

# PRODUCT TRAINING MANUAL

- PRODUCT OVERVIEW
- APPLICATIONS & USE CASES
- TECH SPECIFICATIONS
- PRODUCT MATRIX



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# 01.

## THE BEGINNING: INTRODUCTION





## ENTER NEW WORLDS WITH DUNE HD HIGH DEFINITION MEDIA PLAYERS

WELCOME TO THE DUNE HD UNIVERSE – A DUNE-IVERSE OF HIGH QUALITY HOME ENTERTAINMENT! DUNE HD OFFERS A FULL LINE OF HIGH DEFINITION MEDIA PLAYERS DELIVERING THE FLEXIBILITY, FEATURES AND PERFORMANCE NECESSARY TO CREATE THE ULTIMATE MEDIA MANAGEMENT, CONTROL AND PLAYBACK SYSTEM FOR TODAY’S DEMANDING HOME ENTERTAINMENT CONSUMER.

From whole-home networked multimedia playback systems to room-by-room local storage connected Blu-ray Disc and DVD players, wherever the customer demands access to their media, Dune HD connects them.

The performance of Dune HD devices is so robust and reliable that professionals turn to our powerful media players for digital signage, graphics-intensive high-resolution presentation displays, medical tutorials, point-of-sale retail promotion applications, private IPTV and OTT networks, and more. Dune HD media players are truly universal, in that they can play every common file format, codec,

and video container whether it’s delivered via the Internet or from a locally attached USB- or LAN-connected hard drive.

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**In the pages ahead you’ll learn not only about Dune HD media players and how to design them into your systems, but you also will gain some great ideas about how to put these powerful players to work in exciting and unexpected ways.**

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# WHAT IS A MEDIA PLAYER?

THE MEDIA PLAYER CATEGORY MAY BE A FAMILIAR ONE TO YOU, BUT THERE ARE MANY VARIATIONS, AND SOME PRODUCTS THAT CARRY THE LABEL DO NOT ACTUALLY OFFER FULL MEDIA PLAYER CAPABILITIES. ON THE SURFACE, MANY MEDIA PLAYERS SOUND EXCITING, BUT AS YOU DIG DEEPER, IT BECOMES CLEAR THAT NOT ALL PLAYERS ARE CREATED EQUAL, AND FEW CAN MATCH DUNE HD PLAYER CAPABILITIES, WHICH ALLOW YOU TO:



- Play a wide range of audio and video formats, even up to 192kHz 24-bit and 70 Mbps video streams.
- Support third party applications such as graphically rich movie collection user interfaces.
- Offer virtually unlimited storage and back-up options, connect to any type of network share or locally attached storage device.
- Wireless capabilities built in. Dune HD was the first to offer WiFi Access Point built right into our players, which allows you to connect your Apple, Android and other smart-phones and tablets directly to Dune HD media players.

With sophisticated and advanced digital media technology, Dune HD sets the bar high for what a media player should deliver. It should be nothing less than:

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**A multi-purpose, multi-featured, multi-format, multimedia consumer electronics playback device designed to support the variety of entertainment functions modern consumers demand. Media players deliver set-top box digital TV reception, 1080p video and 7.1 HD surround sound processing, while handling more than 10 different audio codecs up to the current audiophile standard of 192 kHz / 24bit resolution. As such, Dune HD media players deliver the most complete whole-home connected entertainment networking experience.**

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## DUNE HD ADVANTAGES



WHILE DUNE HD MEDIA PLAYERS ARE KNOWN FOR THEIR SOPHISTICATION AND SEEMINGLY ENDLESS CAPABILITIES, THERE ARE MANY ONE-DIMENSIONAL PLAYERS ON THE MARKET GROUPED INTO THE SAME CATEGORY WITH DUNE HD. DON'T BE MISTAKEN!

LOW COST PLAYERS WHICH ONLY DO ONE OR TWO THINGS CANNOT COMPETE WITH DUNE HD DEVICES IN THE SHEER NUMBER OF FEATURES AND FUNCTIONS.

Dune HD products stand apart from other media players in the following important ways:

- 1) Playback of Blu-ray and DVD disc images (ISO) from any media source.
- 2) Support for nearly every digital audio and video format including IPTV, VOD and OTT services.
- 3) IP control interface for access from apps and third party control systems such as Control4.
- 4) Built-in FTP and SMB servers for easy and fast file transfer from computers or network attached storage devices.

If your player doesn't do all of these – and without limitation – you're not using a full-featured universal media player. Experience the power of Dune HD!

# TAKE A TRIP INSIDE A DUNE HD MEDIA PLAYER

A QUICK LOOK AT THE SPECIFICATIONS AND IT BECOMES CLEAR THAT DUNE HD MEDIA PLAYERS HAVE A TECHNOLOGICAL ADVANTAGE, MAKING THEM DOLLAR-FOR-DOLLAR, FEATURE-FOR-FEATURE, THE BEST VALUE ON THE MARKET TODAY.

## Dune HD media players offer:

- State of the art whole-home entertainment playback via the Internet, Digital TV, Blu-ray and DVD Discs or networked personal file collections.
- Highest quality audio and video playback of movies and music stored on personal computers, to complete CD, DVD and Blu-ray disc collections.
- Dune HD media players support all advanced audio codecs and will pass along the bit-stream from whatever audio source it encounters, even 192kHz / 24-bit streams.
- Powerful and modern media processors for the ultimate 1080p picture quality. The current generation is built on Sigma Designs.
- Seamless integration with the most popular custom-installed home automation systems from industry leaders such as Control4. Contact us for more information on other companies and technologies supported.
- Easy customization via an awesome array of third-party applications, from movie to audio collection management and beyond.
- Home security integration via home automation systems with dynamic expansion of features.
- Highly configurable to meet every customer's needs.

This is particularly useful for those customers with high quality home theaters, as Dune HD leaves the decoding of the information up to the home theater receiver or preamplifier.



DUNE HD MAX



DUNE HD SMART H1

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### Link to advanced audio information:

[http://dune-hd.com/online\\_manual/#transmission-of-analog-7-1-audio-to-external-amplifier-receiver](http://dune-hd.com/online_manual/#transmission-of-analog-7-1-audio-to-external-amplifier-receiver)

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# 02.

## THE CONSUMER DUNIVERSE: CONSUMER APPLICATIONS AND CASE STUDIES

DUNE HD MEDIA PLAYERS ARE THE OPTIMUM CHOICE FOR CEDIA A/V INSTALLERS BECAUSE THE DEVICES ARE RELIABLE AND POWERFUL, PARTICULARLY WHEN PAIRED WITH CONTROL4 SYSTEMS AND HOME AUTOMATION TECHNOLOGIES.

Following is a look at Dune HD media players in diverse Control4 home network environments — from consumer applications to professional — including links to step-by-step set-up tips for installers.



## EVERYWHERE ENTERTAINMENT – AN OUT OF THIS WORLD EXPERIENCE!

THE MODERN CONTROL4 FAMILY WANTS TO ENJOY THEIR HOME ENTERTAINMENT ALL AROUND THE HOUSE, FROM THE LIVING ROOM AND DEN TO KIDS ROOMS AND BEDROOMS, EVEN EXTENDING OUTDOORS TO THE PATIO AND HOT TUB. WE'RE TALKING ABOUT TRUE CONNECTED ENTERTAINMENT EVERYWHERE!

Imagine a fully networked home capable of delivering movies, music, and personal videos to anyone or any room in the home at any time.

Dune HD devices stand apart in quality and capabilities all on their own, but when paired with robust home automation and media distribution systems, such as those from Control4, the combination creates a state-of-the-art networked home

entertainment system at a fraction of the cost of other pre-packaged media server systems on the market. Control4 integration brings movie cover art, photos, artist or cast member information, awards and other details to any media player offering wireless tablet or touch panel control of the system throughout the home. With this powerful pairing, favorite entertainment follows you anywhere, anytime in your own home.

# A PERSONAL MATRIX: DUNE HD + CONTROL4



THE CONTROL4 SOFTWARE (COMPOSER), RUNNING IN TANDEM WITH DUNE HD'S CERTIFIED DRIVER, IS SO SMART, IT KNOWS WHERE YOU ARE IN THE HOME AND WILL STREAM MUSIC AND VIDEO TO YOU WITHOUT ADJUSTING ANY SPECIAL SETTINGS.

