ISCO INTERNATIONAL

c-ONE PIM Canceler®

Network Function to Improve Performance and Capacity

C-ONE
PIM CANCELER®

ISCO's c-ONE PIM Canceler® Network Function applies industry-leading Digital Signal Processing algorithms to the challenge of mitigating the devastating impact of PIM on LTE networks.

Passive Intermodulation (PIM) is interference that will degrade network performance such as throughput and accessibility and can cause loss of capacity resulting from reduced transmit power of offending bands. It is generated when transmit signals encounter nonlinear junctions or materials in the RF path. It is typically constant and concerning. Even if best practices are followed for avoiding PIM, some combinations of transmit frequencies can generate intermodulation products in uplink bands, impairing network performance.

ISCO's c-ONE PIM Canceler® Network Function automatically detects internal and external PIM and through patented DSP algorithms dramatically reduces its negative effects. As a Network Function on the ProteusCPRI™ baseband platform, c-ONE PIM Canceler® cancels PIM on up to twelve CPRI links simultaneously using a single 3U device.

ISCO's single box solution does not need to have access to the multiple offending transmit signals and no tuning or convergence is required. This increases effectiveness, reduces complicated cabling, and simplifies integration.
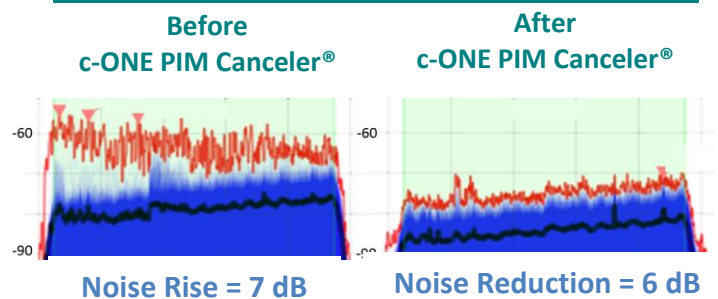
c-ONE PIM Canceler® Features

- Intelligent software analyzes the uplink spectrum for evidence of intermod noise and then dynamically applies signal processing algorithms to cancel it out.

- Simple integration: RX path only and no tuning or convergence required. Unlike traditional phase cancellation it does not need to access the TX signals.

- Reduces PIM from internal and external sources.

Key Benefits of c-ONE PIM Canceler®

- **More Powerful**
  Cancelling internal and external PIM without knowing transmit signals allows sites to be turned up more quickly to high power.

- **More Comprehensive**
  Covers any combination of bands with up to 12 sectors in one 3U system without special tuning or configuration.

- **More Economic**
  Single box solution integrates easily on only the impacted uplink.

- **More Flexible**
  Leveraging the ProteusCPRI™ server platform, scale from 3 to 12 CPRI links in a single system. Add cards when more coverage is needed.

Results: Noise Reduced Over 5dB

Before c-ONE PIM Canceler®	After c-ONE PIM Canceler®

Noise Rise = 7 dB   **Noise Reduction = 6 dB**

Enable deployment of bands otherwise impaired or unusable due to PIM interference, giving highest level of performance and availability