

MetaWatch

Integrated tapping, high-resolution timestamping and aggregation — get insight into your network like never before.



1 ns
Timestamp Precision



GB
Deep Buffers



Tapping



Aggregation

MetaWatch is a powerful network application designed for Metamako's K-Series devices. It simplifies tapping networks, enables traffic capture with high-resolution timestamping, allows for advanced network monitoring and detailed network analytics. MetaWatch combines several components of a traditional network monitoring solution into one powerful device:

- Tapping with negligible latency impact
- Flow-control of aggregated captured traffic
- Time synchronisation
- Picosecond-precise timestamping
- Deep buffering
- Multi-port capture

MetaWatch provides all features with virtually no impact on the monitored network performance and enables a seamless stream of timestamped frames to storage and analytics tools.

MetaWatch is a pre-packaged, qualified, calibrated solution, giving customers confidence that they are capturing and timestamping all data on the network. MetaWatch replaces:

- 30 passive optical taps
- a packet broker/tap aggregation switch
- network timestamping cards
- media converters, patch panels, and all other Layer 1 switch use cases.

FEATURES	BENEFITS
→ Built in tapping	Eliminate the need for optical taps. Save rack space and remove unreliable, expensive and complex cabling.
→ Stream aggregation	Aggregate streams from multiple sources into a single stream for efficient hand off to data capture and analytics devices.
→ High-resolution ingress timestamping	Timestamp each incoming frame with a precision of 1 ns by a clock disciplined via NTP or PTP, optionally coupled with PPS.
→ Industry standard timestamp formats	Leverage standard absolute timestamp formats, not requiring keyframes, making development and integration easier. Also supported by major capture and analytics playforms.
→ Deep buffering	Smooth out traffic peaks to prevent frame loss via MetaWatch's large 8GB or 32GB buffers.
→ Ultra-low latency	Patch devices through the on-board matrix switch with 5 ns of pass-through latency —equivalent to a metre of fibre!
→ Upgradable	Include high-stability OCXO or Rubidium Atomic clock modules for improved oscillator accuracy and extended holdover stability.
→ Detailed per-port Ethernet statistics	Monitor the quality of the source interface directly for light levels and frame statistics.
→ Physical interface abstraction	Configure the relationship between physical ports and internal capture and aggregation ports for complete flexibility.
→ Capture device and port information	Track device ID and incoming port ID included in the appended trailer for every captured frame or configure with customizable identifiers.
→ Optional frame truncation	Reduce the bandwidth required for aggregated streams when frame payloads are not needed for analysis.

Compatible with

Metamako K-Series with embedded Xilinx Virtex 7 FPGA.

PARTNER APPLICATIONS

MetaWatch adds information to each packet to record time and other metadata. Several analytics and capture products can ingest these timestamps off the shelf, including:



Used by

Here are just some of our customers who are improving their network with MetaWatch:

- Australian Stock Exchange
- Deutsche Börse
- FXecosystem / Market Synergy