Dune HD media players are the ideal products for custom installers due to their incredible power and flexibility.

Set up a network with Dune HD as the centralized hub:



With one player

**Dune HD Max:** [http://dune-hd.com/hd\\_players/current/135-dune-hd-max.html](http://dune-hd.com/hd_players/current/135-dune-hd-max.html)



Serving many rooms



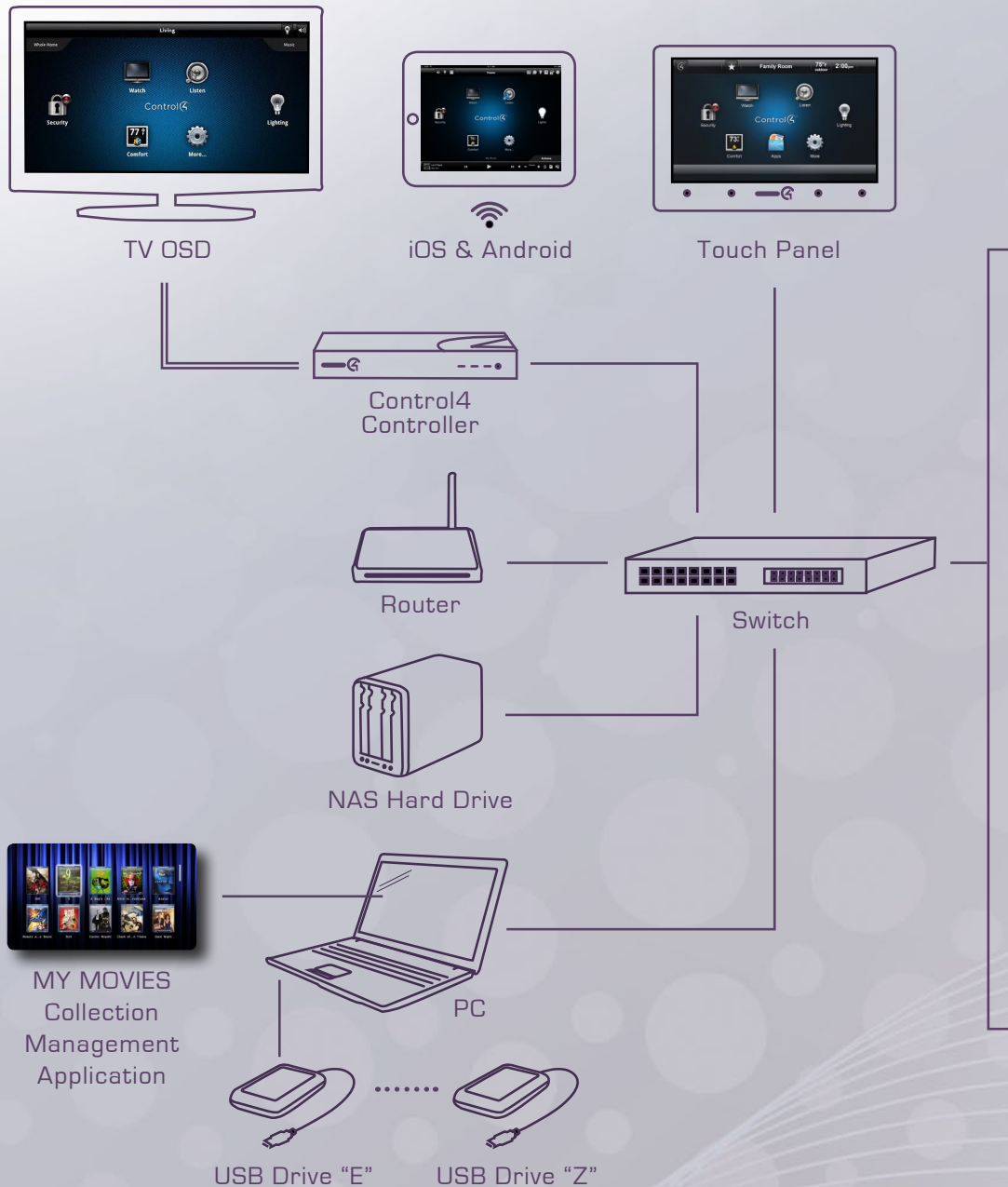
Or place a Dune HD player at every TV for DVD and Blu-ray playback capabilities in each room while enjoying fully networked entertainment.



**Dune HD Smart B1:** [http://dune-hd.com/hd\\_players/current/134-dune-hd-smart-b1.html](http://dune-hd.com/hd_players/current/134-dune-hd-smart-b1.html)

# DUNE HD - CONTROL4

## MULTI-ZONE MEDIA MANAGEMENT & DISTRIBUTION SYSTEM



Example 5 Zone Dune HD Player System Architecture

**Dune HD DVD, Blu-ray & Network Files Media Management & Distribution System**

	<b>Dune HD Max</b>	Theater
	<b>Dune HD Duo</b>	Game Room
	<b>Dune HD Smart B1</b>	Family Room
	<b>Dune HD Smart H1</b>	Master Bedroom
	<b>Dune HD Smart D1</b>	Kids Play Room

# CREATING THE HOME ENTERTAINMENT GALAXY



**CONTROL4** ENABLES CONSUMERS TO WATCH MULTIPLE MOVIES AT ONCE VIA THEIR DUNE HD MEDIA PLAYERS, CREATING EVERYWHERE ENTERTAINMENT FOR THE WHOLE FAMILY. ANYWHERE THE CUSTOMER GOES, SO GOES THEIR MEDIA! DUNE HD MEDIA PLAYERS CONTAIN AN ENORMOUS AMOUNT OF TECHNOLOGY WHICH ENABLE THEM TO BE USED IN A MULTITUDE OF EXCITING SCENARIOS.

Some sophisticated enthusiasts want the fastest data access and easiest set up and management of their networks rather than using a specialized computer for a server to distribute files to various media players. Dune HD has built-in capabilities to support this specialized need, commonly known as a Network Attached Storage (NAS) system.

With Dune HD and Control4, installers can deliver a powerful and decentralized network that speedily delivers content from multiple resources all over the home, be it multiple networked computers, NAS devices or hard drives directly attached to Dune HD media players.

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It is remarkably easy to connect a Dune HD media player to your content sources. Just connect Dune HD to a Control4 system and the media player provides the necessary log-ins and credentials for accessing files on the network.

Control4 makes authentication easy, including creation of an intuitive library interface on all touch screens or TVs connected to a Control4 controller. Accordingly, the certified Dune HD driver is set up to recognize Control4's interfaces and will respond to its requests immediately.

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**Following are links to help you get started with connecting your content drives to a Dune HD media player:**

**SET-UP:** [http://dune-hd.com/eng/support/online\\_manual/system\\_setup](http://dune-hd.com/eng/support/online_manual/system_setup)

**USING USB:** [http://dune-hd.com/eng/support/online\\_manual/using\\_storage\\_devices](http://dune-hd.com/eng/support/online_manual/using_storage_devices)

**USING eSATA:** [http://dune-hd.com/eng/support/online\\_manual/using\\_storage\\_devices](http://dune-hd.com/eng/support/online_manual/using_storage_devices)  
.....

# DEEP INTEGRATION WITH CONTROL4 USING THE DUNE HD CERTIFIED DRIVER

CONTROL4 DEALERS HAVE ENTHUSIASTICALLY EMBRACED THE DUNE HD MAX, DUO AND SMART SERIES IN THEIR CUSTOM RESIDENTIAL AND COMMERCIAL PROJECTS. THE CONTROL4 CERTIFICATION BRINGS ADDITIONAL ADVANTAGES TO THE DUNE HD LINE OVER COMPETING MEDIA PLAYERS.

The Dune HD Control4 Certified Driver features support for the full Dune HD IP control protocol API, and exposes popularly requested advanced features.

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### Download Control4 Certified driver:

[http://dune-hd.com/eng/support/applications\\_and\\_drivers/control\\_4\\_integration](http://dune-hd.com/eng/support/applications_and_drivers/control_4_integration)

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# CONTROL4 INSTALLATION INSTRUCTIONS:

THE CERTIFIED DUNE HD IP DRIVER FOR CONTROL4 COMMUNICATES WITH CONTROL4 VIA IP PROTOCOL OVER THE DUNE NETWORK CABLE.

