



MERGING+NADAC, MERGING+PLAYER,  
MERGING+POWER and MERGING+CLOCK  
are products created by Merging Technologies.

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# MERGING+CLOCK features

The MERGING+NADAC and MERGING+PLAYER offers fidelity and audio quality that has left many critics in awe. The MERGING+POWER pushes the envelope a little further by providing the optimum power conditions for each circuit. The MERGING+CLOCK eliminates the last possible performance compromise: The Master Clock.

Merging is all about eliminating compromises but offering a choice to meet different budgets. The CLOCK is therefore available as two editions:

## CLOCK

The Low Noise edition, offers extraordinary accuracy with a frequency stability of +/-50ppb. The state of the art in clocking performance.

## CLOCK-U

The Ultra-Low Noise edition, offers the almost unbelievable figure of +/-20ppb. The choice for those pursuing the ultimate!

- > The two MERGING+CLOCK editions get you to the pinnacle of accuracy by employing an instrument-grade crystal oscillator OXCO that is coupled to a Q Damping System. This reduces the effects of any mechanical vibrations that might be present in your listening environment.
- > Years of experience and research by Merging led to the discovery of these critical points - short-term clock stability and phase noise performance are exceptionally important for sound quality. MERGING+CLOCK provides the state-of-the-art solution for digital audio applications, which achieves 7E-13 grade short-term stability at subsecond and as low as -111dbc at 1Hz offset (CLOCK-U). More important than the technical specifications, the MERGING+CLOCK will stir the emotions and touch your heart with the purity of the sound.
- > High-precision clocks are supplied by a number of manufacturers and there are recognized standards for devices that are not part of a network. The MERGING+CLOCK provides three different connection types. The first is the RJ45 connector for RAVENNA/AES67 networks; follows a dedicated 625kHz specially adapted for a direct NADAC or PLAYER connection; then two 10MHz BNC connectors for other Hi-End components and finally four standard BNC Word Clock connectors for every sample rate from 44.1kHz to 1536kHz. That is 32 times 1FS!

- OPERATING TEMPERATURE  
 > RECOMMEND 0°C -55°C (APPROX. 30°F -130°F)
- OPERATING HUMIDITY  
 > RECOMMEND 20% RH -70% RH
- WARM UP  
 > 10 MIN USABLE  
 > CLOCK-U: 2 HOURS PERFECT  
 > CLOCK: 1 HOUR PERFECT
- FREQUENCY STABILITY  
 > CLOCK-U: +/-20ppb  
 > CLOCK: +/-50ppb
- 10MHz OUTPUT SHORT-TERM STABILITY  
 > CLOCK-U: TYPICAL 7E-13  
 > CLOCK: TYPICAL 2E-12
- 10MHz OUTPUT PHASE NOISE TYPICAL OUTPUTS  
 CLOCK-U / CLOCK  
 > -111dbc @ 1Hz -103dbc @ 1Hz  
 > -135dbc @ 10Hz -130dbc @ 10Hz  
 > -145dbc @ 100Hz -140dbc @ 100Hz  
 > -155dbc @ 1kHz -155dbc @ 1kHz  
 > -160dbc @ 10kHz -155dbc @ 10kHz
- 10MHz OUTPUT AMPLITUDE  
 > SINE >7dBm @ 50OHM LOAD
- NADAC /10MHz (N/10) OUTPUT SIGNAL  
 > LVTTTL FIXED 625kHz
- WORD CLOCK OUTPUT SIGNAL  
 > LVTTTL 44.1kHz -1.536MHz
- GB ETHERNET  
 > AES67/RAVENNA

# MERGING+CLOCK timing is everything.

Clocking of digital audio signals is vitally important to achieve the best possible fidelity. Merging's experience in dealing with the challenges of perfectly synchronizing digital devices is invaluable. The RAVENNA network technology makes it much easier to distribute super-accurate timing information to all connected devices, but why not go a stage further and make your Master Clock phenomenally accurate. The MERGING+CLOCK is not only designed to synchronize your RAVENNA network, it is also provided with a direct high performance connection to your MERGING+NADAC offering also automatic sample rate switching, with two 10MHz synchronous outputs for other high-end components and with a set of four Word Clock output for our professional friends.



**MERGING+CLOCK**



WITH AN INTERNAL SYNC SIGNAL SPLITTER THAT PROVIDES UP TO SIX DIGITAL AUDIO DEVICES WITH A WORD CLOCK SOURCE THAT DISTRIBUTES THE OUTPUT.

THE WORD CLOCK OUTPUT CAN BE SELECTED AS FOLLOWS:

|                        |   |            |    |          |
|------------------------|---|------------|----|----------|
| BASE SAMPLING RATE     | = | 44.1 kHz   | OR | 48 kHz   |
| 2 TIMES SAMPLING RATE  | = | 88.2 kHz   | OR | 96 kHz   |
| 4 TIMES SAMPLING RATE  | = | 176.4 kHz  | OR | 192 kHz  |
| 8 TIMES SAMPLING RATE  | = | 352.8 kHz  | OR | 384 kHz  |
| 16 TIMES SAMPLING RATE | = | 705.6 kHz  | OR | 768 kHz  |
| 32 TIMES SAMPLING RATE | = | 1411.2 kHz | OR | 1536 kHz |