

## What are the benefits of Sniffer10G over stock tcpdump and libcap in terms of timestamp accuracy, packet loss/integrity, efficiency, and any other relevant aspects?

### Model:

Arc Series C adapters (10G-PCIE2-8C2-2S)

### Software:

Sniffer version 3

### Operating System:

Linux

### Information:

The benefits of Sniffer10G is lossless packet capture at all packet sizes at 10G line rate with lower CPU utilization than if you were using a standard NIC.

Sniffer10G bypasses the kernel stack and delivers the packets directly to use space into a large buffer ring, defaults to 256MB in Snifferv3, and is user customizable to engineering for packet bursts to ensure your application doesn't drop any incoming packets.

Because the kernel is bypassed, there is no kernel interrupt for every packet, instead there is only a kernel interrupt when a set amount of time passes, configurable by the interrupt coalescing value of the port.

Instead of the packets being timestamped by the OS at some later time, the Sniffer10G card timestamps the packet when the packet arrives at the card.

By using less CPU, bypassing the kernel, and having a large buffer, Sniffer10G results in more CPU availability for user applications, and more memory buffering to allow for lossless packet capture under load conditions.

Sniffer v3 support pcap timestamps and pcap-nano timestamps.

Draft	Date	Change
1	7/6/2016	Initial Draft


