

The Voyager 3000 offers superior performance with enhanced digital cable features and capabilities that gives your customers the latest in digital cable entertainment at a price/performance value you can appreciate.

Dual-Processors

Advanced Graphics

VOD & PPV Enabled

Small Footprint

HOW INTERACTIVE BECOMES INTERACTION.



VOYAGER 3000

The Voyager 3510HD HDTV enabled digital set-top is ready to take your entertainment experience to the next level with the highest HDTV resolution available and decoding capabilities that converts various HD/digital/analog cable TV formats on-the-fly for superior picture quality, every time.

Graphics Over HD

Video Up/Down Conversion

Aspect Ratio Controls

DVI Connectivity w/HDCP

THE PICTURE PERFECT PLATFORM FOR HIGH DEFINITION DIGITAL CABLE.



VOYAGER 3510HD

The Voyager 4000 HD-DVR, revolutionizes the standard definition of cable with an exciting new world of high definition interactive entertainment. This dual-tuner digital video recorder set-top features an integrated high-definition (HD) decoder and a robust Hard Disk Drive (HDD) for digital video recording capabilities that will truly redefine the cable experience.

Dual-Channel Reception

Dual MPEG-2 Decoders

Hard Disk Drive (HDD)

Time-Shift Capabilities

INNOVATING DIGITAL CABLE ENTERTAINMENT TIME AND TIME AGAIN.



VOYAGER 4000 HD-DVR

VOYAGER 4000 HD-DVR — Features



- Integrated Personal Video Recording
- Record up to 6 hours of your favorite programming per disc
- Easy-to-use, VCR-like functionality
- Dual-tuners for crisp and dynamic channel browsing
- Some other unique feature or capability, exclusive to 4000

VOYAGER 3510HD — Features

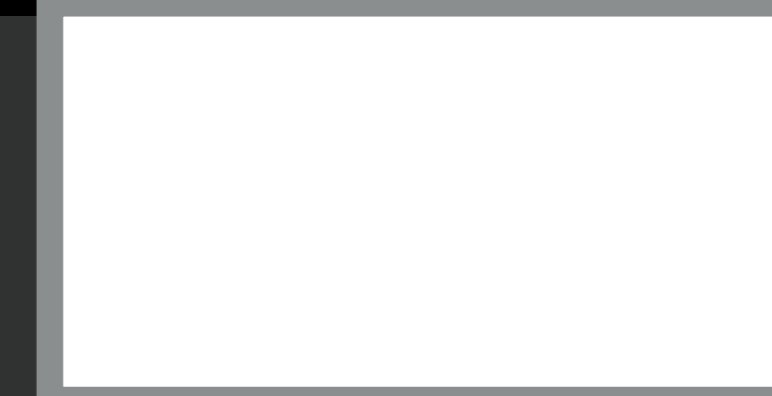


- Graphics over High Definition (HD)
- Decodes various HD/digital/analog cable TV formats
- Video up/down conversion for maximum picture quality
- Aspect ratio controls to meet your viewing needs.
- DVI connectivity with HDCP

VOYAGER 3500 — Features



- MOD, PPV, Impulse PPV, Web browsing functionality
- Integrated internal IR Blaster and a variety of A/V solutions
- Dual-processor core for increased digital capabilities
- Four-digit tuning to accommodate expanded programming
- Compliant with Harmony/DVB/DES Decryptor Codecs.



Visit pioneerdigital.com or call (800) 421-8450 to find out how Pioneer's Voyager Line of digital cable set-tops can turn your interactive digital cable services into true interaction.

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VOYAGER 4000 HD-DVR



HIGH DEFINITION DIGITAL VIDEO RECORDER CABLE SET-TOP BOX

The Voyager® 4000 HD-DVR by Pioneer will revolutionize the standard definition of cable with an exciting new world of high-definition interactive entertainment capabilities.

The latest entry in the Voyager line of digital set-tops, this high-definition (HD) digital video recorder (DVR) set-top features an integrated HD decoder and high-capacity Hard Disk Drive (HDD) for crisp and dynamic digital video recording capabilities that will truly redefine the cable experience.

With the Voyager 4000 HD-DVR's dual channel reception capabilities (analog/digital), in concert with its dual MPEG-2 decoders and hard disk drive, provides seamless content storage with DVD-like controls for time-shift capabilities, enabling viewers to store hours of their favorite entertainment directly on the set-top.

Your customers can watch their favorite cable programming in eye-popping, HD color and clarity— sports, special events, movies, favorite series— *whatever they want, when they want it!*

Redefining the digital entertainment experience is what the Voyager 4000 HD-DVR is all about— an all-in-one digital tour-de-force of advanced cable technologies and features that puts the power of control into your customer's hands.



VOYAGER 4000 HD-DVR

FEATURES AND SPECIFICATIONS

Program Storing Capabilities: Dual-tuner capabilities allow subscribers to view high-definition (HD) or standard-definition (SD) programs from the hard drive, while tuning and decoding another HD or SD program, simultaneously.

