

# TALLEY SHEET

First Quarter 2011



A Quarterly Review for the Wireless Communication Professionals - [www.talleycom.com](http://www.talleycom.com)

## PCTEL's New Chrome Nut Antenna Series

PCTEL's new PCTCN chrome nut antenna series provides coverage of wireless frequencies operating from 118 MHz to 2.5 GHz with only 12 models. The platform features a new high-tech "Titanium gray" finish that closely reflects the color of the surface on which the antenna is mounted, eliminating the need to order different antenna colors to match various vehicle types.



### PCTCN PLATFORM BENEFITS

- Optimized bandwidth performance - Only 12 models required to cover all frequencies between 118 MHz and 2.5 GHz
- High-Tech "Titanium gray" reflective plating - Closely mimics the color of the metallic surface on which the antenna is installed, nicely complementing the appearance of public safety, livery and service vehicles
- Gold plated, brass contact button interface - Provides optimized electrical performance, corrosion resistance and maximum 100 pound pull force resistance for long-lasting, trouble-free operation
- Tear drop style rod tip - Better impact resistance for long-lasting operation (factory tuned models only)
- Heavy duty zinc die cast base for maximum durability and corrosion resistance under extreme weather conditions
- Mates with all 1-1/8"-18 thread mounts, including 3/4" NMO mounts for simple installation and/or replacement

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## Andrew's HELIAX® FXL Smoothwall Cable

HELIAX® FXL Smoothwall Cable from Andrew is the strategic choice for optimized performance and reliability. Across the industry, wireless operators are re-aligning their network strategies in order to improve their operating margins. At the same time, they are upgrading their networks to support more sophisticated delivery of broadband data. In this new paradigm, every purchase is critical.

RF transmission line cable has taken on new significance as a growing source of CAPEX savings. As a key component of the RF signal path, its impact on reliability and OPEX costs is even more important. As a result, operators are looking at RF transmission line cable in a new light, and cable manufacturers, in turn, are giving them something new to look at. From a performance and cost standpoint, Andrew Solutions offers the best choice in RF transmission line cable.

Andrew's HELIAX® FXL Smoothwall cable (part numbers FXL-540, FXL-780, FXL-1480 and FXL-1873) enables you to maximize electrical and mechanical performance and reduce tower loading. Installed in some of the most extreme conditions, HELIAX® FXL delivers long-term performance and reliability that are unparalleled in the industry.

Compared to traditional corrugated cables, FXL offers lower attenuation, excellent VSWR, superior crush strength, lighter weight, and more flexibility. You also realize greater savings with aluminum's lower, more stable raw material cost. HELIAX® FXL offers a full range of industry standard cable sizes and ensures swift, easy installation and site deployments.

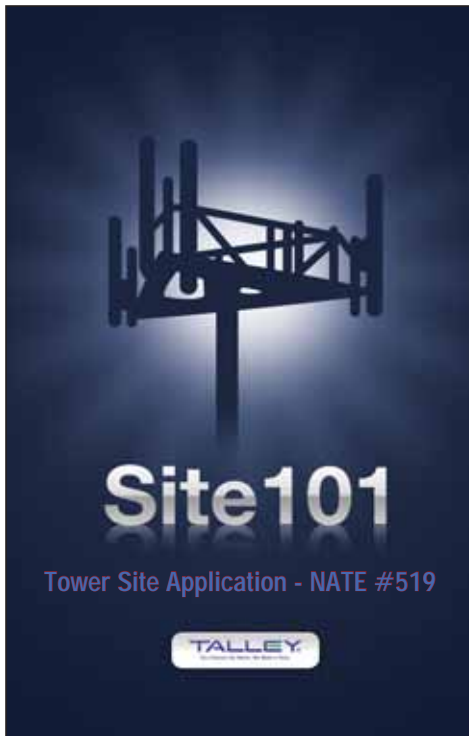
After more than a decade in the field, under the most unforgiving conditions, HELIAX® FXL is a proven performer.

For optimized system performance and lower network deployment costs, HELIAX® FXL Smoothwall from Andrew Solutions is the uncompromising choice. Put the industry's leading cable to work for your bottom line today. For more information on Andrew's HELIAX® FXL cable contact your Talley representative at (800) 949-7079 or visit us at [www.talleycom.com](http://www.talleycom.com).



