CH Precision 10 Series Digital Family Upgrade Path

The CH Precision 10 Series Digital Family represents a modular and methodical approach to high-performance digital audio. This guide outlines the architecture, upgrade path, and engineering rationale behind each stage of the system—from the foundational C10 DAC to the full six-box digital front end. Designed to evolve with the listener's needs, the 10 Series offers unmatched sonic precision and flexibility, allowing each component to build upon the last. Whether starting with a single unit or aiming for the ultimate reference setup, this guide provides a clear overview of how performance can be systematically elevated at every step.

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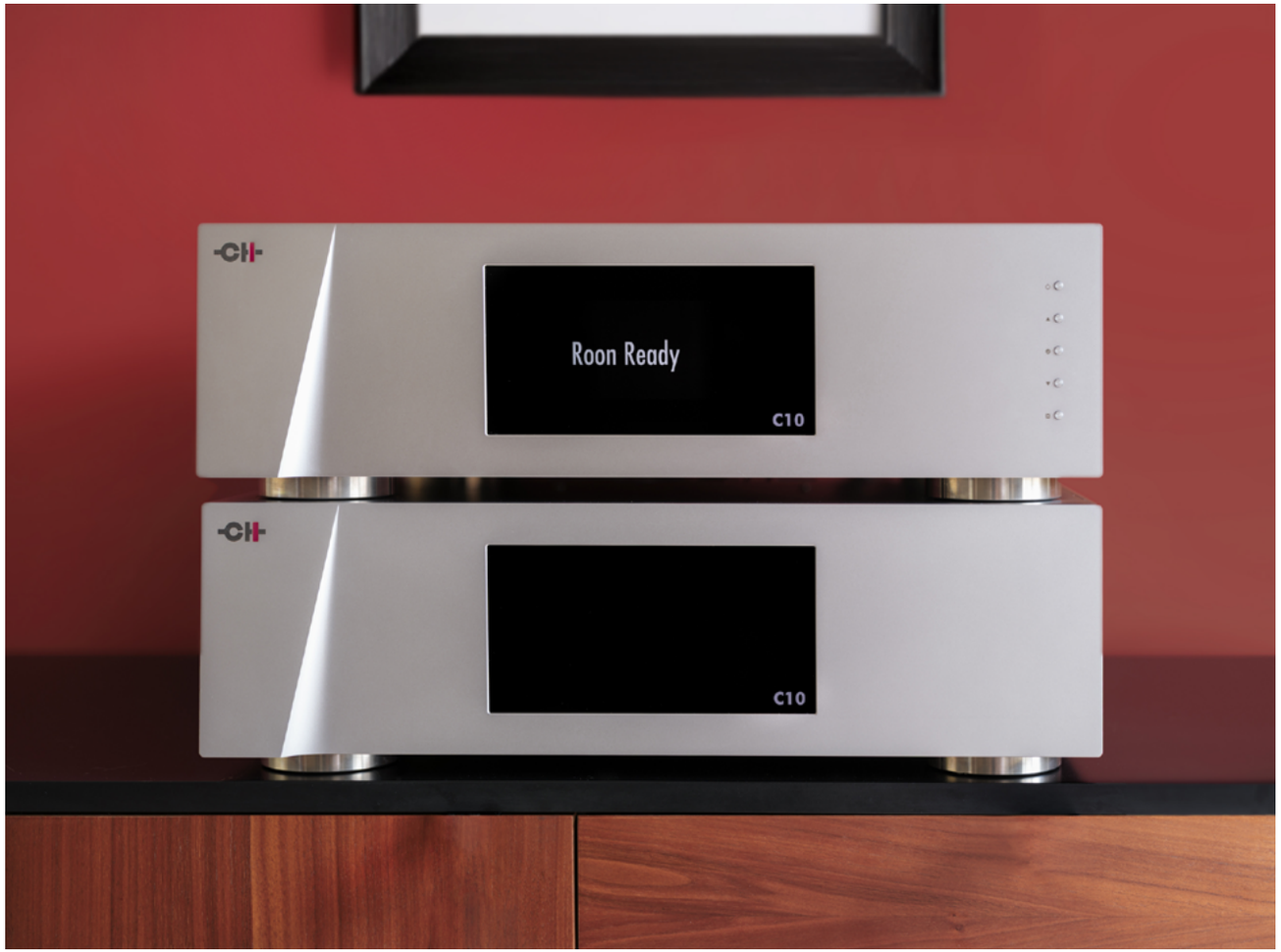