Picture-in-Picture: Video in corner screen keeps viewers continuously connected to programming, enabling them to view both programs simultaneously. Digital Video Recording (DVR) features can be applied to both video windows.

Video Up and Down Conversion: Customer configurable controls enable the Voyager 4000 HD-DVR to output screen resolutions optimized for any display type— from standard definition to high definition in a variety of formats. Video feeds are auto detected and up-converted or down-converted based on the configured output.

Content Security: The Voyager 4000 HD-DVR comes equipped with Macrovision, DVI (HDCP 1.0), and IEEE-1394 with 5C.

Expanded Connectivity: In addition to DVI and IEEE-1394, the Voyager 4000 HD-DVR comes fully equipped with a host of useful connections including component, baseband, SPDIF, USB and S-Video.

Advanced Dual Processing Power: Providing optimum display of high-resolution graphics over HD video using a pallet of 65,000 colors.

Supports Leading Audio Standards: The Voyager 4000 HD-DVR set-top provides CD quality, Dolby® Digital Technology Audio. Analog to digital conversion provides for optimum enjoyment of home theater systems' Hi-Fi digital capabilities.

Operating System	Linux and Pioneer's OpenCable OCAP middleware
Processor	64-bit MIPS RISC processor
Frequency Range	54 MHz to 860 MHz
Modulation Format	ITU-T J.83 Annex B, 64/256 QAM
Copy Protection	Macrovision, HDCP, 5C
Digital Video Format	MPEG-2 Video Decompression – MP@ML, MP@HL Support for 480i, 480p, 720p and 1080i
Digital Audio Format	Dolby® Digital Technology
Downstream Control Signal	70 MHz to 130 MHz agile, QPSK modulation, 1.544 Mbps, 1 MHz bandwidth, Input level: -16 to +15 dBmV RMS
Upstream Control Signal	8 MHz to 26.5 MHz agile, QPSK modulation, 1.544 Mbps, 1 MHz bandwidth, Variable +60 dBmV RMS min.
Input/Output Features	DVI 1.0, S-Video output, Baseband Video and Audio (L/R) inputs, Baseband Output, RF IN/OUT, YPbPr, Baseband Audio (L/R), S/PDIF, Dual IEEE-1394, IR blaster, Smart Card support, USB (front panel)
Hard Drive	120GB Hard Drive
Memory	128MB SDRAM, 32MB Flash ROM, 16MB Encoding DRAM
Dimensions	406mm x 336mm x 81mm, 16 in. x 13.25 in. x 3.2 in.

VOYAGER 4000 HD-DVR

VOYAGER 3510 HD



THE PICTURE PERFECT SOLUTION FOR HIGH-DEFINITION CABLE

Redefining the digital cable entertainment experience is HDTV's promise. Pioneer delivers on that promise and then some with the Voyager® 3510HD high-definition digital cable set-top.

This new feature rich, yet competitively priced HD enabled set-top offers superior high definition cable in multiple formats. Featuring a built-in high definition decoder with a variety of video outputs that can pass native 1080i signals (1,080 lines of resolution) or down-convert those signals based on display capabilities.

The Voyager 3510HD also has the ability to decode standard definition analog and digital cable sources for optimum viewing and image quality, regardless of the source signal.

High Definition. Beyond Definition.

Pioneer has developed the Voyager 3510HD with full graphics support over HD video to maximize the cable viewing experience and allow seamless integration of HD channels into a fluid yet powerful program lineup. HD monitor video formats are software selectable for multiple display options permitting the 3510HD's smart optimization technology to determine and pass the best HD signal based on content format.



VOYAGER 3510HD

FEATURES & SPECIFICATIONS

Advanced High-Definition Capabilities: Decodes HDTV/digital/analog cable TV formats to provide maximum picture quality to a variety of video displays (Plasma, HDTV-ready TV's, standard TV).

Powerful Processor Integration: Powered by the Broadcom® 7100 dual-processor CPU and the 7021 processor for HD decoding, the Voyager 3510HD offers "system-on-a-chip" functionality with dedicated power for both graphics processing over HD video and session-based applications. The 7100 multi-function CPU offers M PEG decoding and a higher level of DAVIC 1.2 implementation, all on one chip.

Enhanced Memory: For greater processing power, the Voyager 3510HD is configured with 16MB RAM for applications/graphics, 2MB RAM for MPEG decoding (MP@ML or SD), 32MB RAM for HDTV MPEG decoding (MP@HL or HD), and 8MB Flash ROM.

Video Optimization: The Voyager 3510HD, through both hardware and software capabilities, is designed to optimize video output based on content format and monitor resolution selection.

A Host of Video Connections: The Voyager 3510HD supports DVI 1.0 with HDCP, S-video, Composite and Component video for a variety of video display formats and configurations.

Conditional Access and Signal Security: The Voyager 3510HD uses the PowerKEY™ multi-layer encryption system. Compliant with Harmony/DVB/and DES Decryptor Codecs.

