# HUNTER®





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## The world's most intelligent network interrogation and predictive maintenance system

While other systems are able to determine that you have a problem in your network, only Hunter can tell you exactly what the impairment is. More importantly, only Hunter can tell you where the problem is located. Instead of simply knowing you have an issue, Hunter arms you with the critical information you need to better prioritize and allocate your maintenance resources and provides the technician with unique tools to quickly mitigate the problem in the field.







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# WHAT MAKES HUNTER **CLEARLY BETTER?**

**INFORMATIVE:** Hunter provides the summarized impairment data you need to effectively prioritize the management and maintenance of your network. The type of impairment is identified prior to any fieldwork. You can easily determine whether the alarm is from CPD, impulse noise, ingress, or laser clipping - and have clear visibility as to how CNR is affected.

**COMPREHENSIVE:** Hunter works on all digital or mixed digital/analog systems and is the only interrogation system able to differentiate between CPD and ingress - critical in the all digital world.

PREVENTIVE: Since Hunter can see impairments well below the system noise floor, it allows you to mitigate CPD impairments before they affect your network. Why wait until you have a problem?

**DEFINITIVE:** Technicians will no longer burn hours blindly searching the field for impairments. With Hunter, they can troubleshoot straight to the source.

**FAST:** Using Hunter, it takes the technician about an hour to locate a problem, even the most difficult and intermittent ones. These types of problems are virtually impossible to locate using typical test equipment. Get rid of those lingering problems that last for months and months.

NO DISRUPTION: Unlike our competitors, our technologies are never disruptive to your network.

**EFFICIENCY:** Eliminate "no trouble found" from your dictionary. Arm your technicians with the right tools and information to guickly find problems - the first time.

EASY: Hunter's intuitive operation makes it easy for any technician to quickly get up to speed and effectively use the tools.

**RELIABLE:** By alarming only low and critical CNR conditions, false alarms are eliminated. With Hunter, all alarms are real and need to be addressed — no chasing after "ghost" impairments.

**TARGETED:** If the alarm is CPD, the technician uses the Xcor radar; if it is ingress, i-Scout probes or spectrum analyzer can be employed; if it is micro-reflections, use the NTC TDR. Hunter helps you select the right tool for each job – all in one piece of field hardware.

**CLEARLY BETTER** ARCOMDIGITAL.COM

## Hunter System Architecture

**HUNTER SERVER** Continuously captures and stores statistics on CPD, return spectrum, impulse noise, CNR alarms, laser clipping, and outages, 24/7.

**HUNTER RADAR** Arcom's patented technology contains the correlation engine, which scans for CPD every second, while simultaneously utilizing the integrated FFT spectrum analyzer to perform full return bandwidth spectrum analysis, noise under the QAM analysis, and calculate the weighted CNR for each return channel.

**XCOR CLIENT** Our interface enables the user to pull and analyze data from the Hunter server. Also available as a web application.

**XCOR ADMIN CLIENT** Configures administrative settings and provides means for troubleshooting, database audit train, and user access.

**RETURN PATH SWITCHES** Sequentially and rapidly present each node to the radar for test and analysis.



# Revolutionary technology that delivers revolutionary results.

Xcor radar, the core technology powering the Hunter System, uses common path distortion (CPD) as a marker to locate impairments. Hunter uses existing forward digital channels as radar probing signals. When CPD exists, an echo-type signal is formed in the return path. Hunter runs a correlation process to statistically compare the forward and return signals in order to identify incidences of CPD. Using this information, the "time distance" to the impairment is calculated. Xcor can "see" extremely low level CPD ( -8odB) well below the system noise floor, and well below the capabilities of any other system. What's more, in an all-digital environment, regardless of level, CPD will be indistinguishable from noise. Xcor is the only technology that can see and locate digital CPD.



### **Predictive Maintenance**

As network devices begin to exhibit problems, they provide feedback in the form of intermodulation products that slowly begin to appear in the return path. Only Hunter can listen to this feedback and provide an opportunity to fix the device before it becomes network or subscriber-affecting.

## Intelligent Prioritization

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The Hunter database stores valuable information about levels, consistency, and time distance to CPD sources. Hunter simultaneously takes snapshots of the return spectrum and automatically calculates bandwidth-adjusted carrier-to-noise ratio (CNR) of each return channel.

We use the CNR of the return path channels as a criterion to prioritize repairs. Often, impairments like ingress and impulse noise exist, but do not affect return signal quality. Hunter allows you to bypass these impairments and attack the truly network-affecting issues.



### **QUIVER**

Quiver devices are the only tools able to identify and locate CPD. Simply connect to the network and the Quiver display tells you exactly how far you need to go to fix the problem.



### **QUIVER S**

We completely rethought the Quiver platform to deliver Quiver S; advanced NTC TDR technology and Xcor radar in a high-performing, compact package.



### **QUIVER XT**



Quiver XT packs a built-in network traffic-compatible TDR to range linear distortions, and Xcor technology to pinpoint the source of non-linear distortions instantly without ever pulling pads or interrupting your

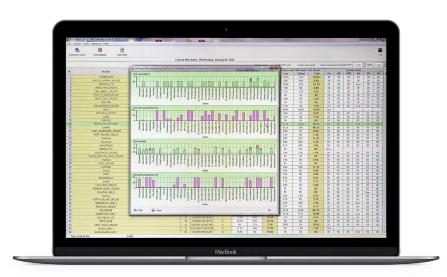
### **I-SCOUT**

I-Scout allows you to remotely diagnose the location of problems from the headend, vastly decreasing both the time required and the number of stops to locate ingress and CPD impairments.



### **MUTI-HUB VIEWER**

Multi-Hub Viewer (MHV) is engineered to allow Hunter installations within multiple hubs to be viewed on one screen. When one person is responsible for oversight of multiple hubs, the volume of unconsolidated input can be overwhelming. That's why we developed MHV. With MHV, anyone in your organization can easily monitor what is happening across your network or on a single node. MHV tells the complete story.



CLEARLY BETTER. ARCOMDIGITAL.COM Arcom engineers and manufactures the most advanced and effective solutions in the world for cable network impairment, leakage detection and locating technology. Arcom employs unique passive radar Xcor technology and provides the only equipment in the industry capable of locating both linear and nonlinear distortions like Common Path Distortion (CPD). We developed these solutions because we are committed to making our customers' lives easier and their customers happier.

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### PNM+

Find problems before they happen, and keep your network running at peak efficiency.



### Hunter

Locate network issues with pinpoint accuracy, saving countless man-hours.



### **QAM Snare**

The only truly effective tools to detect and track QAM leaks are frequency-agile and future-proof.