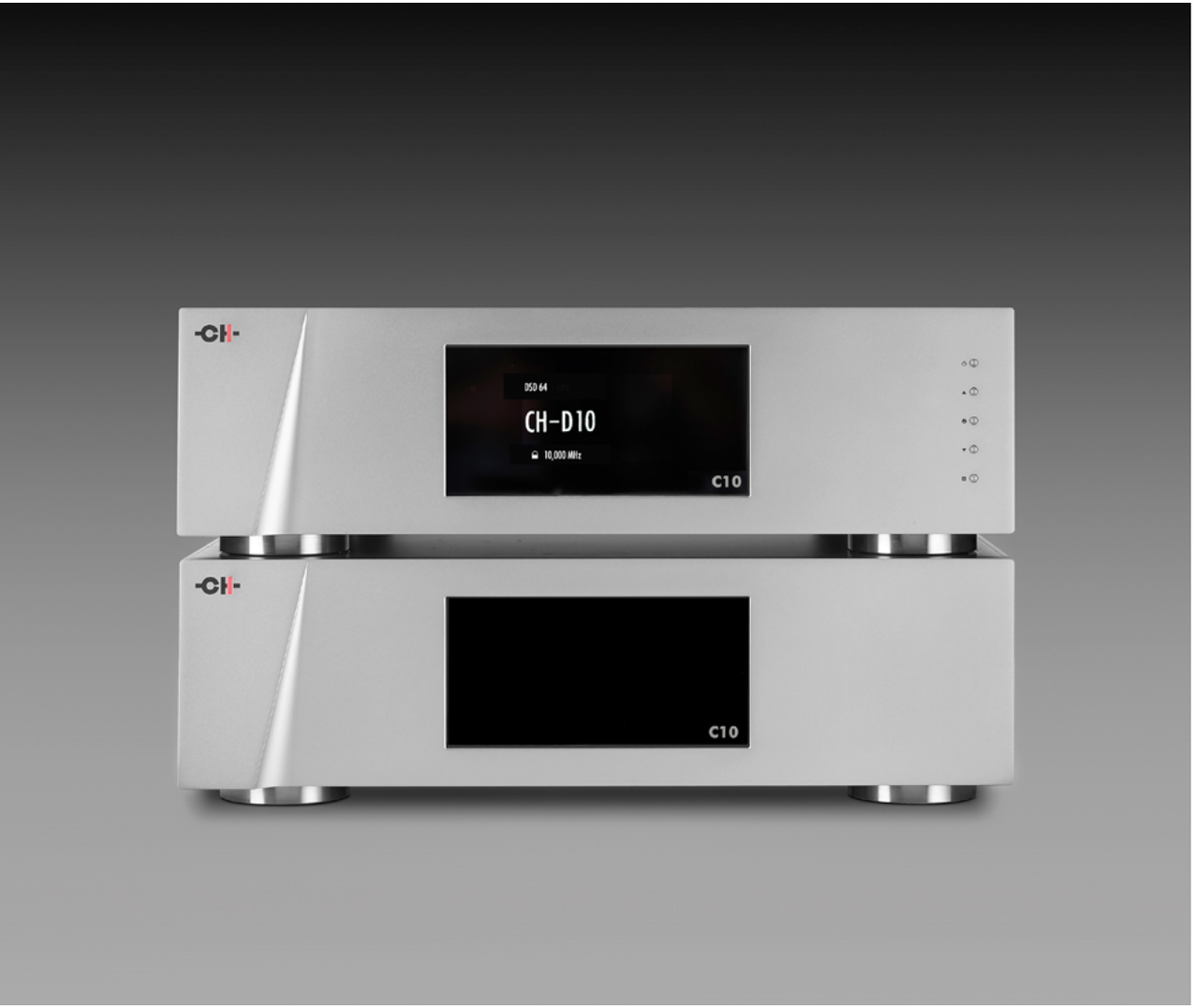

The C10 DAC

The foundation of the 10 Series Digital Family is the C10 DAC. In its most basic form, it is a two-box stereo DAC. Drawing on more than 30 years of digital engineering leadership, the CH Precision team designed the C10 DAC to deliver musical performance beyond anything previously available—at any price. Its digital engine is built around our proprietary PEtER Spline Upsampling filters and a new DSQ Phase Array configuration featuring eight DACs per channel. This architecture achieves an effective resolution of 2.833 MHz at 24-bit for Red Book CD, with virtually no pre- or post-ringing in what is currently the most time-coherent configuration available.

