Supported     UPnP(DLNA) Server/Client/Media Renderer, Samba Server/Client, FTP Server, Web Server, etc       Internet     Internet Radio     Airable       Services     Online Music Services     TIDAL, TIDAL MQA, Deezer, Qobuz, Napster, Spotify Connect       Supported OSD languages     English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)     For audio signal management       Isolated Power management     Toroidal Transformer     For audio signal management     English, German, 12V       Power Source     220V area     AC 220V - 240V, 50/60Hz     English decoment     English		USB Host		USB2.0(5V/1A) x 1 at front			
Wireless(Option) * 802.11b/g/n WiFi USB dongle(Option)   HDMI Out Connect to external screen(* Shared with HDMI Audio Out)   MQA, PCM 384Khz/32Bit, DSD(DSD64, DSD128, DSD256), DXD(24Bit/352.8KHz), HD WAV(24Bit/192KHz), HD FLAC(24Bit/192KHz), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U, PLS, etc   Network Protocols Supported UPnP(DLNA) Server/Client/Media Renderer, Samba Server/Client, FTP Server, Web Server, etc   Internet Internet Radio   Services Online Music Services   TIDAL, TIDAL MQA, Deezer, Qobuz, Napster, Spotify Connect   Supported OSD English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese   Ianguages Toroidal Transformer   For added by request For addio signal management   70W internal SMPS For digital CPU management   70W internal SMPS AC 220V - 240V, 50/60Hz   Power Source 220V area AC 220V - 240V, 50/60Hz	Connectivity	Network		Wired			
MQA, PCM 384Khz/32Bit, DSD(DSD64, DSD128, DSD256), DXD(24Bit/352.8KHz), HD WAV(24Bit/192KHz), HD FLAC(24Bit/192KHz), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U, PLS, etc     Network Protocols Supported   UPnP(DLNA) Server/Client/Media Renderer, Samba Server/Client, FTP Server, Web Server, etc     Internet Services   Internet Radio     Online Music Services   Airable     Online Music Services   TIDAL, TIDAL MQA, Deezer, Qobuz, Napster, Spotify Connect     Supported OSD languages   English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)     Isolated Power management   Toroidal Transformer     70W internal SMPS   For audio signal management     12V Trigger Out   Max 200mA, 12V     Power Source   220V area     AC 220V - 240V, 50/60Hz   AC 110V - 120V, 50/60Hz				Wireless(Option)	* 802.11b/g/n WiFi USB dongle(Option)		
Codec & Format supported   HD WAV(24Bit/192KH2), HD FLAC(24Bit/192KH2), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U, PLS, etc     Network Protocols Supported   UPnP(DLNA) Server/Client/Media Renders and Server/Client, FTP Server, Web Server, etc.   Image: Client Service and Server/Client, FTP Server, Web Server, etc.     Internet Services   Internet Radio   Airable   Image: Client Music Service and Service and Server/Client, FTP Server, Web Server, Spotify Connect   Image: Client Music Service and Server/Client, FTP Server, Web Server, etc.     Supported OSD languages   Internet Radio   Airable   Image: Client Music Service and Server/Client, FTP Server, Web Server, Spotify Connect   Image: Client Music Service and Server/Client, FTP Server, Web Server, Spotify Connect   Image: Client Music Service and Server/Client, FTP Server, Web Server, Spotify Connect     Supported OSD languages   English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)   Image: Client And Server							
