



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

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# MERGING+CLOCK features

Merging is all about eliminating compromises but offering a choice to meet different budgets. The 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+CLOCK gets 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. Merging offers a choice of performance to match the budget and expectation. The MERGING+CLOCK LN offers extraordinary accuracy with a frequency stability of +/-25ppb but if the ultimate is your goal, the MERGING+CLOCK ULN version offers the almost unbelievable figure of +/-10ppb.

- > 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 3E-13 grade short-term stability at sub-second and as low as -120dBc at 1Hz offset (ULN). 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; two 10MHz BNC connectors for other Hi-End components and 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

- > 5 min usable; 20 min normal
- > ULN: 100min perfect LN: 30min perfect

#### FREQUENCY STABILITY

- > ULN: +/-10ppb LN: +/-25ppb

#### 10MHz OUTPUT SHORT-TERM STABILITY

- > ULN: Typical 3E-13 LN: Typical 7E-13

#### 10MHz OUTPUT PHASE NOISE Typical outputs

- |                       |                |
|-----------------------|----------------|
| Ultra Low Noise (ULN) | Low Noise (LN) |
| > 120dBc @ 1Hz        | 110dBc @ 1Hz   |
| > 140dBc @ 10Hz       | 130dBc @ 10Hz  |
| > 150dBc @ 100Hz      | 140dBc @ 100Hz |
| > 160dBc @ 1kHz       | 150dBc @ 1kHz  |
| > 165dBc @ 10kHz      | 160dBc @ 10kHz |

#### 10MHz OUTPUT AMPLITUDE

- > Sine >7dBm @ 50ohm Load

#### NADAC /10MHz (N/10) OUTPUT SIGNAL

- > LVTTTL Fixed 625kHz

#### WORD CLOCK OUTPUT SIGNAL

- > LVTTTL 44.1k -1.536MHz

#### GB ETHERNET

- > Merging 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**

NETWORK CONNECTION VIA ROUTER TO MERGING'S RAVENNA NETWORKED AUDIO DEVICE

MERGING+CLOCK

DEDICATED SYNCHRONIZATION INTERFACE FOR CONNECTING MERGING+NADAC OR MERGING+PLAYER

10MHz SYNC SIGNAL OUTPUT INTERFACE THAT CAN BE USED AS A SYNCHRONIZATION SOURCE FOR MANY DIGITAL HI-END DEVICES



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