Additional advancements have been made in power supply technology, isolation, and clock design, culminating in a fully discrete, fully balanced analog stage that remains unmatched. The included power supply contributes to the system's low-noise operation—requiring just a single power cord. In this configuration, the C10 DAC incorporates three isolated ground planes—chassis/digital ground, clock ground, and signal/analog ground—each meticulously engineered to separate critical sections of the DAC and further reduce the noise floor.

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The C10 Conductor

The first recommended expansion of the C10 DAC is the addition of the C10 Conductor. This upgrade reconfigures the system by physically relocating the DAC boards and analog circuitry from the original unit into the new chassis. The two are then linked via CH Precision's proprietary ultra-low-noise CH-Link interface, allowing digital tasks to be performed in complete isolation before transmission to the analog DAC stage.

In this configuration, CH Precision's naming convention shifts to reflect the system's new architecture: the original C10 DAC becomes the C10 Conductor, responsible for all digital processing, source selection, and clock management; the newly added chassis becomes the C10 Master DAC, dedicated entirely to digital-to-analog conversion and the analog output stages.

This architectural separation delivers both measurable and audible improvements. By removing all digital processing from the DAC, its analog circuitry operates in an electrically quieter environment—dramatically reducing noise and jitter while enhancing resolution, timing accuracy, and musical realism. The C10 Conductor features its own dedicated power supply, further isolating digital and analog domains and minimizing potential interference across the system. Each unit operates independently, resulting in a total of two power cords in this configuration.

The C10 Conductor can be purchased alongside the C10 Master DAC as a four-chassis digital front end, or added later via a straightforward in-field upgrade. Either approach offers the same level of performance, with no price penalty for building the system in stages.

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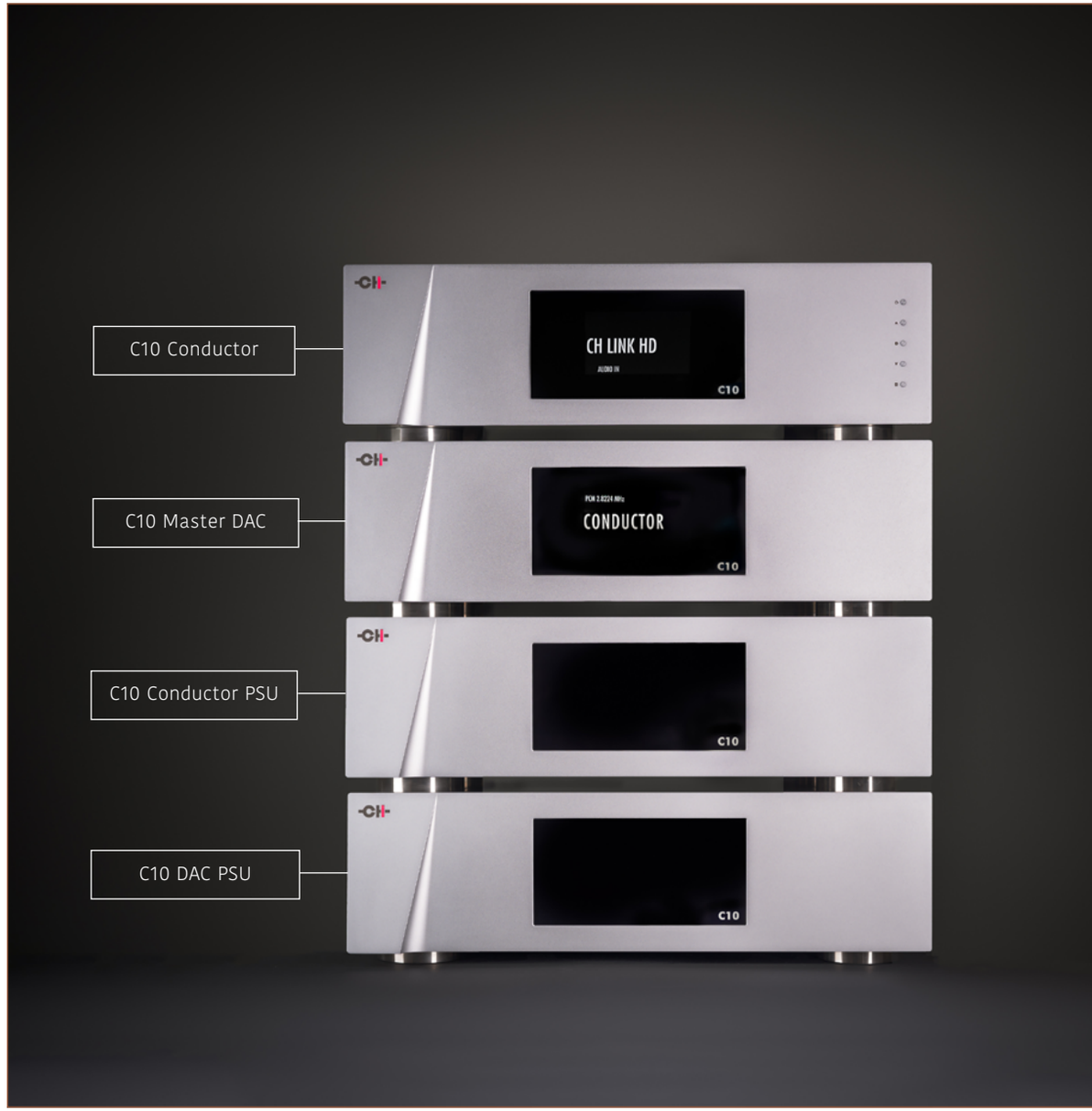

