

IMPROVE YOUR COMMUNICATIONS



PROGRAMMABLE ACTIVE CRYSTAL FILTERS

Improve reliability of communications at highly congested RF environments
Air-to-Ground and Ground Communication with Fiplex Programmable Active Crystal
Filters. Eliminates interference for VHF, UHF and Aeronautic receivers.

Technology applicable at:

- Airports
- Convention Centers
- Corporate /Government buildings
- Hospitals
- Military facilities
- Parking structures
- Shopping Centers
- Stadiums
- Subways
- Theaters
- University campus

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PROGRAMMABLE ACTIVE CRYSTAL FILTER

Why should you use a Programmable Active Crystal Filter?

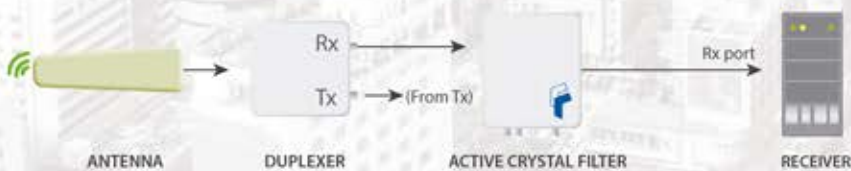
- To get a better reception, due to the modern receivers being much more sensitive.
- Modern receivers are broadband, which does not allow the use of built-in preselector filters to reduce the overall received noise.
- No spectrum allocation rules are present in VHF and UHF bands, which does not prevent having Tx signals very close in frequency to Rx channels.
- RF spectrum is becoming more and more congested.

Forementioned situations are the reason why receivers desensitized, causing overall reception quality degradation, thus reducing the effective coverage area.

ACF features

- For Aeronautical Bands (118-137MHz), VHF, UHF, 700/800MHz
- Crystal-based filtering system
- 12.5 KHz standard bandwidth, 25 KHz optional
- Sharp filtering response
- Uninterrupted reception: high linearity and low noise
- No system loss: built-in low noise amplifier (LNA) with user adjustable gain.
- Suitable for highly congested RF environments, Air-to-Ground and Ground Communication
- Frequency agile: field tuning via USB without changing hardware
- Software programmable tuning in steps (3.125KHz for aeronautical, 1.25KHz for VHF and 6.25KHz for UHF)
- 12.5KHz, 25KHz and 50KHz bandwidths available
- Outstanding rejection: greater than 30dB to adjacent channels and greater than 60dB to semi-adjacent channels (12.5KHz and 25KHz BW), and greater than 22dB to adjacent channels and greater than 47dB to semi-adjacent channels (50KHz BW)
- Single inventory item
- Built-in monitoring system with alarm outputs.

ACF Typical Applications



Active Crystal Filter application at a Repeater site, between the receiver and the Duplexer

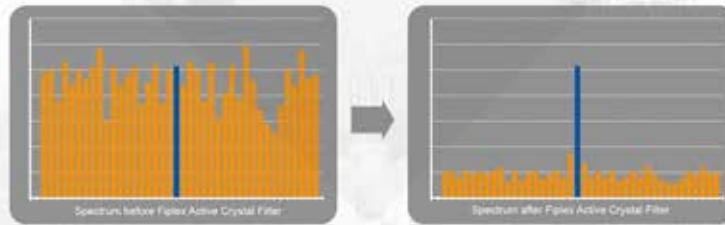


Active Crystal Filter application at a single Receiver, with direct connection to the Rx antenna



ACF spectrum clean-up

The presence of a Programmable Active Crystal Filter provides an outstanding non-desired spectrum rejection, enhancing the overall reception quality and increasing the system coverage area.



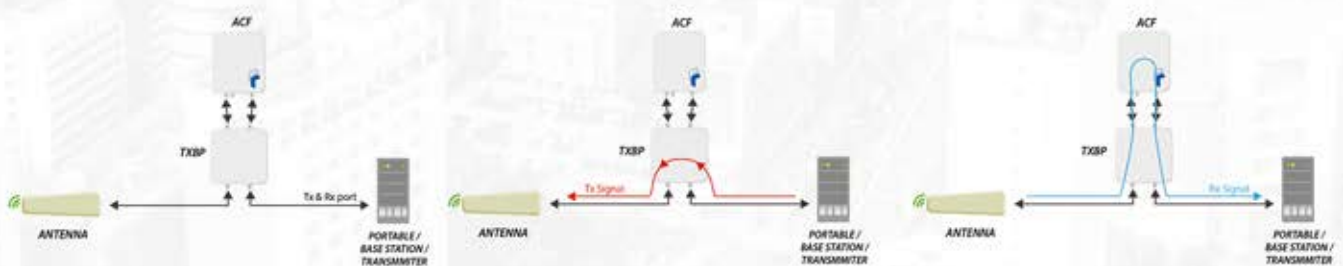
TRANSMITTER BYPASS

Fiplex Transmitter Bypass (TXBP) allows the use of the Fiplex ACF Series in a half-duplex and simplex applications, when RF equipment only has a single Tx and Rx antenna connector.

TXBP Features

- PIN diode based switch, no mechanical parts
- Very fast switching speed, less than 0.3ms
- Low insertion loss
- High Tx/Rx isolation
- Small size
- Ready to be installed with Active Crystal Filters
- DC and RF cable jumpers included

TXBP Typical Application



• Transmitter Bypass (TXBP) and Active Crystal Filter applied together, connected to the RF equipment antenna port.

• When TX power is ON, the TXBP bypasses the Tx signal to the antenna, providing very high isolation to the ACV to avoid damage.

• When TX power is OFF, the TXBP connects the ACF to the Rx path, allowing the ACF to provide spectrum filtration and low noise amplification.