

Heiko Körte - Redundant High Precision Timing Solution

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The NAMC-PTM holds all the logic that is needed to receive a clock or a pulse from a GPS receiver or the other MCH. The detection and the quality rating of these signals can also be done on the NAMC-PTM. In this scenario the NAT-MCH clock module is only used to buffer the generated clock signals and to distribute them to all AMCs via the backplane clocks.

The first of the two NAMC-PTMs is capable of generating and providing two reference signals (e.g. 1pps and 120MHz) to the first MCH via CLK1-RX and CLK3-RX using its local TCLKA/B lines. The MCH will send these clocks to all other AMC, arriving at their TCLKA and TCLKB. The MCH sends also these clocks to the redundant NAMC-PTM via CLK1-TX and CLK3-TX arriving at the PTM at TCLKC/D.

The second NAMC-PTM receives the clocks from the first NAMC-PTM via its TCLKC and TCLKD. It can decide at any time if it generates its clock locked to these clocks or locked to its own GPS reference.

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