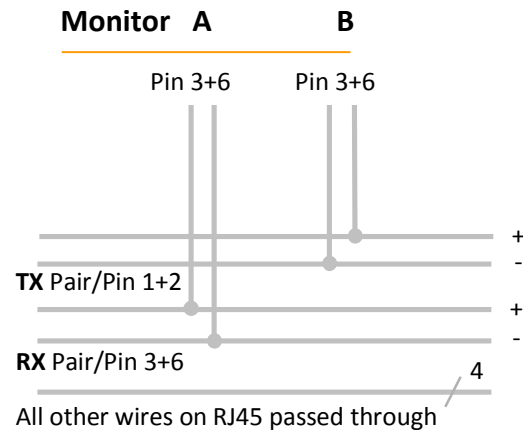
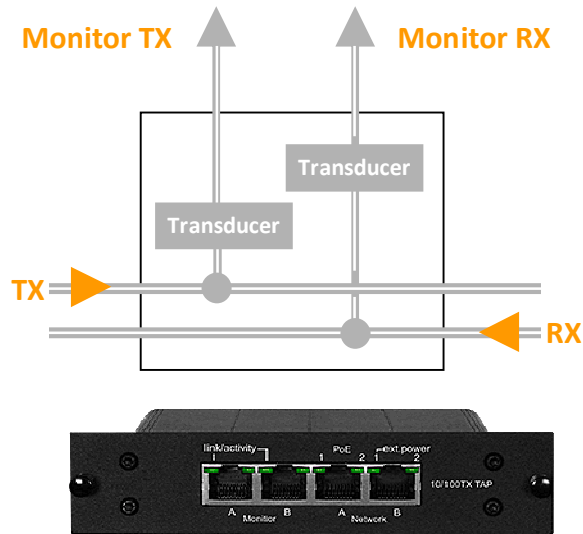


Tapping in Networks – Basics about 10/100 TAPs

10/100 Copper TAP Operation:



- 10 or 100BaseT Communication is defined to 2 dedicated, **unidirectional** Transmit&Receive wire pairs
- Both Monitor outputs are „straight“ connected to 10/100 Link of Input Ports.
- Galvanic separation of Monitor Ports by Transducer.
- From TAP point of view, there is no difference on Linkspeed 10 or 100Mbit
- Each Monitor Port holds Line's TX and RX from the monitored Link to RX Pin's 3+6 of RJ45.
- Monitor Ports do not use TX Pair (Pin 1+2) at all

About Latency and Delay

10/100 TAPs do not add latency to the network, nor add a delay on monitored data at output

FAQ:



: TAP does not interrupt PoE Implementation



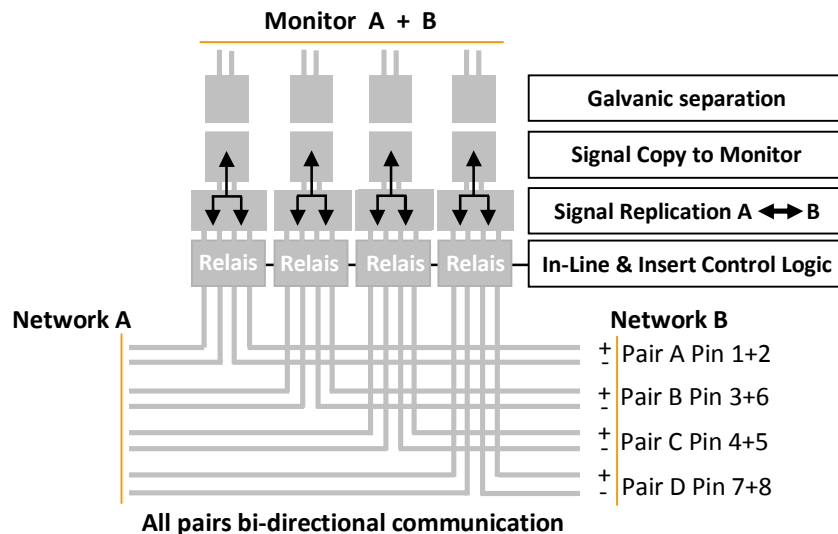
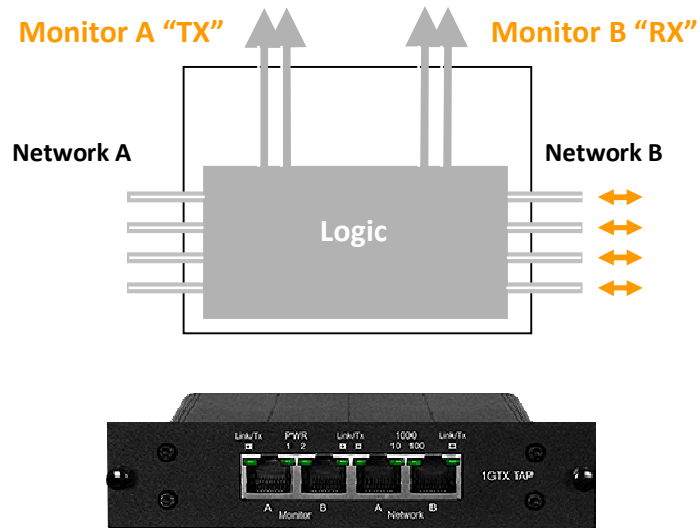
: TAP does not interfere on VoIP applications



Analysers: any appliance require a dual channel (Multi NIC, 2 separated NICs or special CaptureCard) to concurrently monitor TX and RX

Tapping in Networks – Basics about 10/100/1000(GigaBit) TAPs

10/100/GigaBit Copper TAP Operation



- GigaBit 1000BaseT is **bi-directional** communication defined to **4** dedicated wire pairs
- Once the TAP is installed, it inserts to all 4 circuits after verification of linkspeed negotiation at power on.
- relais toggle state between „offline“ and „inserted“ mode. **Link may get lost, packets may get lost during switching states.**
- The bidirectional Traffic is regenerated in both link directions – this is the truth at gigaBit Taps
- Monitor Output outputs are replicated signals, the circuitry and logic prevents Monitor to Link signaling.

About Latency and Delay

Consider a 10/100/GigaBit TAPs to add a **constant latency (bitlength) to the network and a delay on Output of appr. 350nS for the monitored data.**

FAQ:



: TAP does not interrupt PoE Implementation



: TAP does not interfere on VoiP applications



Analysers: any appliance require a dual channel (Multi NIC, 2 separated NICs or special CaptureCard) to concurrently monitor TX and RX