The driver was built by diamond design, LLC for Dune HD and received official Control4 Certified status on January 30, 2012. The Control4 driver will control the following Dune HD models integrated into a Control4 system: HD Max, HD Duo, HD Smart B1, HD Smart D1, and HD Smart H1.

1. **THE FIRST STEP** is to ensure that you are utilizing one of the supported Dune HD media players set forth above and that the firmware is version 110127\_2105 or later. The firmware naming convention used by Dune HD is two digits representing the year, two digits representing the month, and two digits representing the day, followed by other indicators. The firmware on the player at issue must be created on or after January 27, 2011, i.e., 110127.
2. **NEXT**, set a static or reserved IP address for the Dune HD media player by navigating to the Dune Home screen, then Setup, then Network. Change the Mode to Manual and enter the appropriate TCP/IP settings for the player. In the alternative, you may set the player to a static IP address at the router. Link to network setting information: [http://dune-hd.com/eng/support/online\\_manual/accessing\\_network\\_drives\\_from\\_player](http://dune-hd.com/eng/support/online_manual/accessing_network_drives_from_player).
3. **NEXT**, enter the Dune HD media player's IP address in the IP connection field under Composer's Connections view. If you are using a hard disk inside the player for movie storage or otherwise, also enter the same IP address in the last box on the properties tab where indicated.
4. **NEXT**, make the audio and video connections in Control4 Composer software.

# CONTROL4 INSTALLATION INSTRUCTIONS:

[CONTINUED]

5. **FINALLY**, change any defaults on the color and other buttons as desired. Brief descriptions of those options are set forth below:
  - a. **POWER ON DELAY** - The default is adequate in almost all instances and normally should not be changed unless otherwise advised by tech support.
  - b. **ALWAYS ON** - This feature will prohibit the player from receiving the Room Off command. If using an internal hard drive inside the player for items that are being shared via the Dune HD media player's SMB share (known as Dune) such as music, photos, etc., this option may be used to ensure the hard drive remains available to the network. Note, it is not recommended to store announcements, 4Store information or other critical items on this hard drive. If this option is active, the player will revert to the Black Screen state when the Off command is received.
  - c. **REPEAT SPEED** - The default is adequate in almost all instances and normally should not be changed unless otherwise advised by tech support.
  - d. **STOP EVENT** - When the media player receives the Stop command, the user will either be returned to the Dune home screen, see a plain black screen, receive the equivalent of a basic Dune "Stop" command, or be returned to Navigator if the project is running 2.1 or later. Note that to return to the Control4 Navigator via the Stop button, the Dune needs to be located in the room in Composer regardless of where it is physically located, i.e., if the Dune is in the Family Room in Composer and you choose this option, a Stop event or Stop button press will return the Family Room to Navigator. However, if the Dune is in the Rack Room, for instance (in Composer regardless of where it is physically located), it will not return the Family Room to Navigator control.
  - e. **COLOR BUTTONS** - Commands, including certain Dune IR remote commands not located on the Control4 remote such as Slow Motion, may be assigned to any of the color buttons. The Open\_Close commands will only function on the Dune HD Max and Dune HD Smart B1 as it opens and closes the optical disc tray. The Remove Black command is useful if the user is utilizing the Black Screen setup, as there may be occasions where it is necessary to view the player's on screen display. The Caps\_Number command is useful when entering user names and passwords for a NAS or similar device with capital letters.

# CONTROL4 INSTALLATION INSTRUCTIONS:

[CONTINUED]

f. **WEB BROWSER FUNCTIONALITY** - The Star [\*] and Pound [#] buttons may be assigned Web Browser On and Web Browser Off, respectively. If so chosen, those buttons will activate the internal web browser engine located on the Dune HD media player. You must utilize the Web Browser Off assignment if you use the Web Browser On assignment. The optional HD Dune QWERTY keyboard and mouse will increase web-browsing functionality by providing keyboard and mouse support.

g. **WEB BROWSER COMMANDS:**

- **Enter web browser mode:** Optional Star Button
- **Exit web browser mode:** Optional Pound Button
- **Refresh page:** Repeat
- **The remaining buttons,** Enter, Rew, and FF work as you would expect on the Control4 remote.

**OTHER NOTES:**

- The Rewind, Fast Forward, and Slow Motion commands are variable and may be increased or decreased via additional button presses.
- The web server on the HD Dune media player requires the player to be in its Standby mode for it to accept IP commands. Accordingly, the player must first be turned on manually and will thereafter be sent to Standby when an Off command is received.
- Because the communication with Director is over Port 80, which is not constantly open, the player may show as Offline at times under the Network Tools section of Composer but may still be Online, yet not sending or receiving commands at that time.

**To use the internal hard drive (inside the Dune media player) to store media, use the following steps:**

1. Add the Network File Storage Driver and configure it by leaving Username, Password and Workgroup blank and clicking the Browse [the 3 periods] button to browse to the Dune's internal hard drive.
2. Rename the Network File Storage driver something like Dune Media.
3. In the Media tab in Composer, scan the Video portion of that driver (Dune Media in this example) and note that you may need to add certain file extensions to the searched list if you have single file M2TS Blu-rays or certain other formats such as MKV.
4. Click the Search tab to obtain cover art and file info for any files that Composer did not recognize.
5. Refresh Navigators. Note that multi-file M2TS files cannot be utilized. Accordingly, it is recommended to use .ISO format for Blu-rays or ensure that all Blu-rays contain a single M2TS file only. DVDs may be folder (.ISO) or .ISO.

## PUTTING FAMILY AT THE CENTER OF THE DUNIVERSE

DUNE HD MEDIA PLAYERS CAN PRESENT THE ULTIMATE SLIDE SHOW OF PHOTOS AND VIDEO FROM YOUR LATEST VACATION, BIRTHDAY PARTY OR EVERYDAY FAMILY FUN, SO MEMORIES REMAIN AT THE CENTER OF YOUR WORLD.

Dune HD media players are one of the few on the market that work with Control4 seamlessly for presenting photo slide shows. Users can create a “favorites list” of photos stored on the network for instant family memories at the push of a button.

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**Link to Dune HD photo-viewer instructions:**

[http://dune-hd.com/eng/support/online\\_manual/playback](http://dune-hd.com/eng/support/online_manual/playback)

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# FAMILY ENTERTAINMENT + ORGANIZATION



NOT ONLY CAN A DUNE HD / CONTROL4-CONNECTED ENTERTAINMENT SYSTEM ENTERTAIN THE FAMILY, IT CAN HELP PARENTS MANAGE THE HOUSEHOLD AS WELL. BUSIER THAN EVER, TODAY'S FAMILIES WORK HARD TO MANAGE LIFE, HOME, WORK AND SCHOOL — SO HARD, THAT ANY SUPPORT IS WELCOME.

One Dune HD family sends up to four different movies to four different Dune HD media player-equipped TV zones simultaneously throughout the house. When it's time for bed, custom videos are programmed to come on at the same time every evening — even if the TV is not on — to remind the kids to brush their teeth and get ready for bed. Not a replacement for love and care from Mom and Dad, but on those occasions where getting around to every room and every child at the same time is difficult, this home network helps support important family routines, while infusing a little fun into the process.

Control4 is the conductor in this case, providing seamless switching to any device or room in the home, with Dune HD tightly integrated to support the system and deliver the content.

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**The Dune HD certified Control4 Driver may be downloaded here:**

<http://dune-hd.com/control4.html>  
.....

# CREATING A MAGICAL USER INTERFACE: INTEGRATING MY MOVIES



MY MOVIES IS A WINDOWS-BASED PC SOFTWARE PROGRAM. MOVIE AND VIDEO CONTENT MAY BE STORED ON THE INTERNAL HARD DISC, EXTERNAL USB DRIVE, NETWORK SHARE ON A PC OR MAC, NAS DRIVE, OR ANY COMBINATION.

Dune HD media players do not “rip” files, but with media management applications such as My Movies, a highly engaging entertainment experience can be created for users with libraries of content on hard discs.

**Note:** My Movies is a company not affiliated with Dune HD that makes a comprehensive graphical movie indexing system usable with many media players.