Operating System	PowerTV® OS
Processor	Broadcom® BCM7100 DP; 81MHz clock, 85 MIPS BCM7021 Processor for HD decoding
Frequency Range	54 MHz to 860 MHz
Modulation Format	ITU-T J.83 Annex B, 64/256 QAM
Copy Protection	Macrovision, HDCP, 5C
Digital Video Format	MPEG-2 Video Decompression – MP@ML (ISO/IEC 13818-2), MP@HL; Variable bit-rate 1.5 to 15Mbps, Resolutions: 704 x 480, 352 x 480 and 544 x 480, MP@HL
Digital Audio Format	Dolby® AC3 (ATSC A/52), Musicam
Downstream Control Signal	DAVIC, 70 MHz to 130 MHz agile, QPSK modulation, 1.544/3.088 Mbps, 1/2 MHz bandwidth
Upstream Control Signal	DAVIC, 8 MHz to 26.5 MHz agile, QPSK modulation, 1.544 Mbps, 1/2 MHz bandwidth
Input/Output Features	USB, S/PDIF, Digital Audio output (analog/digital), Baseband Audio – (L/R) input, two sets Baseband Audio (L/R) – output, Baseband Video – pass through to Baseband output only, S-Video output, YPbPr, DVI 1.0 with HDCP, IR Blaster, Smart Card support (front panel)
Memory	16MB SDRAM, 8MB Flash ROM, 2MB MPEG
Dimensions	320mm x 240mm x 68.5mm, 12.6 in. x 9.375 in. x 2.7 in.

VOYAGER 3510 HD

VOYAGER 3000



TURNING INTERACTIVE TV INTO TRUE DIGITAL INTERACTION

With Pioneer's Voyager® 3000 series digital cable set-top, you have the key to deploying the digital cable entertainment and services your customers want, while unlocking the value potential of providing the latest in digital cable services and content.

Ready for today's digital trends and tomorrow's digital demands, this low-cost digital cable set-top offers robust power for the latest programming features and capabilities in an efficient, compact set-top design.

Powered by the Broadcom® BCM7100 dual-processor CPU chipset and an enhanced memory configuration, the Voyager 3000 series set-top generates dedicated processing power to both graphics processing and session-based applications.

Working in concert with Passport, Pioneer's premiere interactive application suite for digital set-tops, the Voyager 3000 series can readily deliver the latest in digital content and services. Whether it's Video-On-Demand, PPV, Impulse PPV, web browsing, e-mail or other session-based applications — the Voyager 3000 series set-top can bring the promise of digital cable to your customers, turning interactive TV into true interaction.



VOYAGER 3000

FEATURES & SPECIFICATIONS

Advanced Chip Integration: With a Dual-Processor CPU core chipset, the Voyager offers dedicated processing power to both graphics processing and session-based applications. In addition, the multi-functional CPU offers an MPEG decoder and a higher level of DAVIC 1.2 implementation, all on one chip, while decreasing the product's overall footprint by 33 percent.

Conditional Access and Signal Security: The Voyager 3000 series set-top uses the PowerKEY® multi-layer encryption system. Compliant with Harmony/DVB/and DES Decryptor Codecs.

More Channels, More Programming: With four-digit tuning capabilities, the Voyager 3000 series allows for thousands of channels of programming, enabling operators to offer customers expanded VOD, PPV, interactive and session or venue-based services.

Enhanced Memory Configuration: The Voyager 3000 series set-top ships standard with 16MB RAM for applications/graphics, 2 MB RAM for MPEG decoding, 8 MB Flash ROM and 4 KB NVRAM, the Voyager 3000 series offers reliable memory for greater digital set-top performance and capabilities.

Connectivity Options: The 3000 series supports USB, S-video, Composite video, baseband stereo and boasts an optional IEEE-1394 (firewire) port for peripheral hardware connectivity.

Operating System	PowerTV® OS
Processor	Broadcom® BCM7100 Dual-Processor
Frequency Range	54 MHz to 860 MHz
Modulation Format	ITU-T J.83 Annex B
Copy Protection	Macrovision
Digital Video Format	Video Decompression MPEG-2 – MP@ML (ISO/IEC 13818-2), Variable bit-rate 1.5 to 15Mbps, Resolutions: 704 x 480, 352 x 480 and 544 x 480, MP@HL
Digital Audio Format	Dolby® AC3 (ATSC A/52), Musicam, MPEG-1, PCM - PowerTV synthesized audio APIs
Downstream Control Signal	70 MHz to 130 MHz agile, QPSK modulation, 1.544 Mbps, 1 MHz bandwidth
Upstream Control Signal	8 MHz to 26.5 MHz agile, QPSK modulation, 1.544 Mbps, 1 MHz bandwidth
Input/Output Features	Baseband Video - input/output, Baseband Audio (L/R) - input/output, S-Video output, 3/4 Channel RF input/output (NTSC), USB, S/PDIF, VCR commander port (serial), IR control port
Memory	16MB SDRAM, 8MB Flash ROM
Dimensions	320mm x 240mm x 68.5mm, 12.6 in. x 9.375 in. x 2.7 in.

VOYAGER 3000

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VOYAGER 4000HD-DVR
VOYAGER 3510HD
VOYAGER 3000 SERIES