

## CASE STUDY

# Video Quality Solution Provider Relies on Accolade Packet Capture Adapters for Reliability



### SUMMARY

Video quality assurance company integrates [ANIC-2KL](#) and [ANIC-20Ku](#) adapters into its video monitoring appliances.

### KEY CHALLENGES

- Must find less CPU intensive method to perform packet processing
- Must lower overall solution cost to keep pace with competition
- Require high quality integration support to meet strict deadline

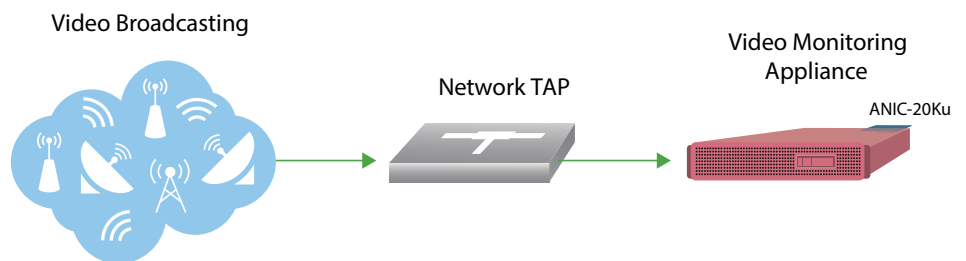
### WHY ACCOLADE?

- Offer a lossless packet capture solution
- Provide dedicated integration support to help customers meet strict product release dates
- Provide cost effective GbE and 10GbE packet capture adapters

### ANIC FEATURES USED

- 100% packet capture
- Timestamping
- Packet Merging
- Packet Filtering
- Packet Steering

The company provides innovate quality of service (QoS) and compliance monitoring solutions for broadcast, telco, satellite, cable, and IPTV video networks. The company's video monitoring appliances are deployed in production networks to help pinpoint video and audio quality issues such as signal degradation. The solutions also ensure compliance with various federal standards such as for closed captioning and audio strength levels. The company has successfully integrated Gigabit Ethernet ([ANIC-2KL](#)) and 10 Gigabit Ethernet ([ANIC-20Ku](#)) packet capture adapters from Accolade in to its video monitoring appliances.



### TECHNICAL CHALLENGE

The company began developing video quality and compliance monitoring solutions in the 1990s when the Internet and IP broadcasting in general was in its infancy. The satellite broadcasting industry was also much smaller and telecommunications providers such as AT&T had not completely entered the broadcasting world. Fast forward to today and competition in the video broadcasting market is fierce, and in lock step, competition and technical requirements in the video monitoring appliance market are equally fierce. The company struggled to keep pace with competition and was forced to rethink its approach to the market. Gone were the days when some packet loss was tolerable and the company could dictate prices. To keep customers satisfied, the company had to re-engineer its solutions and lower cost dramatically.

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## THE SOLUTION

Fearing that the company might lose some major customers, management commissioned an internal study to identify areas for technical improvement that could also lower cost. The internal review revealed that nearly 50% of CPU cycles in each appliance were spent on packet processing functions such as timestamping and packet filtering. This inefficiency led to the packet loss that customers were complaining about and also increased cost because customers were forced to purchase more appliances to compensate for the poor technical performance.

Reducing packet processing overhead and simultaneously lowering cost became top priority for the company. Management set an ambitious goal to complete the work within 6 months and provided a financial incentive to the engineering team working on the project.

The engineering team knew rewriting the video monitoring software could not be accomplished within 6 months and even if they could this might not solve the problem anyway. Some sort of hardware assist seemed the most viable solution and after exploring multiple options the team settled on using an FPGA-based packet capture adapter in each appliance. They chose the [ANIC-2KL](#) for Gigabit Ethernet and [ANIC-20Ku](#) for 10 Gigabit Ethernet. The reasons for choosing Accolade are outlined in the table below.

The table below details the firm's selection criteria.

CRITERION	REQUIREMENT	ACCOLADE FIT
Cost Effective	Competition was lowering prices so the selected solution must meet very stringent budgetary requirements	The ANIC solution was the lowest cost of all that met each criterion
Zero Packet Loss	Packet loss had been an issue with some customers, so no loss could be tolerated even with 64 byte packets	All ANIC adapters perform 100% lossless packet capture
Timestamp	Each packet had to be timestamped with nanosecond precision	All ANIC adapters offer nanosecond precision timestamping
Integration Support	The engineering team was working with a very strict deadline to integrate a packet capture adapter in to its video monitoring appliances.	Dedicated technical integration support helped the engineering team meet its deadline

## CONCLUSION

This video quality assurance company provides innovate quality of service (QoS) and compliance monitoring solutions for broadcast, telco, satellite, cable, and IPTV video networks. The company began providing products in the 1990s and was initially very successful. But over time competitive pressures increased and the company had to rethink its product offering. Packet loss and overall solution cost were the two biggest issues with the existing video monitoring appliances. To mitigate these problems, the company decided to integrate the [ANIC-2KL](#) and [ANIC-20Ku](#) packet capture adapters in to each appliance.

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