Home Theater at the Cutting Edge

Experience the cutting edge of home theater with the 7.2-channel TX-NR646 Network A/V Receiver, the first in its class to feature the revolutionary DTS:X™ and Dolby Atmos® multi-dimensional audio formats. Onkyo’s high-current amplification system drives your speakers to reproduce soundtracks with maximum impact and fidelity at 170 W/Ch. UltraHD video capability is equally impressive, with eight latest spec HDMI® terminals including dedicated HDCP 2.2 compatible inputs for premium 4K video content and two HDMI outputs for video in separate rooms. The TX-NR646’s high-grade 384 kHz/32-bit AKM DAC not only brings movies to life, but your Hi-Res and streamed music as well.

Conveniently stream music over built-in Wi-Fi®, Bluetooth, AirPlay, or internet music services including Spotify Connect and Pandora. Use the free Onkyo Remote app to stream audio stored on your mobile device, browse and select tracks from online services, and control playback in two zones. Plus, for fans of vinyl, the TX-NR646 has a phono equalizer input to connect a turntable.

HIGHLIGHTS

• DTS:X™ Compatible
• Supports Dolby Atmos® up to 5.1.2 Channels
• 170 W per Channel
• Hi-Current Amp Design for Authentic Sound Reproduction
• HDMI® 8 In/2 Out Including 1 Front (4K UltraHD / HDCP 2.2 / 4:4:4 Color)
• Bluetooth Audio / Wi-Fi® with Pandora, Spotify and AirPlay
• AccuEQ Room Acoustic Calibration

ADVANCED FEATURES

• New DTS:X™ New Generation Sound Format Ready
• Supports Dolby Atmos® Format for Existing Multidimensional Sound Experience
• 4K/60 Hz Capable HDMI® Terminals for UltraHD Entertainment®, including HDR and 4:4:4 Color Space
• Supports HDCP 2.2 for Future 4k Full HD Video Streaming and Broadcasting
• Built-in Wi-Fi® Certified Wireless LAN Capability
• Bluetooth® Version 2.1 + EDR Capability (Compatible Profile:A2DP v1.2, AVRCP v1.3) with Advanced Music Optimizer DSP Technology
• Internet Radio and Music Streaming Subscription Services Included (TuneIn Radio, Pandora®, Slacker®, SiriusXM® Internet Radio, Spotify, and Deezer®)
• Playback Compressed, Lossless, and Hi-Res Audio via Local Network (MP3, WMA, WAV, Lossless, FLAC, WAV, Ogg Vorbis, AAC, Apple Lossless, DSD, 5.6 MHz, LPCM®, and Dolby® TrueHD®)
• Proprietary AccuEQ Room Calibration with Mic Included
• Advanced Music Optimizer to Improve Compressed Digital Audio Quality (Bluetooth-Audio Included)
• Control and Stream with Free Onkyo Remote Streaming Apps for iPod touch®, iPhone®, iPad® and Android™ Devices™

AMPLIFIER FEATURES

• 170 W/Ch (6 Ohms, 1 kHz, 0.09% THD, 1 Channel Driven, FTC);
• 100 W/Ch (8 Ohms, 20 Hz–3 kHz, 0.08% THD, 2 Channels Driven, FTC)
• 2 Parallel Subwoofer Pre-Outs
• Location Numbered Speaker Terminals
• 1/4” Headphone Jack

PROCESSING FEATURES

• HDMI® Support for 4K/60 Hz and 4:4:4 Color Space, 3D, Audio Return Channel, DeepColor™, x.v.Color™, J. Lynn, Dolby Atmos®, Dolby® TrueHD, DTS:X™, DTS-HD Master Audio®, DVD-Audio, Super Audio CD, Multichannel PCM, and CEC
•双差分数字信号处理引擎
• 4 DSP Settings for Gaming, Rock, Sports, Action, and RPG
• Theater-Dimensional Virtual Surround Sound
• A/V Sync Control (Up to 500 ms in 10 ms Steps at 48 kHz)
• A/B Speaker Monitoring (Front / Rear)
• Mass Storage Class USB Memory Playback Capability

CONNECTION FEATURES

• 8 HDMI® Inputs (1 Front, 7 Rear) and 2 Outputs
• USB Port (Front) (S/V1.1)
• Powered Zone 2 and Zone 2 Line-Out for Distributed Audio Playback
• Hybrid Standby Function with HDMI Passthrough
• Zone 2 Volume Control
• Zone 2 Speaker Zone
• Multiple Zone Audio Sources
• HDMI® CEC Functionality
• HDMI® Auto Power On (HDMI AUTO POWER)

