

# TX-NR686 7.2-Channel Network A/V Receiver



BLACK SILVER



## Mind-blowing entertainment every day of the week

With high-current Dynamic Audio Amplification driving your surround system to THX Certified Select™ cinema reference levels, you can transport your audience to the heart of the movie. DTS:X® and Dolby Atmos® soundtracks compliment the latest in 4K HDR video via HDMI® pass-through supporting 4K/60p, Dolby Vision™, HDR10, HLG, and the BT.2020 color standard. Now with cross-compatible 3D audio upmixing solutions from Dolby Surround and DTS Neural:X®, you can enjoy regular multichannel movies with spatially immersive sound. Cast music from mobiles to the receiver and other compatible systems in your home over Chromecast built-in, DTS Play-Fi®, or FlareConnect™ wireless multi-room platforms. AirPlay and Bluetooth® technology are also on board. Enjoy built-in streaming services as well Hi-Res Audio via network and USB, all with the dynamic and emotional sound only an Onkyo can deliver.

### HIGHLIGHTS

- THX® Certified Select™ cinema reference sound
- Supports 5.2.2-channel Dolby Atmos® and DTS:X® playback
- 165 W per channel
- HDMI® 7 in (1 front<sup>1)</sup> / Main Out, and Sub Out<sup>2</sup> supporting 4K/60 Hz, HDR10, HLG, Dolby Vision™, BT.2020, and HDCP 2.2 pass-through
- Dynamic Audio Amplification with 4-ohm speaker-driving capability
- 384 kHz/32-bit DAC and VLSC™ filtering for superior clarity
- Supports Chromecast built-in and works with the Google Assistant
- Dual-band Wi-Fi®, DTS Play-Fi®, AirPlay, Amazon Music, Spotify®, TIDAL, Deezer, TuneIn<sup>3</sup>
- FlareConnect™ wireless multi-room audio

### ADVANCED FEATURES

- HDMI terminals supporting HDR10, HLG, Dolby Vision™, BT.2020, 4K/60 Hz pass-through, and HDCP 2.2
- 5.2.2-channel Dolby Atmos playback and Dolby Surround upmixing for audio formats including DTS® codes
- DTS:X playback and DTS Neural:X® 3D upmixing supporting Dolby® formats
- AccuEQ Room Acoustic Calibration with AccuReflex phase alignment for Dolby Atmos-enabled speakers
- Supports Onkyo Controller app<sup>4</sup> for intuitive multi-room operation
- Stable 5 GHz/2.4 GHz Wi-Fi connectivity
- Chromecast built-in wireless audio streaming technology that works with the Google Assistant
- DTS Play-Fi multi-room audio with Onkyo Music Control App<sup>4</sup>

- AirPlay audio streaming from iTunes and iPad, iPhone, and iPod touch
- Hi-Res Audio playback including DSD 5.6 MHz/2.8 MHz<sup>5</sup>, 192 kHz/24-bit FLAC<sup>6</sup>, WAV (RIFF)<sup>6</sup>, AIFF, ALAC<sup>6</sup>, and Dolby® TrueHD<sup>7</sup>
- Supports Amazon Music, Spotify, TIDAL, and Deezer music streaming services and TuneIn internet radio
- FlareConnect multi-room audio distribution to compatible components
- Powered Zone 2 speaker outputs and Zone 2 line-output with DAC supporting digital<sup>8</sup> and analog audio playback
- Bluetooth® wireless technology for mobiles, laptops, and PCs (Version 4.1 + LE, Profile: A2DP v1.2, AVRCP v1.3)
- Advanced Music Optimizer improves compressed digital audio quality, including Bluetooth audio
- Support for front L/R bi-amping in a 5.2-channel speaker layout
- 480i de-interlacing (480i to 480p) via HDMI for legacy video formats

### AMPLIFIER FEATURES

- 165 W/ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC)
- Dynamic Audio Amplification delivers thrilling multichannel and stereo performance
- High-current power drives large speakers with 4-ohm resistance
- H.C.P.S. (High Current Power Supply) customized transformer
- VLSC (Vector Linear Shaping Circuitry) high-frequency noise removal (for front L/R channels)
- Non-phase-shift amplification circuitry for clarity and detail
- Discrete output stage circuitry for low distortion

### PROCESSING FEATURES

- Dolby Atmos and DTS:X reproduction (supports 5.2.2 channels)
- HDMI support for 4K/60 Hz, HDR10, HLG, Dolby Vision, 3D, Audio Return Channel, DeepColor™, x.v.Color™, LipSync, Dolby Atmos, Dolby TrueHD, DTS:X, DTS-HD Master Audio™, DSD, DVD-Audio, Super Audio CD (SACD), multichannel PCM, and CEC
- High-grade AKM (AK4458) 384 kHz/32-bit multichannel DAC
- PLL (Phase Locked Loop) jitter-cleaning technology for S/PDIF audio

