

NP5 Prisma MK2 Design Brief



NP5 Prisma MK2 network player is the latest evolution of Primare's popular NP5 Prisma, a clever little device that provides complete Prisma network player control and connectivity technology to virtually any system with a digital input.

The development of the new model was necessitated primarily by the AKM chip factory fire, causing long-term disruption of the supply of the critical re-clocking chip at the heart of the NP5 Prisma design that allowed for the selection of output sampling frequencies.

In order to continue to make available one of our most popular models with the minimum of interruption, we have sourced a readily available chip and redesigned the circuit to maintain the performance of the original NP5 Prisma while allowing for MQA passthrough not possible with the original chip.

All features and functionality remain the same, with Spotify HiFi and Tidal Connect expected this summer to join the extensive list of connection and control features already available, including AirPlay 2, Bluetooth, Chromecast built-in, Roon Ready, Spotify Connect and a host of other features.

In addition to network connected hard drive control through the dedicated Prisma application, **NP5 Prisma MK2** also allows for volume adjustment and input selection for previous Primare models with RS232 inputs using the comprehensive **Prisma** application – making the **NP5 Prisma MK2** more than ever the network player for everyone.

Specifically designed to be small enough to slip inconspicuously into any system, **NP5 Prisma MK2** represents the best solution for both owners of any of our past products or of other brands with digital inputs, both stereo and multi-channel, to incorporate the latest stored and streamed digital media playback features.



Features shortlist:

- AirPlay 2
- Bluetooth
- Roon Ready
- Spotify Connect, with Spotify HiFi by future update
- Tidal Connect, by future update
- Chromecast built-in
 - Over 600 streaming services available, including Roon
 - Simplified network connection using the Google Home app
 - Voice control through Google Home devices and Google Assistant
- Multi-room/multi-zone connection and control through a variety of platforms: AirPlay 2, Spotify Connect, Chromecast built-in, Roon, and Prisma.
- Inputs: Wired (LAN) and Wireless (WLAN), and USB A input
- Prisma application for consistent high-performance connectivity of network connected hard drives for high resolution file playback up to 24/192kHz PCM and DSD128
- RCA and Toslink outputs, selectable 48, 96 or 192kHz output, Native and Fixed options, to connect to any DAC
- RS232 control connection with included RS232 cable allows for Prisma APP control on past Primare models even when playing through analog inputs: Volume control: Mute; Power on/off; Input selection - previous/next

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Introduction

Prisma is a connectivity and control platform, that consists of a bundle of technologies. The Prisma application is used primarily to setup operating features of any Prisma product and control network connected hard drives. The associated streaming services are all accessed directly from their respective applications, keeping the familiar user experience of those apps for the comfort of anyone in the household who may wish to use the system. This also allows for complete transparency when it comes to operating system and music service updates (no second- or third-party app development delays in adapting to the updates, or additional unintended consequences resulting from multiple layers of possibly conflicting software).

Connectivity

- Digital - USB-A
 - Sample rates up to PCM 24/192kHz and DSD128/5.6MHz
 - File formats: WAV, LPCM, AIFF, FLAC, ALAC, MP3, MP4 (AAC), WMA, OGG, DSD
- Network
 - Wired/LAN – Ethernet connection for wired network system connection
 - Wireless/WLAN - dual band wireless technology (WLAN IEEE 802.11 a/b/g/n and 802.11ac compliant)
- Streaming
 - Bluetooth – connects Apple, Android, and Windows devices directly for playback of either streamed or stored content from the associated device with lossy compression. Given the wide availability of this technology and lower resolution capabilities, Bluetooth is an easy way to stream content for informal listening.
 - AirPlay 2 – connects Apple devices over the WiFi network for playback of any streamed or stored content from the associated device with lossless compression. Apple Lossless Audio Codec is used, to allow streaming quality up to CD quality (44.1kHz/1140kbps) and is appropriate for more critical listening. Recent updates to iOS allow for playback of TIDAL HiFi Masters files for improved audio performance. AirPlay 2 further adds multi-room/multi-zone functionality within the AirPlay ecosystem.
 - Spotify Connect – connects any device (mobile or PC) with the Spotify application directly to that service over the WiFi network and allows for playback at the highest level offered by the required Premium service (up to 320kbps).
 - Chromecast built-in - offering the greatest level of connectivity and control options, compatible with Apple, Android and Google devices:
 - The associated Google Home application allows you to change the name of your primary device and helps you to connect the Prisma device to your WiFi network to allow the casting of hundreds of music streaming services.
 - Casting can be done from virtually any mobile device, as well as computers from the Chrome browser.
 - Chromecast built-in provides a direct connection between the Prisma device and the preferred music service through the network, therefore playback quality is limited (up to 24-bit/96kHz) only by the resolution provided by that service, meaning the possibility of higher resolution playback for critical listening from services like TIDAL HiFi and Qobuz, and Roon as an endpoint.