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**For more information on My Movies and how it can be used with Dune HD media players, please visit:**

<http://www.mymovies.dk/how-to/written-documentation.aspx?Page=My%20Movies%20for%20HDI%20Dune>

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# MOVIE AND MUSIC LIBRARY APPLICATIONS

DUNE HD OFFERS ROBUST APIs THAT ALLOW FOR A WIDE RANGE OF POWERFUL THIRD-PARTY APPLICATIONS TO BE WRITTEN.

For example, Musicnizer (<http://www.musicnizer.com/music-organizer.htm>) is a program that catalogs music for simplified sorting and browsing by category. Additionally, Musicnizer can sync the catalog with relevant reviews and information it pulls from the Internet, including album art, credits, liner notes, etc. A much richer and interactive experience than just managing raw files in folders, Musicnizer also enables a decentralized network using files stored on a computer, external hard drive, NAS, USB drive, etc.

Musicnizer does a lot of hard work on a customer's computer and then, when ready, works with Dune HD media players in the network to access and deliver that music anywhere in the house. For step-by-step instructions on using Dune HD players with Musicnizer, visit their website: <http://www.musicnizer.com/help/illustrated-music-catalog-for-hdi-dune.htm>

## Movie and Music Library Applications:

My Movies (<http://www.mymovies.dk>)

My Music (<http://www.mymusic.dk>)

Movie, TV and music collection management  
Available for Windows based PC and Mac (OSX), supports iPad, iPhone and Android based tablets

Zappiti (<http://zappiti.com>)

Movie and TV series collection management  
Available for Windows based PC, supports iPad and iPhone

DuneX (<http://www.dunexapp.com>)

Movie and TV series collection management  
Available for Mac (OSX), no tablet support

Movienizer

(<http://www.movienizer.com>)

Musicnizer

(<http://www.musicnizer.com>)

Movie and TV series collection management  
Available for Windows based PC, no tablet support

All My Movies (<http://www.bolidesoft.com/allmymovies.html>)

Movie and TV series collection management  
Available for Windows based PC, no tablet support

Dune Flash Interface (<http://www.mpcclub.com/forum/showthread.php?t=27171>)

Movie and TV series collection management  
Available for Windows based PC, no tablet support

yaDIS (<http://www.mpcclub.com/forum/forumdisplay.php?f=151>)

Movie and TV series collection management  
Available for Windows based PC, no tablet support

Dune Explorer 2 (<http://www.mpcclub.com/forum/showthread.php?t=23178>)

Movie and TV series collection management  
Available for Windows based PC, no tablet support

## VIRTUAL WATCHDOG FOR EXTRA SECURITY



MEDIA PLAYERS FROM DUNE HD OFFER RICH FEATURES DESIGNED TO SUPPORT CREATIVE AND CONSCIENTIOUS HOMEOWNERS. WITH A SIMPLE RECORDING PROGRAM COMMONLY FOUND ON A PC OR EVEN AN IPHONE, USERS CAN CREATE STIRRING AUDIO MESSAGES (VOICE COMMANDS, DOG BARKS, ETC.) FOR PLAYBACK ACROSS ALL DUNE HD MEDIA PLAYERS NETWORKED THROUGHOUT THE HOME.

Using your Dune-enabled home theater system to play recorded audio can be a great supplement to traditional alarm systems, delivering an even stronger warning to potential intruders when triggered by an unauthorized entry. The system can tie directly into home security

systems from Honeywell, GE and Elk with no additional software necessary. The Dune HD driver coordinates the interplay between the different systems on the network to signal the police while simultaneously alerting the intruder that they need to exit immediately.

# 03.

## THE PROFESSIONAL DUNIVERSE: PROFESSIONAL APPLICATIONS AND CASE STUDIES



# EVER-EXPANDING WORK APPLICATIONS



DUNE HD IS THE IDEAL CHOICE IN PROFESSIONAL ENVIRONMENTS REQUIRING VIDEO OR NETWORKED PRESENTATIONS. DUNE HD MEDIA PLAYERS CAN STORE THOUSANDS OF PHOTOS, VIDEOS AND INFORMATION REQUIRING HIGH QUALITY VISUAL PRESENTATION IN LOBBIES, RETAIL OUTLETS, MEDICAL OFFICES AND CLINICS, OR OTHER PROFESSIONAL FACILITIES.

Many commercial entities have a Dune HD-equipped Control4 system programmed to turn on automatically at the start of the business day. Professional environments can present an automated cycle of video playback featuring end-user testimonials and business success stories.

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**To learn more about how to do this for your customers, follow the step-by-step instructions on the Dune HD website:**

[http://dune-hd.com/eng/digital\\_signage/introduction](http://dune-hd.com/eng/digital_signage/introduction)

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# THE SIGN OF THE TIMES: DIGITAL SIGNAGE



ONCE RESERVED FOR THE LARGEST, MOST SUCCESSFUL CORPORATIONS, DIGITAL SIGNAGE IS A FAST-EMERGING MARKETING OPPORTUNITY FOR SMALL TO MEDIUM-SIZED BUSINESSES AND IS AN OUTSTANDING APPLICATION FOR DUNE HD MEDIA PLAYERS.

Dune HD redefines the notion – and cost! – of creating multimedia displays and dynamically updated digital signs for a variety of businesses. Professional spaces can use readily available and affordable components for everything from interactive advertising to lifestyle-driven presentations and custom programming in office buildings and other public installations.

Companies are moving away from overly complex and expensive digital signage solutions in place of private networks for streaming localized video, photo and music content from their own servers. The concept of replacing traditional digital signage systems with private networks, such as IPTV or closed networks, allows for far greater flexibility, simplicity and cost savings.

With capacity to store massive amounts of content in a central repository in the cloud, Dune HD media devices offer custom playback, scheduling and streaming with professional effects to create the modern day digital signage environment.

A common installation of a Dune HD network consists of a number of video playback devices, or “Presenters,” each connected to a display or a series of displays via HDMI splitters or matrix switches, or to a Local Area Network (LAN).

In the Dune HD network here is how they function:

- Users configure Presenters easily based on how they desire video to be displayed – streamed continuously in a loop, played synchronously, repeated, time-based, etc.
- Enable the “Digital Signage” mode of the Dune HD device to support the configuration settings.
- Each Presenter plays video files from its local storage bay, either a built-in hard disc drive or a connected USB storage device.
- Users can control the Dune HD media players remotely from a PC connected to the same LAN by using the Control Center application, where they can transfer video files, edit configuration, restart Presenters, etc.
- High quality graphics and video displays deliver corporate and promotional messages across one or many networked displays in a broad area.

# ENDLESS POSSIBILITIES: MEDICAL, AUTOMOTIVE, DESIGN AND MORE



FROM MEDICAL OFFICES, FASHION OUTLETS, DESIGN FIRMS, RESTAURANTS TO ANY BUSINESS WHERE VISUALS AND IMAGE NEED TO BE PRESENTED IN A GRAND MANNER, DUNE HD PLAYERS ENABLE SIZZLING ON-SCREEN PRESENTATIONS.

Store owners can easily load promotional videos showcasing their products, while consultants can offer video presentations of their services and results.

Dune HD's ability to work with the widest array of video formats means that even international designers can service small retail outlets with compelling promotional videos.

1. Consider a plastic surgeon with pre-loaded case studies for prospective patients to view in the waiting room area.
2. Innovative automotive dealers and repair centers can create presentations and slide shows to play while customers wait for car repairs.
3. Architecture and design firms can showcase their work to customers in a continuous stream of designs and completed work.

The advantage of using a Dune HD media player is the ability to easily add or change video files as necessary, without waiting for DVDs to be professionally produced or loaded into the player. Dune devices can store thousands of videos and programs on the system to play when needed. Small businesses can create compelling multi-screen presentations throughout their spaces armed only with a Dune HD media player and inexpensive LCD flat screen TVs. Dune HD puts a professional quality media player network and sophisticated video presentation in reach of every business.

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**Detailed instructions for using Dune HD devices in digital signage applications may be found here:**

[http://dune-hd.com/firmware/hdnetwork/Dune\\_HD\\_Network\\_User\\_Guide.pdf](http://dune-hd.com/firmware/hdnetwork/Dune_HD_Network_User_Guide.pdf)

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# DUNE-ENABLED PRIVATE NETWORKS: OTT AND IPTV APPLICATIONS

DUNE HD MEDIA PLAYERS ENABLE THE ULTIMATE “NARROWCASTING” NETWORK, AND ARE ABLE TO SERVE EVERYTHING FROM A SMALL IN-OFFICE NETWORK OF A FEW DISPLAYS, TO COMPLEX ARRAYS OF HUNDREDS OR EVEN THOUSANDS OF TVS LOCATED IN MULTIPLE BUILDINGS.