Supported   UPnP(DLNA) Server/Client/Media Renderer, Samba Server/Client, FTP Server, Web Server, etc.     Supported   Internet Radio   Airable     Services   Online Music Services   TIDAL, TIDAL MQA, Deezer, Qobuz, Napster, Spotify Connect     Supported OSD languages   English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)   For audio signal management     Isolated Power management   Toroidal Transformer   For digital CPU management     70W internal SMPS   For digital CPU management   Internet Q20V area     AC 220V - 240V, 50/60Hz   AC 110V - 120V, 50/60Hz   Internet Q20V area	Codec & Format supported	HD WAV(24Bit/192KHz	HD WAV(24Bit/192KHz), HD FLAC(24Bit/192KHz), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg				
Services     Online Music Services     TIDAL, TIDAL MQA, Deezer, Qobuz, Napster, Spotify Connect       Supported OSD languages     English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)     For audio signal management       Isolated Power management     Toroidal Transformer     For audio signal management       70W internal SMPS     For digital CPU management     12       12V Trigger Out     Max 200mA, 12V     220V area     AC 220V - 240V, 50/60Hz       Power Source     110V area     AC 110V - 120V, 50/60Hz     110V area		UPnP(DLNA) Server/Cli	ient/Media Rendere	er, Samba Server/Client, F	TP Server, Web Server, etc		
Supported OSD languages English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese (To be added by request)   Isolated Power management Toroidal Transformer   70W internal SMPS For audio signal management   12V Trigger Out Max 200mA, 12V   Power Source 220V area AC 220V - 240V, 50/60Hz   110V area AC 110V - 120V, 50/60Hz	Internet	Internet Radio	dio Airable				
Ianguages (To be added by request) For audio signal management for audio signal management   Isolated Power management Toroidal Transformer For audio signal management for   70W internal SMPS For digital CPU management for   12V Trigger Out Max 200mA, 12V for   Power Source 220V area AC 220V - 240V, 50/60Hz   110V area AC 110V - 120V, 50/60Hz for	Services	Online Music Services TIDAL, TIDAL MQA, Deezer, Qobuz, Napster, Spotify Connect					
Isolated Power management     70W internal SMPS     For digital CPU management       12V Trigger Out     Max 200mA, 12V     E       Power Source     220V area     AC 220V - 240V, 50/60Hz     E       110V area     AC 110V - 120V, 50/60Hz     E     E		English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean, Japanese					
Isolated Power management     70W internal SMPS     For digital CPU management       12V Trigger Out     Max 200mA, 12V     E       Power Source     220V area     AC 220V - 240V, 50/60Hz     E       110V area     AC 110V - 120V, 50/60Hz     E     E	Is a late of Development			For audio signal management			
12V Trigger Out     Max 200mA, 12V     Comparison     Comparison <t< td=""><td>Isolated Power management</td><td colspan="2"></td><td colspan="2"></td><td></td></t<>	Isolated Power management						
Power Source     220V area     AC 220V - 240V, 50/60Hz       110V area     AC 110V - 120V, 50/60Hz	12V Trigger Out						
110V area AC 110V - 120V, 50/60Hz		220V area AC 220V - 240V 50/60Hz					
Front 13mm thickness aluminum by CNC cutting	Power Source	110V area AC 110V - 120V, 50/60Hz					
	Mechanical	Material	Front	13mm thickness aluminum by CNC cutting			
Material Knob Aluminum by CNC cutting			Knob	, , ,			
Mechanical Body Metal			Body				
Without foot 441mm(W) x 330mm(D) x 100mm(H)		Dimonsion	Without foot				
Dimension     With foot     441mm(W) x 330mm(D) x 111mm(H)		Dimension With foot		441mm(W) x 330mm(			
Certificate CE, FCC, EMI, etc	Certificate	CE, FCC, EMI, etc					