The T10 10MHz Reference Clock

To further enhance the performance of the four-chassis C10 Conductor and C10 Master DAC system, the next recommended upgrade is the addition of the T10 10 MHz Reference Clock. Although both the Conductor and Master DAC feature high-performance internal MEMS clocks, slight clock drift remains possible. The T10 is engineered to provide superior clock stability by delivering a 10 MHz reference signal, implemented using CH Precision's proprietary DPLL (Digital Phase-Locked Loop) architecture—unlike conventional analog PLL designs. DPLL enables tighter timing control and improved jitter rejection by operating entirely in the digital domain, offering greater immunity to noise and signal degradation. The sonic improvements are immediate and substantial, delivering enhanced timing accuracy and musical coherence. With the T10 added, the system expands to five chassis and requires three power cables.

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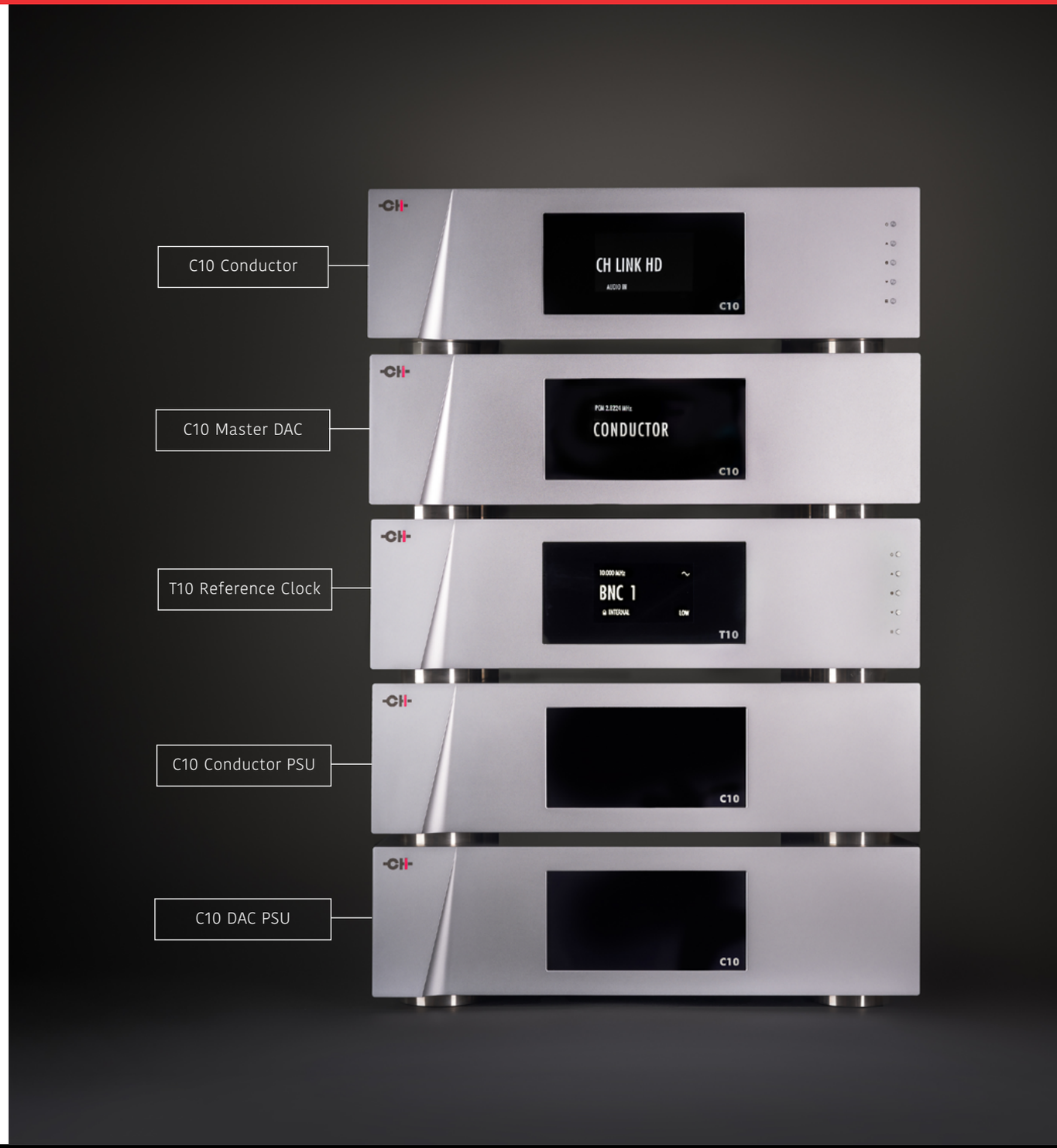
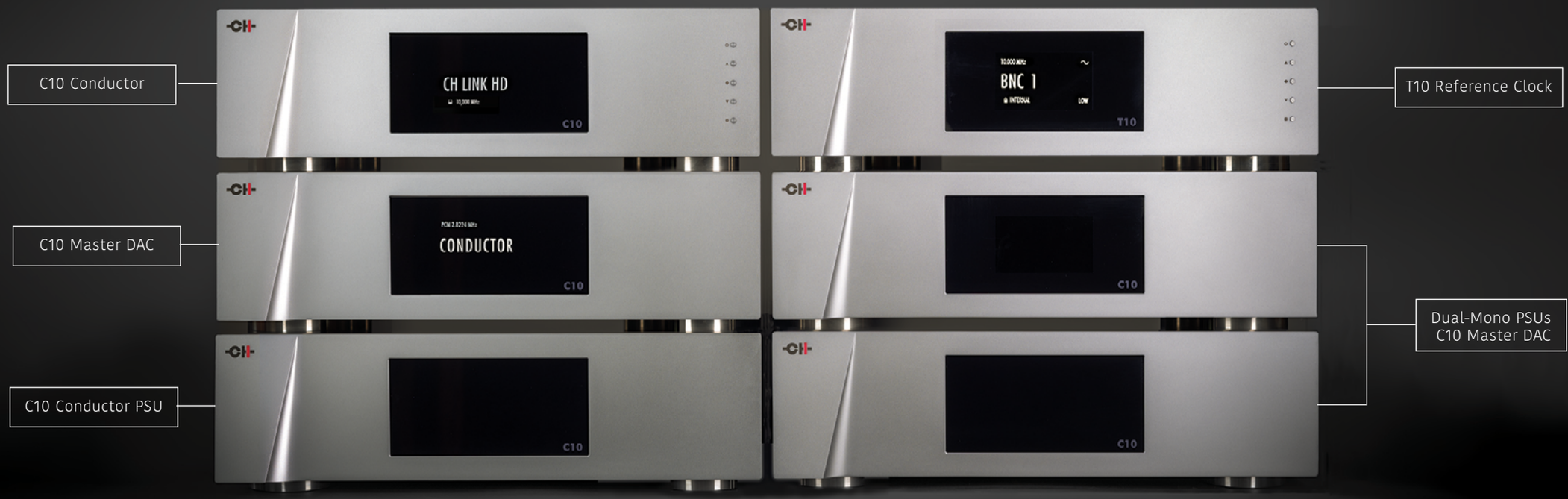