- 32-bit Digital Signal Processing (DSP)
- Listening modes for gaming (Rock, Sports, Action, and RPG)
- Theater-Dimensional virtual surround function
- Direct Mode for audio reproduction close to original source quality
- Tone controls (bass/treble) for front L/R channels

### CONNECTION FEATURES

- 7 HDMI inputs (1 front) and 2 outputs (1 Main Out, 1 Sub Out)
- Powered USB terminal (5 V, 1 A) for audio playback
- 2 composite video inputs and 2 component video inputs
- 3 digital audio inputs (2 optical and 1 coaxial)
- 6 analog audio inputs, 1 stereo 3.5 mm analog input (front)
- Phono input (MM) and equalizer for turntable connection
- 2 subwoofer pre-outs
- 6.35 mm headphone jack (front)
- Speaker setup mic input (front)
- Speaker posts with screw knobs

### OTHER FEATURES

- Crossover adjustment for each channel (40/50/60/70/80/90/100/120/150/180/200 Hz)
- A/V Sync Control (up to 500 ms in 5 ms steps at 48 kHz)
- Graphical User Interface with overlaid On-Screen Display via HDMI
- Quick Setup Guide via GUI and easy connection diagram on rear panel
- Large input selector buttons
- Economical HDMI pass-through and Network Standby functions
- IP control support for home automation systems
- 3-mode display dimmer (normal/dim/dimmer)
- 40 FM/AM random presets
- Simple remote control

<sup>1</sup> Front HDMI input does not support 4K/60p/4:4:4/24-bit video, HDR10, HLG, Dolby Vision, or BT.2020. <sup>2</sup> HDMI Sub Out does not support ARC or CEC.

<sup>3</sup> Availability of services may vary with region. Subscription may also be required.

<sup>4</sup> Visit App Store or Google Play to check device and OS requirements and download free.

<sup>5</sup> Converted to PCM. Playback not guaranteed via wireless LAN. <sup>6</sup> Supported sampling rate via wireless LAN depends on network environment. ALAC supported up to 96 kHz. <sup>7</sup> Not guaranteed via wireless LAN. <sup>8</sup> Audio via HDMI inputs excluded.

# TX-NR686 7.2-Channel Network A/V Receiver

## THX® Certified Select™ reference sound

THX Certified Select guarantees the high-volume sound experienced at a commercial cinema in your home. To gain certification, amplifiers must pass severe THX bench-tests covering every aspect of audio performance. THX Certified Select components suit rooms where screen-to-seat viewing distance is about 3 meters and room volume around 57 cubic meters.



## Dolby Atmos® and DTS:X® with upmixing solutions

Object-based audio lets sounds play independently through any speaker, moving all around your audience so they feel 5.2.2-ch Dolby Atmos or DTS:X soundtracks with natural conviction. DTS Neural:X® and Dolby Surround upmixing solutions find spatial cues in legacy multichannel soundtracks and upmix them for 3D audio playback through your object-audio-ready speaker system. Both solutions offer cross-compatible support for common movie soundtracks, such as Dolby® Digital 5.1, Dolby® TrueHD, and DTS-HD Master Audio™, so you can enjoy more immersive 3D sound from your movie library as well as with supported video streaming services.



## Onkyo Controller app for easy multi-room management

Onkyo Controller app collects streaming services and network-attached audio into one intuitive interface. Control playback, navigate internet services, and distribute audio all over the home with ease.



## Chromecast built-in, now with the Google Assistant

Stream any music from your smartphone, laptop, or PC to the TX-NR686 with ease. Control playback with Chromecast-enabled apps you know and love from your iPhone, iPad, Android™ phone or tablet, Mac® or Windows® laptop, or Chromebook™. If you have a speaker device featuring the Google Assistant, such as the Onkyo Smart Speaker G3, you can cue, play, and control music playback on your TX-NR686 by voice.



## Ready for DTS Play-Fi® multi-room audio

DTS Play-Fi allows you to enjoy high-quality music from connected online services, networked media servers, and your device library over Wi-Fi® to any number of compatible products using the Onkyo Music Control App for iPad, iPhone, and Android smartphones/tablets. DTS Play-Fi can synchronize the music in every room. Each member of your family can use their own device to listen to their music in a room or group of rooms. DTS Play-Fi lets you structure a comprehensive multi-room ecosystem that satisfies virtually any need. For more information, visit [www.play-fi.com](http://www.play-fi.com).



## Wi-Fi, AirPlay, Spotify®, and Bluetooth®

Dual-band 5 GHz/2.4 GHz Wi-Fi assures stable connectivity so you can enjoy smooth streaming over AirPlay, the Spotify

app, and the local network. Bluetooth technology also provides simple wireless streaming from music applications.