\* Specification to be changed without notification



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# cockteil AUdio X45



A World-Class High-resolution Digital Audio









TIDAL

#### Features of Hardware and Engineering

- Equipped with high-performance Dual Core ARM Cortex A9 processor running at 1.0Ghz
- Dual ESS ES9018K2M Sabre<sup>32</sup> Reference DAC chips built-in separately for right and left channels
- 16 Core Microcontroller with Advanced RISC Architecture for high performance USB DAC function
- USB Audio Class 2.0 Output built-in to connect an external USB DAC
- Isolated power source circuit design for digital and analogue parts
- Toroidal transformer to minimize idle noise
- High speed optical disk drive for quick CD ripping
- Phono Input(Moving Magnet) for turntable
- 7 inch TFT LCD(1024 x 600 pixels) screen for intuitive GUI
- DAB+/FM Tuner built-in
- Giga Fast Ethernet(10/100/1000Mbps) built-in
- Support up to 8TB(Tera Bytes) storage like 3.5"/2.5" hard disk or SSD
- Rugged chassis contruction with 13mm thickness aluminum front and knobs with CNC cutting
- HDMI Out connector for an external screen like TV as its GUI screen or audio signal out

#### **6** Versatile Software functionalities and usage

- Support various file formats like MQA, DSD(64/128/256), DXD(24Bit/352.8Khz), PCM singal up to 32Bit/384Khz including 24Bit/192Khz WAV/FLAC and full range hi-res audio file formats
- Breathtaking sound quality delivered by Dual ES9018K2M Sabre<sup>32</sup> Reference DAC
- CD Ripping with professional CD metadata and album cover art provided by Gracenote
- Connect turntable and play LP directly to record it via Phono Input(Moving Magnet)
- Load your vinyl and cassette tape collections, DAB+/FM radio, Internet radio to X45 MusicDB via recording function with hi-res sampling rate 192Khz
- Play hi-res files(like MQA, DSD, etc) in your PC directly through X45 via its far advanced USB DAC function
- High Connectivity
- Versatile network functions
- Major Music Streaming Services(TIDAL, TIDAL MQA, Deezer, Qobuz, Napster) and Internet Radio(Airable) available
- Customized Remote Control App, NOVATRON MusicX for iOS and Android
- Provides customized WebInterface(WebUI) for remote control and MusicDB management by PC
- Support 'Roon Ready', which is the famous Music Player for Music Lovers

# What is the cocktail Audio X45

The X45 is a World-Class High-resolution Audio Player and DAC, which is featured by Dual Sabre<sup>32</sup> Reference DAC chips built-in, CD Ripper, Music Server, Network Streamer, Music Recorder, and much more









MQA USU Direct Stream Digital Digital eXtream Definition	32Bit/384Khz 84Bit/192Khz
DSD DXD PCM Iflac	HD FLAC (24bit/192KHz)
	HD WAV (24bit/192KHz)
	MP3 APE/CUE
CAF ALAC AIFF AIF	HD MUSIC 32 Bit/ 384 Khz High Resolution Audio



#### **6** High Performance System Resources and custom-designed software

Based on Dual Core ARM Cortex A9 processor running at 1.0GHz, 64Bit/1000MIPS Microcontroller and custom-designed software, the X45 will surely satisfy all music lovers with great performance and versatile features

#### **b** Breathtaking Sound Quality created by accumulated circuit design technology and qualified components

Equipped with dual ESS Sabre <sup>32</sup> Reference DAC ES9018K2M built-in separately for right and left channels, 64Bit XMOS chip, TCXO oscillator and high quality Toroidal Transformer including isolated power source circuit design technology and in-house R&D know-how for circuit designing, the X45 will deliver wonderful sound to you

#### **6** Dual Sabre<sup>32</sup> Reference DAC separated for right and left channels

You can experience breathtaking sound quality delivered by dual Sabre<sup>32</sup> ES9018K2M DAC built-in separately for right and left channels

#### **6** Toroidal Transformer



Isolated power source circuit design for digital and analogue parts minimizes idle noise

#### • High quality Analog Out terminal

High quality with well-shielded analogue out terminal guarantees lossless signal transmission

#### **6** Balanced & Unbalanced Analogue Out

- Balanced XLR: Dynamic Range: 130dB(Max 4.5Vrms, stereo) THD +N: 0.0004%
- Unbalanced RCA: Dynamic Range: 130dB(Max 2Vrms, stereo) THD +N: 0.0004%