Mono C10 PSUs

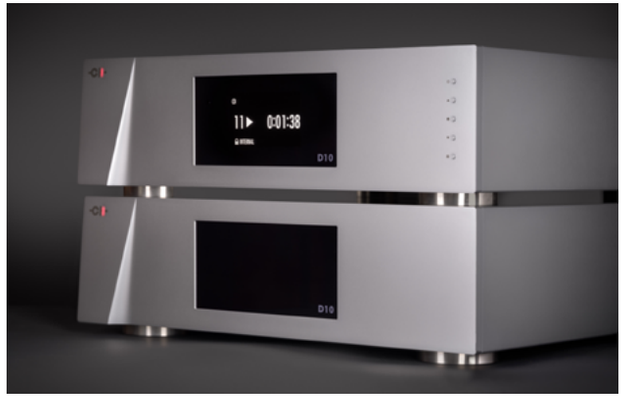
The final upgrade for the C10 Conductor and C10 Master DAC system is the addition of a second power supply dedicated to the Master DAC. This step separates the power feeds for the left and right channels by transferring two of the original connections from the first PSU to a newly added, identical unit. Each power supply now powers a single channel independently, ensuring complete electrical isolation between left and right signal paths. This refinement also extends the number of isolated ground planes from three to four, further lowering the noise floor and improving channel separation. The audible results are immediately apparent: greater dynamic expression, improved image stability, and enhanced spatial resolution. These benefits are especially significant when paired with fully dual-mono amplification systems, such as CH Precision's L10 Mono preamplifiers. The system now becomes a full six-chassis digital front end, requiring four power cables.