Dune HD offers options for scrolling text and graphic logos over video, which is typically required in public places, as well as automated demonstrations of a wide range of high definition video materials (up to 1080p, H.264) on monitors, television sets, and other display networks.

For Content Operators Dune HD is an ideal partner as we offer an extensive set of APIs for user interface (UI) integration at the native graphics, Webkit / HTML and HTML5 levels. For those looking to develop their own custom interfaces, extensive information is available at the API information links below.

**Please note** that we are updating and extending our API information all the time, so please contact [mdonnigan@dune-hd.com](mailto:mdonnigan@dune-hd.com) before proceeding with your evaluation to ensure you have the latest information. Also, all API information above applies to every model in the TV series, but not necessarily all models in the Dune HD line.

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## API information:

[http://files.dune-hd.com/partners/sdk/dune\\_devel\\_info.txt](http://files.dune-hd.com/partners/sdk/dune_devel_info.txt)

<http://files.dune-hd.com/partners/sdk/sdk.txt>

[http://files.dune-hd.com/partners/sdk/kernel\\_sdk/dune\\_kernel\\_sdk.2011\\_10\\_19.zip](http://files.dune-hd.com/partners/sdk/kernel_sdk/dune_kernel_sdk.2011_10_19.zip)

[http://dune-hd.com/firmware/misc/media\\_url.txt](http://dune-hd.com/firmware/misc/media_url.txt)

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# 04.

## DEEP SPACE TECH: SPECIFICATIONS AND ADVANCED TECHNICAL INFORMATION

# MOBILE CONTROL OPTIONS

REMOTE CONTROL APPLICATIONS ALLOW CONTROL OF DUNE HD MEDIA PLAYERS FROM IPHONE, IPAD, IPOD TOUCH OR ANDROID DEVICES USING THE DUNE HD INTERNET PROTOCOL (IP) API AND MAY BE USED TO REPLACE OR SUPPLEMENT THE ORIGINAL IR-BASED REMOTE CONTROL.

Using the Dune HD IP control API, dealers may easily integrate with nearly every control system on the market today.

**Dune HD IP control API information is available here:**

[http://dune-hd.com/firmware/ip\\_control/dune\\_ip\\_control\\_overview.txt](http://dune-hd.com/firmware/ip_control/dune_ip_control_overview.txt)

## iOS Control Applications for Dune HD Media Players:

### Dune HD RC

Original remote control application for iPhone, iPod Touch and iPad  
<http://itunes.apple.com/us/app/dune-hd-rc/id514907005?mt=8>

### Dune Remote

Remote control application for iPhone, iPod Touch and iPad  
<http://itunes.apple.com/us/app/dune-remote/id408868276?mt=8>

### My Dune Remote

Remote control application for iPhone, iPod Touch and iPad  
<http://itunes.apple.com/us/app/my-dune-remote/id413244927?mt=8>

## Android Control Applications for Dune HD Media Players:

### Dune HD RC

Original remote control application for Android OS based devices  
<https://play.google.com/store/apps/details?id=dune.remoteControl>

### Dune Media Controller

Remote control application with Media Collection visualization for Android OS based devices  
<https://play.google.com/store/apps/details?id=babachan.android.dunemediacontroller>

### Dune Control

Remote control application for Android OS based devices  
<https://play.google.com/store/apps/details?id=ru.org.dunehdfaq.dunecon>

# ADVANCED HELP AND INFORMATION

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## Official specifications and feature list:

[http://dune-hd.com/eng/products/full\\_hd\\_media\\_players](http://dune-hd.com/eng/products/full_hd_media_players)

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Extensive documentation on firmware features and enhancements is available on the respective product's firmware page.

## Firmware Updates and documentation:

[http://dune-hd.com/eng/support/firmware\\_zone](http://dune-hd.com/eng/support/firmware_zone)

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## Online Owners Manual:

[http://dune-hd.com/eng/support/online\\_manual/getting\\_started](http://dune-hd.com/eng/support/online_manual/getting_started)

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## Support Forums:

[http://dune-hd.com/eng/support/technical\\_support](http://dune-hd.com/eng/support/technical_support)

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## HELPFUL TIPS

### Software for Creating Movie Collection Indexes with Cover Art and Metadata

Dune HD media players are the most versatile and highest performing on the market. To facilitate a great user experience with large DVD and/or Blu-ray disc libraries, third party software is available.

Following are links to some of the most popular applications beginning with My Movies, the most advanced and complete solution we have tested to date.

<http://www.mymovies.dk/>

<http://zappiti.com/index.htm>

<http://www.thaidune-hd.com/yadis.pdf>

<http://www.movienizer.com/>

<http://www.musicnizer.com/>

### Multiregional Playback of Blu-ray and DVD Video Discs

Dune HD players containing Blu-ray drives are shipped locked to the particular region for which they were intended.

If you require support for a region other than your player shipped with, please contact [support@dune-hd.com](mailto:support@dune-hd.com).

### Playback of Blu-ray and DVD Images (.iso) from Any Media Source

Dune HD players offer full support for playback of Blu-ray images (BDMV folders and BD ISO files) from any media source (internal / USB / eSATA HDD, PC or NAS drives on local area network via SMB / NFS network protocols). This capability includes abilities missing on many other media players, such as full Blu-ray menu support, BD-J, BD-Live, etc. Similarly, all Dune HD players can play DVD images (VIDEO\_TS folders and DVD ISO files) from any media source, with full DVD menu support. (NOTE: This feature is included in all models except the "Lite53D" model.)

## HELPFUL TIPS (CONTINUED)

### Support for Highest Quality and High Bitrate Video File Formats

Dune HD players support all popular high quality and high bitrate video file formats, including MPEG-TS and MKV file formats with modern H.264 and VC1 video codecs with up to 1080p resolution, and bitrates up to 50Mbps. Dune HD players also support HD-quality audio tracks in DTS HD Master Audio or Dolby True HD audio codecs. Dune HD players are some of the few offering smooth high bitrate playback from both local and network media sources.


Dune HD players also feature the widest support for MKV files, including the following features: MKV chapters, embedded DTS HD Master Audio and Dolby True HD audio tracks, embedded multi-channel FLAC audio tracks, embedded OGG/Vorbis audio tracks, embedded WMA audio tracks, embedded PGS subtitles, embedded subtitles in various other formats, etc. Dune HD is deeply committed to offering the widest support for every popular video format on the market today, or those planned for introduction in the future.


### Rich Video File Format Support

Dune HD Players support a wide range of file formats and A/V codecs:

- **VIDEO FILE FORMATS:** MKV, MPEG-TS, MPEG-PS, M2TS, VOB, AVI, MOV, MP4, QT, ASF, WMV, Blu-ray-ISO, BDMV, DVD-ISO, VIDEO\_TS.
- **VIDEO CODECS:** MPEG2, MPEG4, XVID, WMV9, VC1, H.264.
- **AUDIO CODECS:** AC3 (Dolby Digital), DTS, MPEG, AAC, LPCM, WMA, WMAPro, EAC3 (Dolby Digital Plus), Dolby True HD, DTS HD High Resolution Audio, DTS HD Master Audio, FLAC, multichannel FLAC, Ogg/Vorbis.
- **SUBTITLES FORMATS:** SRT (external), SUB (MicroDVD) (external), text (in MKV), SSA/ASS (in MKV, external), Vob-Sub (in MP4/MKV, external SUB/IDX), PGS (in TS/MKV).

## HELPFUL TIPS (CONTINUED)

 **EXTERNAL SUBTITLES SUPPORT:** Put the subtitles file near the video file, and use the same filename as the video file name, but with a different extension (e.g. “my\_movie.mkv” and “my\_movie.srt”). Various subtitle encodings are supported, including Unicode (UTF8/UTF16) and various Windows CP125x encodings.

 **EXTERNAL AUDIOTRACKS SUPPORT:** Handled the same way as external subtitles (e.g. put “my\_movie.ac3” near “my\_movie.mkv”). Supported external audiotrack file formats/extensions: AC3/EAC3 (.ac3), .DTS/DTS-HD-HRA (.dts), FLAC (.flac/.fla), Ogg/Vorbis (.ogg).