#### **USB** Audio Class 2.0 Output

An external USB DAC can be connected

#### • Phono In(Moving Magnet) for a turntable

Default senstivity is 7.5mVrms and controllable 3.75~15mVrms

#### ♦ DAB+ Tuner and FM Radio Tuner

For high quality digital radio, X45 offers DAB+ tuner also

#### 

For quick data transfer purpose, X45 offers two(2) high speed USB3.0 Host Ports at rear side

#### ₲ 6.35mm Headphone Out at the front

X45 offers Headphone Out with senstivity of 100mW+100mW@1Khz, 600ohm, 0.1% THD

• XMOS 64Bit/1000MIPS 16 Core Powerful Microcontroller



X45 USB DAC function can support up to PCM 384Khz/32Bit, DSD Native 256 and MQA

#### **USB** Digital - to - Analogue Converter(DAC)

















#### **CD** Ripping with Gracenote CD metadata and Album cover art

Load all your CD collection onto the X45 Music Database in FLAC, ALAC, WAV or MP3 file format with professional CD metadata and album cover art from Gracenote



#### **•** Music Database function

The X45 has a well-organized Music Database built-in, which offers very nice and convenient functions like SEARCH, display by text or cover art, SORT, various View, etc



#### • Phono Input(MM) for your turntable

Just connect turntable to the X45 phono in directly to play your precious LP music and record it to the X45 in hi-res digital file. The X45 offers very smart and convenient auto cutting function to edit the recorded file with easy

#### **6** Recording with 192Khz hi-res sampling rate

The X45 offers a recording function for internet radio, DAB+/FM radio, Analogue In, Phono In, AUX In including all digital inputs. You can make your own digital music collection with wonderful sound

### **6** Auto/Manual Cutting for the recorded files

Smart auto/manual cutting function to edit the recorded files is available at the X45. You can easily edit files and import them into X45 Music Database





#### **6** Versatile Networking and Remote Control with a Customized App

Connect the X35 to your network for streaming music to and from other devices, listen to cloud based music services and control remotely using mobile devices with our customized remote control app, NOVATRON MusicX or WebInterface



Control remotely by mobile devices with customized Remote Control App, NOVATRON MusicX app





#### • Major Music Streaming Services integrated

You can access tens of thousands of internet radio stations and online music services like TIDAL, Deezer, Napster and Qobuz including Spotify Connect function



#### Control remotely by PC with WebInterface

Control the X45 remotely by your PC with its nice WebInterface function

### Support various network protocols like UPnP Server/Client/Renderer, Samba Server/Client

Stream songs to and from other compatible devices in the same network

#### **6** AirPlay and Spotify Connect

You can play songs from iOS devices and musics from Spotify via X45 wirelessly

#### Control X45 by Roon

As X45 supports 'Roon Ready', you can control X45 with Roon, which is great music player for music loves



### € 7 inch TFT LCD Screen for Intuitive GUI and HDMI Out for external screen

7 inch big screen will let you control the X45 easily with intuitive GUI, and connect it to your TV for an external screen to view bigger GUI or a slideshow of photos while listening to your music collection



#### └ DAB+/FM Radio Tuner built-in

Enjoy high quality digital radio via DAB+ Tuner, and record any song or broadcast with high quality sound

#### **•** High Connectivity for various external devices

- + 2 x USB3.0 host at rear and 1 x USB2.0 host at front
- USB Audio Class 2.0 Output
- GigaFast Ethernet LAN
- ${\scriptstyle \bullet}\, {\rm HDMI}\, {\rm Out}\, {\rm for}\, {\rm external}\, {\rm screen}\, {\rm or}\, {\rm Audio}\, {\rm out}$
- USB Audio Input for USB DAC function

#### **6** Storage for Music Server

3.5"/2.5" SATA hard disk and Solid State Drive(SSD) is accepted to the X45, which supports up to 8TB capacity. You can install a storage easily thanks to a customized storage drive bay(drawer)

#### **C** Rugged and durable casing

The X45 front panel is based on 13mm thickness aluminum with CNC cutting and total metal chassis. The die-cast aluminum feet provide rigidity along with additional resistance from external vibration.

