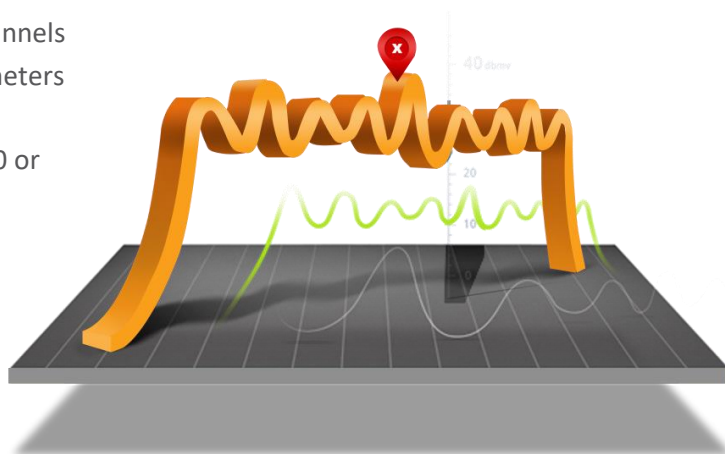


Intelligent Channel Optimizer

For E6000[®] CER and C4[®] & C4c[™] CMTS

FEATURES

- Monitors upstream spectrum and analyzes upstream SC-QAM channels
- Optimize modulation profiles & upstream SC-QAM channel parameters for maximum throughput
- Works with E6000 CER Release 4.0 or higher, C4 CMTS Release 8.0 or higher and C4c CMTS Release 8.0 or higher
- Works with ARRIS E6000n RPDs provisioned by the E6000 eCore
- The ICO analysis is accomplished for a wide range of:
 - Modulation Profile Types
 - Channel Widths
 - Center Frequencies
 - Forward Error Correction (FEC) Values



PRODUCT OVERVIEW

The Intelligent Channel Optimizer (ICO) is a GUI-based tool used to maximize the throughput of RF upstream channels connected to ARRIS C4 / C4c CMTS DOCSIS[®] 2.0 (2Dx12U) CAMs, DOCSIS 3.0 (12U and 24U) CAMs, and E6000 CER UCAMs, UCAM-2s and ARRIS E6000n RPD.

After analyzing the noise conditions present for a particular upstream channel, the ICO employs error analysis algorithms to provide guidance on optimal modulation profile and upstream channel settings.

The operator may then choose to use the ICO to apply the recommended profile and channel settings to the selected upstream. The ICO runs on a laptop or PC and may be used remotely via Telnet, SSHv2, and SNMP.

GENERAL SPECIFICATIONS

Minimum Requirements for Customer Supplied Hardware Platform

Laptop/PC equipped with: A display with the resolution of 1024 x 768 or higher

A Network Interface with IP connectivity

Minimum Requirements for Customer Supplied Operating System

Windows 7, Windows 8.1 or Windows 10

Java 1.5 or later

Connection Protocol

C4/C4c C4/C4c : Telnet, SSHv2, SNMP

E6000 Telnet, SSHv2, SNMP

ICO Operation Modes

Major Operation Modes:

- FFT Capture Mode – uses time domain sampling of the specified upstream spectrum
- Optimizer Mode – uses the FFT capture data to provide guidance on parameter optimization
- Theory Mode – explores how changes in various channel characteristics and burst profile parameters might affect performance

Minor Operation Modes:

- Iterative Mode – schedules FFT data captures to be taken at specified intervals over a specified time period
- Averaging Mode – uses FFT data averaged over a specified time period to run the Optimizer Mode functions
- Worst-case Mode – takes samples at specified time intervals for a specified period; uses worst-case FFT data to run the Optimizer Mode functions

Required CMTS Hardware

C4/C4c CMTS with DOCSIS 2.0 CAMs (2Dx12U) and DOCSIS 3.0 CAMs (12U and 24U)

E6000 CER with UCAM, UCAM-2 or ARRIS E6000n RPD

Required CMTS Software

C4 Release 8.0 or higher

C4c Release 8.0 or higher

E6000 Release 4.0 or higher

E6000n RPD Release 1.0 or higher provisioned by the E6000

ICO Charts and Graphs

Power density versus frequency

Power density display at specific frequency on a graph. Up to four frequencies

Packet error rate versus Signal-to-Noise Ratio (SNR)

Achievable bit rate versus SNR

Bit rate, packet rate or packet error rate versus packet size

ORDERING INFORMATION

Part Number	Description
#1001278	Intelligent Channel Optimizer Release 1.0.4, Per E6000 CER or C4/C4c CMTS Chassis License
#719484	Annual Service Contract for cable operators and resellers
#721042	Annual Service Contract for value-added resellers

CUSTOMER CARE

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656