## Manufacturers

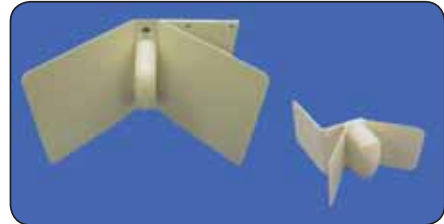
3M	BridgeWave Communications	DDB Unlimited	GAL-Tronics	Megger	Redline Communications	Spotwave
Adtran	Cellular Specialties	Digital Antenna	Gamber-Johnson	Mobile Mark	Republic Wire	STI-CO
Andrew	Cielo	DragonWave	ICT	Newmar	RF Industries	Telewave
· DECIBEL PRODUCTS	CommScope	DuraComm	JPS	ODM	RFS- Celwave	thermOweld
· MTS	Copper B-Line	Emerging Power	Kathrein-Scala	PCTEL	ROHN	Times Microwave
Anritsu	Corning Cable Systems	EMR	Laird Technologies	Panavise	Roxtec	TJ Cope Inc.
Astron	CPI	Ericsson	Larsen	PolyPhaser	Samlex	Transtector
Axxcelera	Comtelco	Eupen	Lyncole	RAD Data	Sinclair	TPL Communications
Belden	DBI SALA	Exalt	MECA Electronics	Radiowaves	Solar World	Uniden
Bird Electronic						



## Mobile Mark's Corner Reflector Antennas Are Easy to Align and Quick to Set-up

When building out a WiFi or WiMAX system, network designers should incorporate directional corner reflector antennas into the mix. These antennas provide efficient point-to-point coverage and are easy to install.

Mobile Mark's corner reflector antennas have a unique design that provides high efficiency radiation without skewing the radiation pattern. The reflector panels serve to narrow both the horizontal and the vertical pattern for increased gain and directivity. The result is excellent bandwidth, gain and match over the target band. Mobile Mark's SCR Series antennas are available in two sizes. The Large SCR Corner Reflectors have larger reflector panels (seven inches x 10-inches); the Mini-Corner Reflectors have smaller panels (three inches x three inches). These attractive and compact antennas will blend in well with many environments, both inside and outside.



People who use the Mobile Mark Corner Reflectors also like the fact they have a reasonably small foot print. The large corner reflectors extend out five inches and the mini-corner reflectors extend out less than three inches.

Six models are available for WiFi or WiMAX applications.

Model Number	Size (Style)	Gain	Frequency
SCR9-2400	Mini	9 dBi	2300-2600 MHz
SCR12-2400	Large	12 dBi	2300-2600 MHz
SCR12-2600	Large	12 dBi	2500-2700 MHz
SCR10-3550	Mini	10 dBi	3400-3700 MHz
SCR10-5250	Mini	10 dBi	5150-5350 MHz
SCR12-5725	Mini	12 dBi	5720-5930 MHz

Mobile Mark's Corner Reflector Antennas are provided with a built-in mounting bracket and U-Bolts for secure pipe mounting. These dependable antennas and brackets can handle operational loading of 125+ mph winds. Now available at Talley- just give us a call at 800.949.7079 or visit our website at [www.talleycom.com/store](http://www.talleycom.com/store) to place your order.

## CAxT® Custom Cables. Made Just the Way You Want Them

Talley builds custom cable assemblies for all your cable requirements. You provide the design parameters and we will build and test your assemblies to your specification. Need off the shelf cables? We've got those too. We can also sweep test and special label your cable assemblies.

How about 24/7 assembly configuration? Use our online CAxT Wizard to configure and to order your custom assemblies. Talley's online cable configurator allows you to select the cable type needed and then it will supply you a list of connectors that are specific to that cable. Just point, click, configure and buy.



Talley employs a staff of certified installers who utilize precision equipment in our ISO 9001:2008 certified production operation. Our professional staff will guarantee your assemblies are done to your precise specifications.

CAxT and Talley ARE your solution. For more information on custom cables, please contact your Talley experts.

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**OneBase InSite® Connect gives you total control of base station site performance.**

Managing base station site performance can be a logistical nightmare. Countless subsystems, controlling hundreds of functions, supported by dozens of OEMs. OneBase InSite Connect lets you take back control and efficiently manage the performance of your individual subsystems, no matter whose they are.

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- Take advantage of site sharing opportunities to significantly lower Radio Access Network maintenance cost.
- Provides IP timing for synchronisation and quality assurance.



Now optimizing base station site performance is not just manageable, it's profitable. Simply connect, coordinate, and control—with the one solution that manages all your independent base station subsystems together. **OneBase InSite® Connect.**

To learn more or to schedule a demonstration of OneBase InSite Connect, contact [sales@talleycom.com](mailto:sales@talleycom.com). (800) 949-7079



## Andrew Connector Certification Classes

February 2, 2011	Kansas City	April 6, 2011	Phoenix	August 2, 2011	Las Vegas
February 10, 2011	Portland	April 20, 2011	New Jersey	September 22, 2011	Minneapolis
February 15, 2011	Los Angeles	May 3, 2011	Sacramento	September 29, 2011	St. Louis
February 15, 2011	Denver	May 24, 2011	San Diego		
March 1, 2011	Seattle	June 21, 2011	Los Angeles		
March 31, 2011	Houston	July 26, 2011	Dallas		



### SITE RELATED COMPONENTS

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## Andrew's Universal Structural Support Solutions



At Andrew, they know all too well how a poorly designed mount can render the highest-performing antenna average. As one of the world's most respected providers of microwave antennas they see it every day. So when customers asked them to design structural support systems to ensure the best possible performance from their antennas, they approached it from the perspective of an antenna engineer.