OTHER FEATURES

• Preprogrammed IR (Remote Interactive) Remote Control
• A-Form Listening Mode Memory
• Phase Matching Bass Boost for Deep Bass and Clear Mid-Range
• Virtual Surroundback Function
• Direct Mode
• Direct Mode
• Non-Scaling Configuration
• Decoding Formats: Dolby Atmos®, Dolby TrueHD, DTS:X™, DTS-HD Master Audio®, DVD-Audio, Super Audio CD, Multichannel PCM, and CEC
• Certified with DLNA Version 1.5
• Firmware Updates via Ethernet and USB
• Remote Access Via Onkyo Controller
• Mass Storage Class USB Memory Playback Capability
• Dual Band Wi-Fi® (2.4 GHz / 5 GHz)
• 3-Mode Display Dimmer (Normal/Dim/Dimmer)
• Certified with DLNA Version 1.5
• Hybrid Standby Function with HDMI Passthrough
• Tone Control (Bass/Treble)
• 8 Analog Audio Inputs
• 2 Component Inputs
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TX-NR646 7.2-Channel Network A/V Receiver

**SPECIFICATIONS**

**Amplifier Section**

<table>
<thead>
<tr>
<th>Power Output</th>
<th>All Channels</th>
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<tbody>
<tr>
<td>130 W/Ohm (6 Ohms, 1 kHz, 0.9% THD-N)</td>
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<tr>
<td>100 W/Ohm (8 Ohms, 20 Hz–20 kHz, 0.08% THD-N)</td>
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| Dynamic Power | 200 W/Ohm (Front) |
| 210 W (Front) |
| 120 W (Front) |

| THD+N (Total Harmonic Distortion + Noise) | 0.08% (20 Hz–20 kHz, Half Power) |

| Damping Factor | 60 (Front), 100 (Rear) |

| Input Sensitivity and Impedance | 200 mV/47 k-ohms (Line) |
| 3.5 mV/47 k-ohms (Phono MM) |

| Rated RCA Output Level and Impedance | 100 mV/2 k-ohms (Zone 2 Line Out) |
| 200 mV/2 k-ohms (Subwoofer Pre Out) |

**Video Section**

| Video | 1080p (1080p, 60 Hz, 0.7 Vp–p/75 Ohms) |
| 1080p/60Hz video resolution, 14-bit color space |

| DSD | 6.6 MHz, 192 kHz/24-bit Hi-Res |

<table>
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<tr>
<th>Audio Capability</th>
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Onkyo A/V receivers are engineered for universal Hi-Res compatibility and ease of use. Use the remote app to locate your 192/24 and 96/24 albums (including 5.6 MHz DSD playback) on PC or NAS and bask in the clarity, depth, and detail of high-resolution music. 384 kHz/32-bit Hi-Grade DAC

A premium-quality AK4458 digital-to-analog converter from Asahi Kasei unlocks the full potential of Onkyo’s amplification philosophy.

**Sound Reproduction**

High-instantaneous current enhances speaker control for accurate and dynamic audio reproduction. It’s the cornerstone of Onkyo’s amplification philosophy.

**DTS® X Compatible**

DTS-X is a next-generation object-based surround sound technology that includes height to deliver a fully-immersive listening experience to your room. DTS-X provides listeners the ultimate in flexibility, immersion, and interactivity.

**High-Current Amp Design for Authentic Sound Reproduction**

High instantaneous current enhances speaker control for accurate and dynamic audio reproduction. It’s the cornerstone of Onkyo’s amplification philosophy.

**HDMI® 8 In / 2 Out Including 1 Front (4K UltraHD / 4:4:4 / HDCP 2.2)**

The latest HDMI specification and HDCP 2.2 compatibility support the latest formats and technologies planned for Hollywood content. This latest HDMI spec offers a significant increase in bandwidth (up to 18Gbps) to support new Hollywood content. This Onkyo AVR enables transmission of High Dynamic Range (HDR) formats, and provides enhanced picture quality by simultaneously enabling greater detail for both the dark and bright parts of an image.

**Bluetooth Audio / Wi-Fi® with Pandora, Spotify, and AirPlay**

Stream virtually any audio from your smartphone, tablet, or PC to your home theater for clear and powerful sound. Available internet radio and music subscription services include Pandora, Spotify, and more.

**Dolby Atmos and DTS:X Compatible**

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