



Farmers Telephone Cooperative Choose Inca for 8VSB Replacement Project

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Why ATSC 1.0 is Still Relevant

8VSB reception continues to be an important requirement for video operators to ensure the delivery of over-the-air (OTA) content to subscribers.

In November 2017, the FCC authorized television broadcasters to use ATSC 3.0, the next generation transmission standard. Unlike the mandatory switch from analog NTSC video to digital ATSC video 11 years earlier, the upgrade to ATSC 3.0 was announced as being voluntary and there's no indication yet if or when it will be required for broadcasters. Additionally, broadcasters that voluntarily choose to broadcast in ATSC 3.0 must continue to offer ATSC 1.0 signals for at least 5 years.

With the requirement to simulcast ATSC 1.0 and 3.0, support for ATSC 1.0 will be around for a while - at least 5 years - so it's important for video operators to keep reliable gear in operation for 8VSB reception. Many operators that purchased 8VSB modulation equipment back in 1996, when the switch from analog to digital was enforced, are now discovering issues with this equipment. Many of these units were purchased over 10 years ago and are starting to fail in the field or have become end-of-life or end-of support. With subscribers reporting regular service disruptions, it's natural for operators to feel hesitant to replace this legacy gear with all the buzz around town about ATSC 3.0. But as mentioned previously, ATSC 1.0 is still a relevant and current technology for the delivery of off-air channels and can't be abandoned just yet.

The Inca 4400 Modular Series for linear transcoding includes options for IP, ASI and 8VSB inputs, and features VidiOS™, a visually sophisticated user interface for management and monitoring. Inca Networks is preparing for ATSC 3.0 support via a future hardware upgrade so that our customers can easily interface between yesterday, today and tomorrow's video technologies.



CHALLENGE

- Provide stable and reliable service to subscribers from off-air sources

SOLUTION

- 4430 chassis with 8VSB receiver modules to receive and transcode OTA channels

RESULTS AT A GLANCE

- Better handling of problematic or impaired sources
- Easy to set-up, manage and maintain with intuitive user interface
- Improved video quality delivered to subscribers

"We chose Inca because of their reliability, excellent video quality, and excellent technical support."

-Pete Anderson, Central Office Supervisor at FTC



Inca Networks was recently selected as Farmers Telephone Cooperative's (FTC) preferred vendor for 8VSB reception and transcoding after FTC ran a set of head-to-head tests comparing the Inca gear to another vendor's 8VSB receiver. Inca's 4400 Modular Series with 8VSB Reception replaced FTC's previous vendor at 4 different sites and has significantly improved video and audio quality for local off-air channels. Using 3rd party monitoring software, FTC could see that the Inca equipment had strong 8VSB receivers compared to the other 3rd party units and was better at handling problematic sources. Overall, FTC were happy with the smooth set-up and deployment they experienced and have found the Inca products intuitive, reliable and easy to maintain.

The Off-Air Situation at FTC

Farmers Telephone Cooperative, Inc. (FTC) is a multifaceted telecommunications company headquartered in Kingstree, South Carolina. FTC provides video services to approximately 12,000 subscribers within a coverage area of 3,000 square miles and provides cutting-edge technology to businesses and residents of 5 counties in South Carolina. FTC is also part of a consortium and hosts the master head-end supplying the majority of national channels to 2 other telephone companies.

FTC has 4 separate sites for receiving channels over-the-air, the furthest site being about a 90-minute drive from the main headend in Sumter, South Carolina.

Pete Anderson, Central Office Supervisor at FTC, knew something had to be done about their 8VSB reception gear: around 8 OTA channels came from problematic sources and were causing tiling in the video and audio blips. FTC were looking to add 9 more local channels to their lineup and it didn't make sense to add more licenses or hardware for a product causing issues in the field.

Finding the Inca Solution

For new 8VSB equipment, Pete called Inca first. FTC has been an Inca customer since 2014 and has had a positive experience with the Inca transcoders. When Pete discovered that Inca offered 8VSB Receiver modules for the 4400 Modular Series, he didn't investigate any other options. "Whenever we get new Inca gear, our technicians are very pleased with how easy it is to actually troubleshoot and maintain," says Pete. "And our customer's experience is

improved with Inca's video quality."

Before making a final decision, Pete completed his due diligence and ran head-to-head tests between the problematic equipment and the Inca 4400 Modular Series with 8VSB Reception. He used a 3rd party monitoring software to compare the quality of video and audio streams from each unit using the worst problem OTA channels. The monitoring software provided a summary of the number of errors per second found in the video and audio streams over a 24-hour period.

Right away, Pete could see that the Inca gear performed better for both video and audio compared to the other vendor's equipment. It was immediately evident that the Inca product used a stronger receiver and had a better handling of impaired broadcast signals.

An All-Inca Headend

Armed with these results, the decision was an easy one: FTC replaced all the problematic 8VSB receivers with the Inca 4430 chassis with 8VSB Reception, part of the 4400 Modular Series family. Within a couple weeks, FTC had the Inca gear already set-up and in production. Configuration and deployment of Inca products was fast and intuitive thanks to VidiOS™, a powerful and award-winning management tool. VidiOS™ is included in every Inca product and features inbound and outbound video thumbnails, stream capture and download, and extensive statistical analysis.

"Set-up was really easy," explains Pete. "The Inca platform is so intuitive and easy to maintain and configure, whether you're adding a new channel or troubleshooting one. For the set-up of 8VSB, all you do is put in the frequency for ATSC channels. It's a great product and easy to use"

FTC is now using 5x Inca 4430 chassis with 8VSB front-end modules to receive and transcode 20 HD and 49 SD off-air channels. In fact, Pete was happy to report that FTC's head-end is now using 100% Inca gear as equipment from all other vendors has been replaced. "We chose Inca because of their reliability, excellent video quality," explained Pete "and excellent technical support."

For more information about Inca's 4400 Modular Series and 8VSB solution options, visit incanetworks.com. We're here to help.