Firmware updates regularly improve compatibility with specifically encoded files and add support for new file formats and codecs. For our latest firmware, visit:

[http://dune-hd.com/eng/support/firmware\\_zone/11](http://dune-hd.com/eng/support/firmware_zone/11)

### Adobe FlashLite Support

Dune HD FlashLite is based on Adobe Flash Lite for the digital home. It is a Flash player implementation optimized for the Dune player software and hardware platform. Dune FlashLite features Flash Player 8 rendering capabilities and Flash Player 10 media support. It can be viewed also as Adobe Flash Lite 3.1 implementation supporting ActionScript 2.0 for developing Flash applications. However there are some differences between Flash Lite 3.1 and Adobe Flash Lite for the digital home. For details please refer to document “Developing Applications for Adobe Flash Lite for the Digital Home” which can be found at the following link: [http://www.adobe.com/content/dam/Adobe/en/devnet/devices/pdfs/developing\\_apps\\_flash\\_lite\\_digital\\_home.pdf](http://www.adobe.com/content/dam/Adobe/en/devnet/devices/pdfs/developing_apps_flash_lite_digital_home.pdf)

Multiple language support:

<http://dune-hd.com/firmware/languages/>

For full information on developing and implementing Dune FlashLite applications for the Dune Player, visit: [http://dune-hd.com/firmware/flash/flashlite\\_info.txt](http://dune-hd.com/firmware/flash/flashlite_info.txt)

**Note:** Additional features and enhancements are available with firmware Version “110511\_2007\_beta” or newer. For your player simply go to <http://dune-hd.com/firmware> and select the model player you own to download the specific firmware build for your device.

## HELPFUL TIPS (CONTINUED)

### Support for Highest Quality Music File Formats

Dune HD players support all popular, high quality audio file formats and support audio playback with up to 7.1 channels up to 192kHz / 24-bit resolution quality. There is also support for various popular lossless audio file formats that ensure the best possible audio quality, such as FLAC, APE (Monkey's Audio), WavPack, and Apple Lossless. Dune HD is deeply committed to offering the widest support for every popular audio format on the market today, or those planned for introduction in the future.

Dune HD players support CUE-sheets that allow navigation in albums stored in one single file (e.g. one huge FLAC file). CUE-sheets also provide gapless playback possibilities. When you launch such a FLAC file, if there is an associated CUE-sheet (it should have the same filename as the audio file, but with ".cue" extension), the Dune HD player will automatically use the CUE-sheet.

Additionally, high-quality audio may be transmitted to the receiver via HDMI or S/PDIF. For users accessing an S/PDIF connection and using good-quality cables and hardware, there are advanced settings allowing pass through of a 96/kHz and 192kHz signal through the S/PDIF connection.

For Blu-ray playback, there is a special setting (enabled by default when "bit-stream" audio output mode is enabled) that ensures the maximum possible digital audio quality (it forces passing the audio track to the A/V receiver as the original bit-stream, disabling any possible decoding/mixing/processing by the Blu-ray player engine).

## HELPFUL TIPS (CONTINUED)

### User Interface Skins

Dune HD players allow the user to switch between different user interface themes (called “skins”), and even allow users to develop and install their own customized skin. To switch between available skins, either press the RC button “B” on the main menu, or change the “Skin” setting in “Setup / Appearance” menu.

*Note: Additional features and enhancements are available with firmware Version “110511\_2007\_beta” or newer.*

To download the specific firmware build for your device, simply go to [http://dune-hd.com/eng/support/firmware\\_zone/11](http://dune-hd.com/eng/support/firmware_zone/11) and select the model player you own and download for your device.

For more information on creating custom skins, visit: [http://dune-hd.com/eng/support/additional\\_features/skins](http://dune-hd.com/eng/support/additional_features/skins)

### Favorites and Shortcuts

To make it more convenient to gain access to some folders or files, it is possible to create a shortcut at the top level of the main menu, in “Favorites” menu. To create such a shortcut, simply select the desired file or folder, and press the “D” RC button.

It is also possible to add shortcuts to particular network shares to the “Sources” menu. For example: to create a shortcut called “network folder,” press “POP UP MENU” RC button in the “Sources” menu and choose “Create network folder.” To create a SMB network folder, you can also choose the share in the SMB network browser, press “POP UP MENU” RC button, and choose “Add as network folder” action.

### Customizing the User Interface

Dune HD players have a built-in mechanism that allows the user to customize the look and behavior of the user interface using simple text files (called “dune\_folder.txt” files). In particular, it is quite easy to organize links to various media resources. This feature gives third-party applications a mechanism to implement attractive user interfaces for organizing movies collections in Dune HD players. Examples of such applications include:

<http://zappiti.com/>

<http://www.movienizer.com/articles/create-a-movie-catalog-for-dune-media-players.htm>

<http://wiki.mymovies.dk/My%20Movies%20and%20HDI%20Dune.ashx>

## HELPFUL TIPS (CONTINUED)

### IP and IR Remote Control

Dune HD players feature an IP Control interface, allowing complete control using Internet Protocol from a device located on the local network. This allows the implementation of advanced Remote Control applications for various devices (e.g. iOS, Android, Control4, advanced remote control systems, etc.) and the integration of Dune HD players into home automation systems. There are control applications available for iPhone and other devices including Control4. Dune HD has a certified Control4 Driver that may be found in the Composer driver library.

### iOS apps:

<http://itunes.apple.com/ru/app/dune-remote/id408868276?mt=8>

<http://itunes.apple.com/ru/app/my-dune-remote/id413244927?mt=8>

### Android apps:

<http://tinyurl.com/androiddunerc>

### For more information on Dune IP Control:

[http://dune-hd.com/firmware/ip\\_control/dune\\_ip\\_control\\_overview.txt](http://dune-hd.com/firmware/ip_control/dune_ip_control_overview.txt)

### For information on Dune IR Control:

[http://dune-hd.com/eng/support/additional\\_features/remote\\_control](http://dune-hd.com/eng/support/additional_features/remote_control)

## HELPFUL TIPS (CONTINUED)

### Internet Radio Services

Dune HD players are shipped with two popular integrated Internet Radio services, RadioTime and ShoutCAST, which provide access to a large number (up to 60k stations) of free local and worldwide Internet Radio stations. It is also possible to easily access other Internet Radio stations, e.g. just by using a simple M3U playlist file with HTTP URLs.

**Note:** Additional features and enhancements are available with firmware Version "110511\_2007\_beta" or newer. To download the specific firmware build for your device, simply go to <http://dune-hd.com/firmware> and select the model player you own and download the corresponding driver.

For more detailed information on setting up Internet Radio: [http://dune-hd.com/eng/support/additional\\_features/internet\\_radio](http://dune-hd.com/eng/support/additional_features/internet_radio)

### Web Browser and Dune HD Qwerty Keyboard

Dune HD players (except Lite53D model) have a built-in web browser, allowing you to browse various Internet web sites.

To use the web browser, you first need to connect a USB keyboard to the player (and ideally also a USB mouse), such as the new Dune HD Qwerty compact keyboard. The Dune HD Qwerty keyboard + touch-pad + Dune remote control is a perfect device for browsing the web and controlling the Dune HD media player. Information on the Dune HD Qwerty keyboard may be found here: [http://dune-hd.com/eng/products/full\\_hd\\_media\\_players/31](http://dune-hd.com/eng/products/full_hd_media_players/31)

When a keyboard is connected to the player and the web browser is running, type F5 on the keyboard and then type the desired URL. You can also create shortcuts for your favorite web sites by creating standard Windows ".url" files and just launching these files in Dune (to create such a ".url" file on a Windows PC, just drag-and-drop the URL from the URL bar of Internet Explorer to desktop). To stop using the web browser, press the "STOP" button on the standard RC or Dune HD Qwerty.

**Note:** in the current firmware versions the built-in web browser has limited functionality and is designed to allow viewing of web sites, but does not allow the user to download files from web sites and does not offer support for Flash applications running inside the browser window. In future firmware versions, we anticipate these limitations may be eliminated, and control of the web browser via the stand-ard IR remote control could be added along with other features.