## More streaming services and internet radio

Amazon Music, TIDAL, Deezer, and TuneIn are baked into the GUI, making it easy to select from music and radio programs with Onkyo Controller.



## FlareConnect™ wireless multi-room audio

FlareConnect shares audio from network and external audio input sources between compatible components. Enjoy effortless multi-room playback of LP records, CDs, network music services, and more with supported components and speaker systems. Music selection, speaker grouping, and playback management across the home are built into the Onkyo Controller app.



Note: External audio inputs supporting FlareConnect may differ depending on model. Please consult individual product specification for more information. Download Onkyo Controller free from the App Store or Google Play.

## Supports 4K HDR, BT.2020, 4K/60 Hz, and HDCP 2.2

Six rear HDMI® inputs support pass-through of 4K HDR in HDR10, HLG, and Dolby Vision™ formats. They handle the BT.2020 4K Video Standard, 4K/60 Hz playback, and HDCP 2.2 for premium content. Front HDMI connects video cameras or consoles, while rear Sub Out is ideal for connecting a projector.



## Give life to sound with Dynamic Audio Amplification

High-current power is proven by an ability to drive four-ohm speaker loads, which test the toughest multichannel amplifier. Heaps of muscle means superior control for fast dynamics and high energy. Non-phase-shift amps present a detailed and cohesive audio image, while VLSC™ eliminates high-frequency distortion for ultimate clarity of sound.

## Graphical User Interface with Easy Setup

With speakers and media players connected, plug in the AccuEQ mic and let the receiver GUI guide you through setup, from speaker calibration (including AccuReflex phase correction for Dolby Atmos-enabled speakers) through to network connection. The refined interface makes control simple and enjoyable.

## Powered Zone 2 and Zone 2 line-out

Powered Zone 2 speaker outputs let you send amplified audio sources, including network, S/PDIF, and analog, to a pair of speakers in another room. Line outputs can connect home cinema sources to a separate hi-fi system. Manage playback distribution with Onkyo Controller.

## SPECIFICATIONS

### Amplifier Section

<b>Power Output</b>	
All Channels	165 W/Ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC)
<b>Dynamic Power</b>	240 W (3 Ω, Front) 210 W (4 Ω, Front) 120 W (8 Ω, Front)
<b>THD+N (Total Harmonic Distortion + Noise)</b>	0.08% (20 Hz–20 kHz, Half Power)
<b>Input Sensitivity and Impedance</b>	200 mV/47 kΩ (Line) 3.5 mV/47 kΩ (Phono)
<b>Rated RCA Output Level and Impedance</b>	1 V/470 Ω (Subwoofer Pre Out) 200 mV/2.3 kΩ (Zone Line Out)
<b>Frequency Response</b>	10 Hz–100 kHz/+1 dB, -3 dB (Direct Mode)
<b>Tone Control</b>	±10 dB, 20 Hz (Bass) ±10 dB, 20 kHz (Treble)
<b>Signal-to-Noise Ratio</b>	106 dB (Line, IHF-A) 80 dB (Phono, IHF-A)
<b>Speaker Impedance</b>	4 Ω–16 Ω
<b>Video Section</b>	
<b>Input Sensitivity/Output Level and Impedance</b>	
Video	1.0 Vp-p/75 Ω (Component Y) 0.7 Vp-p/75 Ω (Component B/R) 1.0 Vp-p/75 Ω (Composite)

### Tuner Section

<b>Tuning Frequency Range</b>	
FM	87.5 MHz–108 MHz 87.5 MHz–107.9 MHz (Taiwan Model)
AM	522 kHz–1,611 kHz 530 kHz–1,710 kHz 530 kHz–1,710 kHz (Taiwan Model)
<b>FM/AM Preset Memory</b>	40 Stations

### General

<b>Power Supply</b>	AC 220–240 V~, 50/60 Hz AC 120 V, 60 Hz (Taiwan Model)
<b>Power Consumption</b>	570 W 580 W (Taiwan Model)
<b>No-Sound Power Consumption</b>	60 W
<b>Standby Power Consumption</b>	0.15 W
<b>Dimensions (W x H x D)</b>	435 x 173.5 x 379.5 mm
<b>Weight</b>	10.0 kg

### CARTON

<b>Dimensions (W x H x D)</b>	539 x 260 x 450 mm
<b>Weight</b>	12.5 kg

### Supplied Accessories

- Indoor FM antenna • AM loop antenna • Speaker setup microphone
- Quick Start Guide • Basic Manual • Remote controller
- AAA (R03) batteries x 2\*

\* Not included with Chinese models.



Text on receiver may vary with region.

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