- Roon Ready functionality allows for the use of Roon's sophisticated digital music management software. Roon transforms the experience of browsing music. Artist photos, credits, bios, reviews, lyrics, tour dates, and composers are located automatically, then interconnected by links to build a surfable, searchable digital magazine about your collection.
And Roon finds all the same links between your personal files and the millions of tracks available on TIDAL and Qobuz, so you can start with the music you know, then explore and discover new music from the world beyond your collection.
In addition to music browsing, Roon is a multi-room, multi-user networked audio platform built to the exacting standards of audiophiles. It offers features like bit-perfect playback, DSD and PCM upsampling, multichannel playback, and signal path display.
Roon plays to a number of different types of devices on your home network and can be controlled from Mac, Windows, iOS, and Android.
- MQA passthrough allows for Tidal Master and MQA files from a NAS to passthrough for higher resolution processing by the connected DAC.
- Multi-room and multi-zone connectivity and control:
 - More than one device can be connected at a time
 - Content can be cast to any Chromecast built-in device on the network
 - Control of all functions can be accomplished from anywhere within the network
- Automatic Prisma firmware updating through Google Home application.
- Voice control through the Google Home speakers and Google Assistant.

Control

Once connected to your network, the Prisma application allows for the control of virtually all functions of any of our Prisma enabled products:

- Input Device Selection on linked devices only
- Search by artist, album, track, and title from stored media
- Playlist and Queue creation from stored media
- Playback functions: Play, stop, track forward and back, shuffle play, repeat single or all tracks, volume mute, volume adjustment either by tapping the -/+ icons
- Track information by pressing the album cover in the lower left corner:
 - Song: indicates the title of the song.
 - Album: indicates the title of the album
 - Artist: indicates the artists name
 - Playing from: indicates the source of the music file being played back
 - Track duration: indicates elapsed and remaining time
 - Format: indicates format of the music file being played.
 - Sample rate: indicates sample rate of the music file being played
 - Bit depth: indicate the number of bits for the playing track.
 - Bitrate: indicates bit rate of the music file being played
 - Fil size: indicates the files size.

System configuration NP5

Prisma allows for complete system configuration:

- Source – select media servers on your network to use



- Queue – add queue to playlist
- Playlist – create new playlist
- Zone – manage zones to connect with Prisma devices in other areas of the house
- Settings
 - Source settings
 - Add media server to your source screen.
 - Add music server to your source screen.
 - Audio Settings
 - Output - choose between variable or fixed volume.
 - Balance – to adjust the output balance between the left and right speaker
 - Startup volume – sets the volume level at a predetermined level upon turn on from standby.
 - Maximum volume – sets the maximum volume
 - Mute volume – sets the output level when muted, from 0 to any preferred setting
 - Digital output – Native or Fixed, to select between 48kHz, 96kHz and 192kHz settings for the digital output sample rate.
 - General Settings
 - RS232 Link allows you to setup the linked connection between your NP5 and the device you have connected to NP5 with the RS232 cable.
 - Factory reset - Allows you to reset the device to factory settings
 - Auto-standby – sets the amount of time without user interface action or signal from last selected source before the device automatically goes into standby
 - Streaming settings
 - Bluetooth settings
 - Visible – enable or disable Prisma device being visible to Bluetooth devices
 - Auto-connect – enable or disable automatic connection with Bluetooth devices
 - Airplay password – set AirPlay password
 - Information
 - App version - states the PRISMA apps version nr.
 - System information – Shows all Primare devices connected to the network, if they are connected by LAN or WiFi, their IP address, NET MAC, BT MAC and their firmware.



Technical Specifications



Digital outputs: coaxial, RCA; optical, Toslink

Output sample rates, selectable: 48, 96 or 192 kHz/24bit

Digital input: 1 x USB-A up to 192kHz/24bit; up to DSD128 (5.6MHz)

Network Connectivity

- 1 x Ethernet LAN port

- 2 x Internal antennas for Bluetooth and Wi-Fi

- LAN: 10/100Mbit Ethernet port

- WLAN: IEEE 802.11 a/b/g/n/ac compliant; 2.4/5GHz; b, g, n mode

Audio formats

- WAV, LPCM, AIFF, FLAC, ALAC, WMA, OGG: Up to 192kHz/24bit

- MP3, MP4 (AAC): Up to 48kHz/16bit, VBR & CBR 320kbps

- DSD: Up to DSD128 (5.6MHz)

Streaming

- AirPlay 2

- Bluetooth®

- Chromecast built-in

- Roon Ready*

- Spotify Connect®

- DLNA/UPnP

General Control: RS232

Power Consumption: Standby <2.9W; Operate <3.6W

Dimensions

143 x 125 x 36 mm (wxdxh) with connectors

143 x 120 x 36 mm (wxdxh) without connectors

Weight: 0.5 kg

Colour: Black

All specifications and features subject to change.

* Tidal Connect with future software update.



NP5 Prisma MK2 Operating Lights*

Colours (below colours dimmed while in standby)	LED 1 (standby led – left)	LED 2 (WIFI LED - centre)	LED 3 (play LED - right)
White flashing	Booting	N/A	N/A
White	Other streaming (Chromecast, airplay,)	N/A	Playing
Green flashing	NA	Ethernet cable found proceed with chrome cast setup	N/A
Green	Spotify connect	Ethernet cable set up	N/A
Blue flashing	N/A	No ethernet cable found, proceed with chrome cast setup (WIFI)	N/A
Blue	Bluetooth	WIFI connected	N/A
Red flashing	Countdown factory reset	Countdown factory reset	Countdown factory reset
Red	Factory reset/FW update in progress	Factory reset/FW update in progress	Factory reset/FW update in progress