For more information on the web browser: [http://dune-hd.com/eng/support/additional\\_features/web\\_browser](http://dune-hd.com/eng/support/additional_features/web_browser)

**Note:** Additional features and enhancements are available with firmware Version "110511\_2007\_beta" or newer. For your player simply go to [http://dune-hd.com/eng/support/firmware\\_zone/11](http://dune-hd.com/eng/support/firmware_zone/11) and select the model player you own to download the specific firmware build for your device.

## HELPFUL TIPS (CONTINUED)

### Convenient and Advanced File Browser Features

The file browser in Dune HD players has many convenient and advanced features including the following:

➤ **MARKING SEVERAL FILES/FOLDERS** for a file management or playback action. Use “SELECT” RC button, or POP UP MENU actions “Mark,” “Mark All.”

➤ **CUT/COPY/PASTE FILES AND FOLDERS.** Use POP UP MENU actions “Cut,” “Copy” and “Paste,” or RC buttons “B” and “C.” Folders are copied recursively (with all subfolders).

➤ **DELETING FILES AND FOLDERS.** Select a file/folder or mark several files/folders and use POP UP MENU action “Delete” or press “CLEAR” RC button. Folders are deleted recursively (with all subfolders).

➤ **RENAMING FILES/FOLDERS.** Select a file/folder and use POP UP MENU action “Rename”.

➤ **BUILDING PLAYLISTS.** Select a folder or mark several files/folders and press “PLAY” RC button. Folders are scanned recursively (with all subfolders). Also, when you simply press “ENTER” or “PLAY” on a single file, all files from the current folder are included into the playlist and the playlist starts playing from the selected file. During playback, use “PREV”/“NEXT” or “POP UP MENU” RC buttons to navigate through the playlist.

## HELPFUL TIPS (CONTINUED)

### Photo Slideshow with Background Music

Simply add audio files into a folder with photos, select this folder (or any photo in this folder) and press “PLAY” RC button. The player will automatically display photos with music tracks placed in the folder.

### Built-in FTP and SMB Servers

You can access all storage devices attached to a Dune HD player from the network via SMB and FTP protocols. This allows you to transfer the files from a PC or other devices to a HDD attached to the player, or use the player as a simple NAS (Network Attached Storage) device.

### External Optical Drive Options

Dune HD player models without a built-in Blu-ray drive can be extended via an external optical disc drive. You can either use “Dune HD Smart BE” extension model (an external Blu-ray drive), or connect any USB DVD/Blu-ray drive. Playback of AACs-protected retail Blu-ray discs is only possible when connecting Dune HD Smart BE to a Blu-ray-enabled Dune HD player model, such as the Dune HD Smart D1/H1.

### System Storage Options

Dune media players (all models except Dune HD Ultra and Dune HD Mini) have support for “System Storage,” which is a dedicated storage device (typically a 2GB+ USB Flash drive) permanently attached to the player and configured in a special way. System Storage is used by the player for its needs, to provide certain player functions (see below). If you do not need these player functions, you do not need System Storage. When System Storage is attached, it is not visible to the user as a normal storage device in the player’s file browser. For more information visit: [http://dune-hd.com/eng/support/additional\\_features/system\\_storage](http://dune-hd.com/eng/support/additional_features/system_storage)

## HELPFUL TIPS (CONTINUED)

### Connecting Macs Running OS X to Dune HD Media Players via SMB Protocol

In both Mac OS X Server and Client editions (OS X 10.2x to 10.6x), Samba enables Macs to easily share files with Windows clients on the network and access Windows file servers. Thus, Macs with OS X 10.2x to 10.6x installed are fully compatible with all Dune HD media players via the SMB protocol. However, the Samba team has moved active development of the project to the stricter GPLv3 license, which prevents Apple from using the software commercially. Therefore, in Apple OS X Lion (10.7x) the standard SMB server was replaced with the proprietary Apple SMBX server, which is compatible with Microsoft's SMB2 version (Windows Vista/7/8), but not with the standard SMB protocol Dune HD utilizes.

If you are running OS X versions 10.2x to 10.6x you will not have any problems connecting via SMB to your Dune HD media player. However, if you are running OS X Lion 10.7x (or later) you cannot access the SMB server on your Mac from the Dune HD player. However, there is a solution! To solve this problem simply download and install the free SMBUp application <http://eduo.info/apps/smbup> on your Mac. After the application is installed, compatibility with standard SMB shares will be restored on your Mac and you may connect to Dune HD media players without limitations.

**IMPORTANT NOTE:** Though Dune HD does everything possible to support applications that extend or enhance the functionality of our products, we do not provide support for third-party software. If you have any problems or questions with functionality of SMBUp, please contact the creators of the software.

### How to Set up NFS Server on a Mac

If you are not familiar with using Terminal on a Mac, you may set up NFS server on your Mac by using a free and easy-to-use application called NFS Manager.

To download the NFS Manager application, follow the link below:  
<http://www.bresink.com/osx/NFSManager.html>

# 05.

## DUNE HD PRODUCT MATRIX



# DUNE HD PRODUCT MATRIX



Dune HD Model	Max	Duo	Smart D1	Smart H1	Smart B1
<b>Package content</b>					
Power Supply	Internal	Internal	External (12V)	External (12V)	External (12V)
Remote Control	Yes	Yes	Yes	Yes	Yes
HDMI cable	Yes	Yes	Yes	Yes	Yes
AV cable	Yes	Yes	Yes	Yes	Yes
Ethernet cable	No	No	No	No	No
IR Extender	No	No	No	No	No
Wi-Fi antenna	No	No	No	No	No
Quick Start Guide	Yes	Yes	Yes	Yes	Yes
<b>Unit parameters</b>					
Unit dimensions without legs (W x D x H), mm	429 x 299 x 56	429 x 299 x 56	142 x 276 x 56	142 x 276 x 56	142 x 276 x 56
Unit dimensions with legs (W x D x H), mm	429 x 299 x 65	429 x 299 x 65	142 x 276 x 65	142 x 276 x 65	142 x 276 x 65
Gift Box dimensions	140 x 365 x 500	140 x 365 x 500	270 x 100 x 325	270 x 100 x 325	270 x 100 x 325
Gross weight, kg	5.75	5.66	2.74	2.75	2.97
Net weight, kg	4.24	4.16	1.38	1.39	1.64
Country of origin	Taiwan	Taiwan	Taiwan	Taiwan	Taiwan
<b>Hardware equipment</b>					
Media Processor Manufacturer	Sigma Designs	Sigma Designs	Sigma Designs	Sigma Designs	Sigma Designs
Media Processor Model	SMP8642	SMP8642	SMP8643	SMP8643	SMP8642
RAM	512	512	512	512	512
Flash Memory	256	256	128	128	128
BD-Loader	Yes	No	No	No	Yes
HDD Installation	Int. Rack/USB	Int. Rack/USB	Internal/USB/eSATA	Int. Rack/USB/eSATA	USB/eSATA
Number of Internal HDDs	1	2	1	1	0
Internal HDD Form Factor	3.5"	3.5"	3.5"	3.5"	No
USB 2.0 Ports	3	3	3	3	3
USB 2.0 Slave	No	No	Yes	Yes	Yes
USB 3.0 Slave	No	No	No	No	No
Internal SD Card Reader	Yes	Yes	Yes	Yes	Yes
Slot for Extension Boards	Yes	Yes	No	No	No
Wi-Fi module	External*	External*	External*	External*	External*
<b>Connectivity</b>					
HDMI	v1.3a	v1.3a	v1.3a	v1.3a	v1.3a
CVBS	Yes	Yes	Yes	Yes	Yes
Y/Pb/Pr	Yes	Yes	Yes	Yes	Yes
S-Video	Yes	Yes	No	No	No
Optical S/PDIF	Yes	Yes	Yes	Yes	Yes
Coaxial S/PDIF	Yes	Yes	No	No	No
Analog 7.1 Audio Output	Yes	Yes	No	No	No
Analog 2.0 Audio Output	Yes	Yes	Yes	Yes	Yes
IR Extender Port	No	No	No	No	No
I2C Port	Yes	Yes	Yes	Yes	Yes

