

multiplexing FPGA platform filtering timestamping

MetaMux 48K

The versatile application switch that can be used for packet aggregation, timestamping, packet filtering or FPGA application deployment.

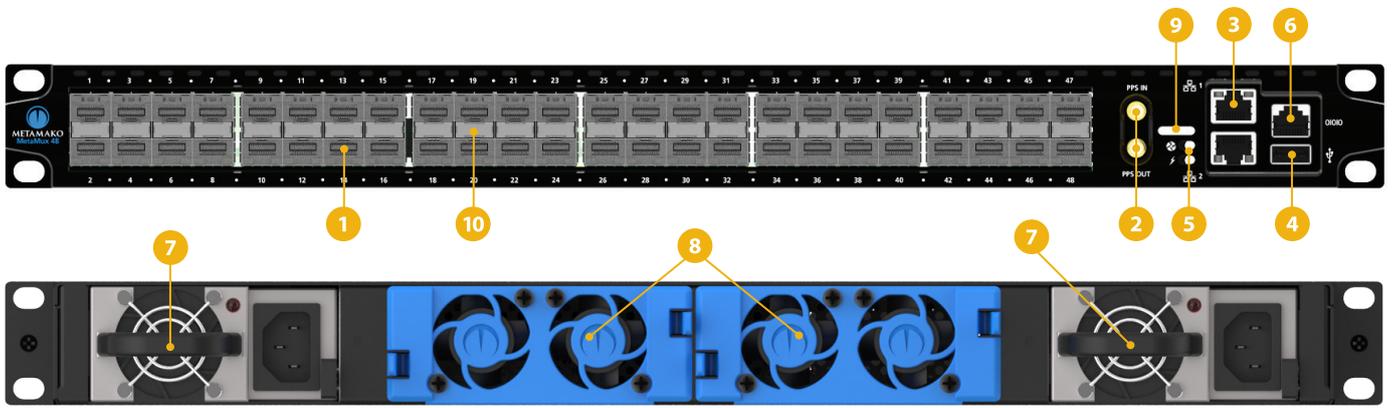


MetaMux 48K is a versatile application switch. MetaMux 48K is optimised to run MetaWatch, a tap-aggregation and high-resolution timestamping solution with deep buffering, but may also be configured to perform layer 1 switching in only 5 ns, multiplexing/aggregation in 99 ns or filtering at 95 ns. It has an on-board Xilinx Virtex 7 FPGA and can also be used as an application deployment platform

for FPGA based applications for third party or custom developed FPGA applications.

MetaMux is built on the same foundation as MetaConnect, so its layer 1 features include dynamic patching, tapping, one-to-many replication, media conversion and packet statistics. That means the delay on downstream packets is barely detectable and makes it a much simpler and cost effective solution than using optical taps and aggregation switches.

FEATURE	BENEFIT
One device; different applications	Can be configured in tap-aggregation mode (MetaWatch), multiplexing (MetaMux) or filtering (MetaFilter) modes. Can be used as a platform to host custom developed FPGA applications.
Tap aggregation with deep buffering	Tap, timestamp and aggregate up to 30 ports into a pair of output ports with 8GB egress buffer.
Fast 32:1 multiplexing	Aggregate streams from multiple sources into a single stream for hand-off to exchanges, microwave links, or WAN links. Also configurable as many N:1 multiplexers.
Integrated layer 1 switching	Patching, media conversion, tapping, replication, packet statistics. Wire once and remotely reconfigure to reduce visits to the data centre. Use Layer 1 broadcast to implement a return path with a latency of just 5 ns and virtually no jitter.
Port Mirroring	Replaces taps to monitor or share feeds such as market-data with full regeneration and no additional overhead.
Deterministic	Know and rely upon your system's latency. Traffic passes through at 5 ns.
Flexible SFP/SFP+ support	Allows the use of less expensive modules, including twin-ax copper cables, that are boosted by MetaMux's high performance signal recovery and regeneration.



- | | |
|---|--|
| <ul style="list-style-type: none"> 1 48 SFP Ports Works with any SFP/SFP+ 2 SMA Connector Pulse-per-second timing 3 Ethernet Management 100/1000 4 USB Upgrades, storage 5 Indicator LEDs Fan, power, status 6 Industry-standard console port | <ul style="list-style-type: none"> 7 Dual redundant power supplies 8 Dual redundant fan modules 9 Tri-color status LED for system-wide status 10 Per-port link and activity LEDs 11 SMA Connector Pulse-per-second output for synchronising other devices |
|---|--|

Layer 1

- 5 ns latency with virtually no jitter
- Non-blocking matrix switching fabric
- SFP/SFP+ ports from 100M-11.3Gbps
- Bit-for-bit forwarding for any protocol
- Unlimited port-to-port mirroring with regeneration
- Multiple independent links through the device are supported at different data-rates
- High performance signal recovery, regeneration and conditioning (EDC on input, CDR on input and output)

Aggregation

- Multiplexing (32:1, 2 x 16:1, 4 x 8:1 or 16 x 2:1) in 99 ns for 10GbE
- Packet statistics without affecting the 5 ns layer 1 performance
- Precise packet timestamping
- Packet capture

Cable Compatibility

- Compatible with SR, LR, ZR, LRM and DWDM SFP/SFP+ modules and direct attach cables
- Drive any MSA compliant SFP/SFP+ module
- Works with long list of third-party SFP/SFP+ modules
- 100M,1GbE, 10GbE and many others

Redundancy and data centre

- 1 rack unit (1RU)
- Dual redundant, hot-swappable power supplies (DS460S)
- Dual redundant, hot-swappable fans
- Fan and power supply replacement kits are available
- Front-to-back or back-to-front air flow

Monitoring

- Packet statistics captured on every port (valid packets, invalid packets, link state)
- Eye diagram for monitoring and troubleshooting signal quality
- Front panel LEDs for port activity and status
- Ports can be “sniffed” via the management system
- Precise timestamping without additional latency for pass through streams
- Fully managed SFP+ interface diagnostics including light levels, temperature and voltages

Management platform

- Quad-core, hyperthreaded x86-64 CPU
- 4GB RAM, on-board SSD
- Industry standard command line interface (serial/SSH/telnet)
- Web-based GUI
- Linux based (shells, scripting, Python, RPMs etc.)
- Binary compatibility with other x86-64 based Linux systems
- Firmware restore and update via USB, serial and network

Management protocols

- HTTP/S, SSH, telnet
- Serial console
- PTP, NTP
- SNMP v1, v2, v3
- DHCP
- Local and remote syslog
- RADIUS and TACAS+ authentication

Operating environment

- Temperature 0C to 40C
- Humidity: 10% to 85% non-condensing
- Maximum altitude: 3000 m (9800 ft)

Physical and electrical

- Dimensions (h x w x d): 4.3 x 44.8 x 37.9 cm (1.7 x 17.6 x 14.9 in)
- Weight: 8kg (17.6 lbs), depending on configuration
- Maximum power: 290 W
- AC voltage range: 100-240 V, AC frequency: 50/60 Hz
- DC voltage range: 40-72 V



METAMAKO

Contact us today to evaluate MetaMux:
info@metamako.com
www.metamako.com