- Digital Out(Coaxial, Toslink, AES/EBU XLR, HDMI)
- Digital In
- Analog Out/Input
- Phono Input
- And more.....



# **Many Useful functions**

Created by custom-designed smart software developed by in-house R&D center





#### Listing by Text or Cover Art

**Sleep function** 

To display album or song list by Text or Cover Art by pressing TEXT/ART key of RC

Pressing SLEEP key of RC will make X45

powered off automatically after set



## Jump to Song Mode

time

On Now Playing screen, pressing CAP/ NUM key of RC will lead you to 'Jump to Song Mode' or 'Seek to Percent Mode' On 'Jump to Song Mode', pressing numeric key is to jump to the song equal to the pressed number







#### **Auto CD Ripping** function

When you want to rip many CDs, Auto CD ripping function will be helpful. If you insert CD to the X45, remaining tasks will be done by X45 until the CD is ejected after CD ripping is completed

#### To merge multialbum or rip it into one folder(Album)

You can rip Multi-album into one folder (album)

#### Auto Cutting function Using this function, you can edit a file recorded by X45 easily.



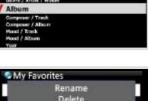








#### FM - Start It Up Repeat One Repeat All Cut to Wave file Slide Show 04 02





recordina

## Edit recorded files

Edit recorded files cutting by unit of track or adding album tag info



TAG Edit

import to DB

Burn My Audio CD

**Create Folder** 

#### **ROON Ready**

If you like 'ROON' remote app from Roonlabs, you can use it with the X45

#### **Audio CD Burning**

You can burn Audio CD with the X45

Scroll Speed

screen

Control text scroll speed on the

System	
actory Reset	
IDD Sleep	
IDD Format	
ITFS Fix	
Irightness	
larm	
tuto Shutdown	
Scroll Speed	
ist Line Count	

# Import & Export

Import/Export music to/from the

X45 Music DB via USB or over a

Make 'My Playlist'

it, My Playlist will disappear

**HDD Sleep** 

Go into sleep mode as set

This is virtual playlist. If you stop playing

your music

**Delete Files** TAG Edit Import to DB Copy Files Move Files

# network Make Playlist

Clear Song New PLS Delete PLS

# Album The Element of Free Creating Playlist 'My Playlist'

actory Reset HDD Sleep



# Section Repeat

Set specific section to play repeatedly

Schedule when you want the X45

**Clock & Display OFF** =HDD1 Pressing CLOCK key of RC will make X45 screen show current clock or off

# Seek to Percent Mode

On 'Seek to Percent Mode' pressing numeric key is to seek the location of the playing file equal to the pressed number

## **Display Mode**

Alarm

X45 offers Alarm function

You can display Music DB list by unit of Album, Genre, Track, Artist, Composer, Year, Mood, etc

## Reservation Recordina

to record iRadio with reservation

Play List





### Audio file format conversion

Convert existing audio files into other formats, (e.g. mp3, FLAC, WAV, MP4) for use on other devices -MP3 player, car stereo, etc

### **Gapless Playback**



#### Delete Rename TAG Edit Artist / Track Artist / Album

#### **HDD** Format

Easy solution to format hard disk with Linux file system or NTFS

### Edit music tag info

# Artist View Genre View rack View torage Backup

🗘 System	
Factory Reset	
HDD Sleep	
HDD Format	
NTFS Fix	
Brightness	
Alarm	
Auto Shutdown	
Scroll Sneed	



₽System	
OSD Language Auto Play	
Resume Play	
Factory Reset	
HDD Sleep	
HDD Format	
NTES Fix	
Brightness	
Alacen	

### Music DB backup & Restore

#### **Auto Shutdown**

Schedule when you want the X45 powered off

#### USB Keyboard

Use an USB keyboard to edit song tag info easily

#### **Resume Play**

After booting up, resume playing automatically where it was last stopped.