# DUNE HD PRODUCT MATRIX



Dune HD Model	Max	Duo	Smart D1	Smart H1	Smart B1
<b>External Storage Support</b>					
Maximum HDD capacity	No Limitations	No Limitations	No Limitations	No Limitations	No Limitations
EXT2/EXT3/FAT/FAT32/NTFS Format	Yes	Yes	Yes	Yes	Yes
EXT2/EXT3/NTFS Support	Read and Write	Read and Write	Read and Write	Read and Write	Read and Write
HFS/HFS+ Format	No	No	No	No	No
HFS/HFS+ Support (without journaling)	Read and Write	Read and Write	Read and Write	Read and Write	Read and Write
Работа с ФС HFS/HFS+ Support (with journaling)	Read	Read	Read	Read	Read
<b>Optical Storage Support</b>					
Commercial DVD Video	Yes	Yes	Yes***	Yes***	Yes
Burned DVD Video	Yes	Yes	Yes***	Yes***	Yes
DVD Audio	No	No	No	No	No
DVD DATA	Yes	Yes	Yes***	Yes***	Yes
CDDA	Yes	Yes	Yes***	Yes***	Yes
DTS-CD	Yes	Yes	Yes***	Yes***	Yes
CD DATA	Yes	Yes	Yes***	Yes***	Yes
SACD	No	No	No	No	No
Commercial Blu-ray Video	Yes	Yes	Yes***	Yes***	Yes
Burned Blu-ray Video	Yes	Yes	Yes***	Yes***	Yes
Blu-ray DATA	Yes	Yes	Yes***	Yes***	Yes
<b>File structures and ISO Support</b>					
DVD-ISO, VIDEO_TS	Full Support	Full Support	Full Support	Full Support	Full Support
Blu-ray ISO, BDMV	Full Support/BD-Lite	Full Support/BD-Lite	Full Support/BD-Lite	Full Support/BD-Lite	Full Support/BD-Lite
<b>Ethernet protocols</b>					
Samba Server	Yes	Yes	Yes	Yes	Yes
Samba Client	Yes	Yes	Yes	Yes	Yes
Samba Browser	Yes	Yes	Yes	Yes	Yes
NFS Server	No	No	No	No	No
NFS Client	Yes	Yes	Yes	Yes	Yes
NFS Browser	No	No	No	No	No
FTP Server	Yes	Yes	Yes	Yes	Yes
FTP Client	No	No	No	No	No
FTP Browser	No	No	No	No	No
<b>Supported Video Modes</b>					
PAL/NTSC (i/p)	Yes	Yes	Yes	Yes	Yes
720p	Yes	Yes	Yes	Yes	Yes
1080 (i/p)	Yes	Yes	Yes	Yes	Yes
Standard PC Resolutions	Yes	Yes	Yes	Yes	Yes

# DUNE HD PRODUCT MATRIX



Dune HD Model	Max	Duo	Smart D1	Smart H1	Smart B1
<b>HDMI Output Options</b>					
8/10/12bit Color Space	Yes	Yes	Yes	Yes	Yes
YUV/RGB	Yes	Yes	Yes	Yes	Yes
Autoframerate Feature	Yes	Yes	Yes	Yes	Yes
Autoframerate modes (24/50/60Hz)	Yes	Yes	Yes	Yes	Yes
<b>Video Codecs Support</b>					
MPEG-2	Yes	Yes	Yes	Yes	Yes
MPEG-4	Yes	Yes	Yes	Yes	Yes
Xvid	Yes	Yes	Yes	Yes	Yes
WMV9	Yes	Yes	Yes	Yes	Yes
VC-1	Yes	Yes	Yes	Yes	Yes
H-264	Yes	Yes	Yes	Yes	Yes
<b>Video Containers Support</b>					
MKV	Yes	Yes	Yes	Yes	Yes
MPEG-TS	Yes	Yes	Yes	Yes	Yes
MPEG-PS	Yes	Yes	Yes	Yes	Yes
M2TS	Yes	Yes	Yes	Yes	Yes
VOB	Yes	Yes	Yes	Yes	Yes
AVI	Yes	Yes	Yes	Yes	Yes
MOV	Yes	Yes	Yes	Yes	Yes
MP4	Yes	Yes	Yes	Yes	Yes
QT	Yes	Yes	Yes	Yes	Yes
ASF	Yes	Yes	Yes	Yes	Yes
WMV	Yes	Yes	Yes	Yes	Yes
<b>Audio Formats Support</b>					
AC3 (Dolby Digital)	Yes	Yes	Yes	Yes	Yes
EAC3 (Dolby Digital Plus)	Yes	Yes	No	No	Yes
Dolby True HD	Yes	Yes	No	No	Yes
DTS/DTS-WAV	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
DTS HD High Resolution Audio	Yes	Yes	No	No	Yes
DTS HD Master Audio	Yes	Yes	No	No	Yes
LPCM/Multichannel	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
MPEG/MP3/MPA	Yes	Yes	Yes	Yes	Yes
AAC/Multichannel	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
WMA/WMAPro	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
APE/Multichannel	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
FLAC/Multichannel	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
WAV Pack	Yes	Yes	Yes	Yes	Yes
ALAC	Yes	Yes	Yes	Yes	Yes
Ogg/Vorbis	Yes	Yes	Yes	Yes	Yes

# DUNE HD PRODUCT MATRIX



Dune HD Model	Max	Duo	Smart D1	Smart H1	Smart B1
<b>HDMI Audio Output (Bitstream)</b>					
AC3 (Dolby Digital)	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1
EAC3 (Dolby Digital Plus)	Up to 7.1	Up to 7.1	No	No	Up to 7.1
Dolby True HD	Up to 7.1	Up to 7.1	No	No	Up to 7.1
DTS	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1
DTS HD High Resolution Audio	Up to 7.1	Up to 7.1	No	No	Up to 7.1
DTS HD Master Audio	Up to 7.1	Up to 7.1	No	No	Up to 7.1
<b>HDMI Audio Output (PCM)</b>					
AC3 (Dolby Digital)	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1
EAC3 (Dolby Digital Plus)	Up to 7.1	Up to 7.1	No	No	Up to 2.0
Dolby True HD	Up to 7.1	Up to 7.1	No	No	Up to 2.0
DTS	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1
DTS HD High Resolution Audio	Up to 7.1	Up to 7.1	No	No	Up to 2.0
DTS HD Master Audio	Up to 7.1	Up to 7.1	No	No	Up to 2.0
<b>S/PDIF Audio Output (Bitstream)</b>					
AC3 (Dolby Digital)	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1
EAC3 (Dolby Digital Plus)	Up to 5.1 (Core)	Up to 5.1 (Core)	No	No	Up to 5.1 (Core)
Dolby True HD	Up to 5.1 (Core)	Up to 5.1 (Core)	No	No	Up to 5.1 (Core)
DTS	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1	Up to 5.1
DTS HD High Resolution Audio	Up to 5.1 (Core)	Up to 5.1 (Core)	No	No	Up to 5.1 (Core)
DTS HD Master Audio	Up to 5.1 (Core)	Up to 5.1 (Core)	No	No	Up to 5.1 (Core)
<b>S/PDIF Audio Output (PCM)</b>					
AC3 (Dolby Digital)	Up to 2.0	Up to 2.0	Up to 2.0	Up to 2.0	Up to 2.0
EAC3 (Dolby Digital Plus)	Up to 2.0	Up to 2.0	No	No	Up to 2.0
Dolby True HD	Up to 2.0	Up to 2.0	No	No	Up to 2.0
DTS	Up to 2.0	Up to 2.0	Up to 2.0	Up to 2.0	Up to 2.0
DTS HD High Resolution Audio	Up to 2.0	Up to 2.0	No	No	Up to 2.0
DTS HD Master Audio	Up to 2.0	Up to 2.0	No	No	Up to 2.0
* - Optional Dune HD Air Wi-Fi stick required					
** - Optional extension board required					
*** - Optional extension module Dune HD BE required					

# 06.

## CONCLUSION



# CONCLUSION AND CONTACTS

BY CREATING AN ENTERTAINMENT EXPERIENCE WITH DUNE HD MEDIA PLAYERS, YOUR CUSTOMERS WILL BE PULLED INTO THE EXCITING AND ENGAGING WORLD OF MOVIES AND MUSIC.

Dune HD is passionate about bringing you or your customers the best universal media players on the market. Your happiness and success is our metric for success! Please do not hesitate to call or email with your questions.

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**For more examples of how Dune HD works in various home environments, or questions about the right products for your customers, please contact us.**

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PHONE: [1-908-751-4340](tel:1-908-751-4340)

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# NOTES:

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