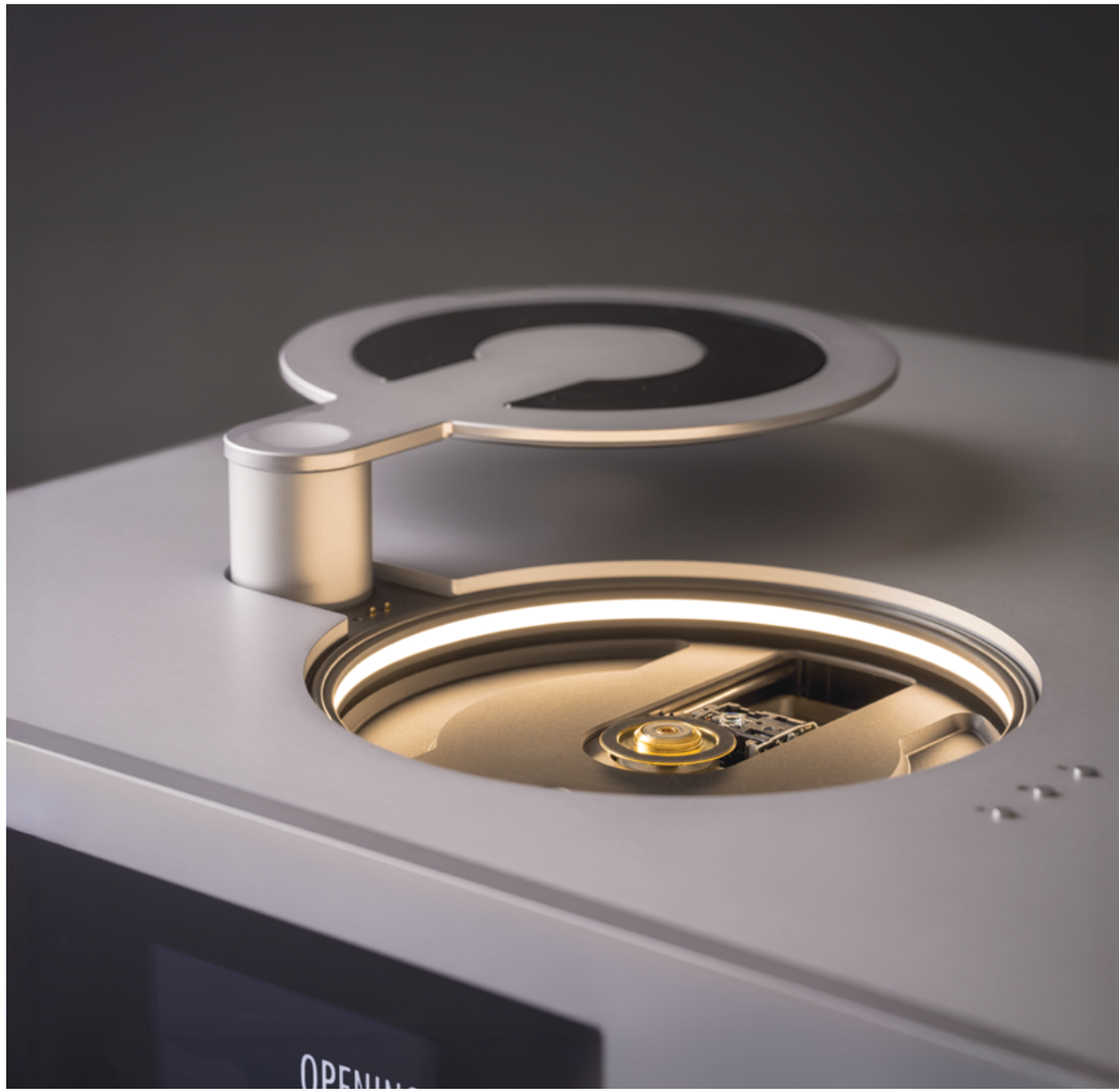


The D10 Reference Transport

For those who consider CD, SACD, or MQA-CD playback an essential part of their digital listening experience, the D10 Reference Transport is a highly recommended addition at any stage of system development. More than just CH Precision's most advanced transport, the D10 stands alone in the industry for its exceptional engineering, uncompromising design, and meticulous execution—resulting in a musical experience that is truly without parallel. At its core is CH's proprietary MORSE mechanism (Mechanically Optimized Reading & Stability Enhancement), entirely designed and engineered in-house to redefine standards of mechanical precision, stability, and data retrieval accuracy. The suspended transport platform features a composite structure—an aluminum skin over a dense brass core—offering superior vibration damping. Supported by alpha-gel isolators and weighing over 13 kilograms, the mechanism suppresses vibrations below 20 Hz, dramatically reducing mechanical noise and preserving digital signal integrity.

The D10 connects to the CH Precision digital ecosystem via the proprietary CH-Link interface for native disc playback, but it also serves as a world-class transport in non-CH systems. Whether compared to file-based playback or other disc transports, the sonic advantages are immediate—offering enhanced clarity, tonal depth, and temporal precision. Like other components in the 10 Series Digital Family, the D10 is a two-chassis product with a single power cable, integrating seamlessly into CH Precision or third-party systems alike.





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The 10 Series Digital System: Modular Design, Reference-Level Performance

The CH Precision 10 Series is built on a modular digital architecture, with each component engineered to perform at the highest level—either independently or as part of an integrated system. The journey begins with the C10 DAC, already the most musically accurate digital-to-analog converter available. From this foundation, performance scales upward: the C10 Conductor introduces centralized digital control and physical isolation; the T10 Reference Clock ensures absolute temporal coherence; and the D10 Reference Transport—featuring CH's proprietary MORSE mechanism—delivers unmatched optical disc playback.

This architecture is designed for seamless scalability. Whether starting with the C10 DAC alone or progressing to a full six-chassis digital front end, each upgrade offers tangible and measurable improvements in resolution, timing, and musical transparency. The addition of a second power supply, the Conductor, or the Master Clock yields meaningful gains in noise reduction, dynamic range, and sonic realism. The D10, compatible with both CH and third-party systems, completes the digital chain for those seeking the highest level of disc playback performance.