The results are Andrew's Universal Structural Support Solutions — unique designs that not only completely support the antennas, but also give the entire tower greater structural integrity. Less twist and sway means:

- Better antenna performance
- Higher spectrum efficiency
- Fewer dropped calls
- Lower cost of total ownership
- Reduced OPEX

Andrew's Universal Structural Support Solutions is a family of innovative support systems that provides the highest level of structural integrity for antennas mounted to virtually any tower, monopole, roof top structure, even water tank. It represents a significant departure from past antenna mounting solutions.

For example, their tower face mounts feature a system of cross-structural supports and secure mounting channels that increase the stability of today's lighter towers and structures, not to mention creating a more secure mount for the antenna. As a result, these innovative support solutions minimize and, in many cases, eliminate twist and sway that can create antenna misalignment and erode network performance.

By increasing structural integrity, this new family of mounting solutions allows the antennas to maintain the high level of performance and precision for which they are designed.

## 7-16 DIN Adapters Are a Must for Cellular Technicians

For cellular communication, the 7-16 DIN interface offers technical advantages over the N, TNC or SMA coaxial interfaces. Technicians in the PCS, GPS and digital communication fields increasingly find applications that require 7-16 DIN connectors and adapters.

Capable of carrying high power at high frequencies up to 100 watts of power per channel, 7-16 DIN connectors are larger and more precise. They offer stable electrical and mechanical connections with tighter tolerances and improved VSWR performance.

They are easy to install with or without the use of tools. Their design deters dust or other debris from interfering with the contacts. The 7-16 DIN was designed for transmission of medium to high power signals for base stations. It has an impedance of 50 ohms with excellent performance to 7.5Ghz.



All feature machined bodies, Teflon® dielectric, with brass male and beryllium copper female contacts for superior mechanical and electrical performance. Bodies and contacts are silver-plated for minimal intermodulation generation.

RF Connectors, a division of RF Industries, designs and manufactures six adapters bridging 7-16 DIN to 7-16 DIN and N connectors: RFD-1652-2 (7-16 DIN Male to 7-16 DIN Female R/A adapter); RFD-1653-2 (7-16 DIN Female to 7-16 DIN Female barrel adapter); RFD-1670-2 (7-16 DIN Male to N Male adapter); RFD-1671-2 (7-16 DIN Male to N Female adapter); RFD-1672-2 (7-16 DIN Female to N Male adapter); and RFD-1673-2 (7-16 DIN Female to N Female adapter).

RF Connectors offers a complete line of coaxial connectors ranging from the very small MHF to the much larger 7-16 DIN interfaces. As well as coaxial connectors, the Connector Division also manufactures several indispensable kits for use in the field or labs.



One kit, the RFA-4013 7-16 DIN Adapter Kit, contains the adapters listed above. It was introduced more than 10 years ago and has proven invaluable to end users.



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BY DESIGN**



How a better **designed**  
Antenna **Mount** ensures  
the best possible  
Antenna **Performance**





## TALLEY'S 2011 PRODUCT GUIDE IS NOW AVAILABLE

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## BridgeWave's High Performance Campus Network Connectivity Solutions

Colleges and universities have always been at the forefront of utilizing high-speed wireless technologies in their networks. The prevalence of multi-building campus settings and the regular need to quickly and economically connect off-campus buildings into the core, LAN drives the use of high-capacity point-to-point wireless links.

Students and faculty require seamless access to network resources while bandwidth intensive images and research data call for high-speed campus WAN connections. In addition, the widespread use of Wi-Fi access points and WIMAX nodes, along with IP-based security cameras across the campus, drives the need for capacity that can be quickly and flexibly deployed and upgraded. BridgeWave's wireless links offer a 'future-proof' solution, providing full-rate, full-duplex GigE transmissions for a scalable, expandable backbone to support existing and growing networking needs. BridgeWave's solutions deliver fiber-like performance required for educational applications without the performance price associated with lower-frequency alternatives. BridgeWave's 60 GHz and 80 GHz point-to-point wireless systems yield significant return on investment compared to leasing or trenching fiber, an important consideration when IT budgets are under the microscope.

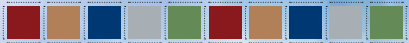
With successful installations in over 120 universities worldwide, BridgeWave Communications is the leading supplier of multi-gigabit wireless connectivity solutions. BridgeWave's solutions are ideal for a wide range of higher education applications such as:

- Deliver the high performance required for seamless campus connectivity
- Provide secure and scalable network infrastructure for high bandwidth applications
- Serve as leased line replacement for rapid ROI

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## Two Vertical Markets in In-Building Systems



The Distributed Antenna Systems (DAS) market has been growing exponentially for the past several years, and 2011 is expected to continue that trend. In-Building Systems (IBS) are made up primarily of two market verticals: Carrier and Public Safety systems. Each of these markets have unique growth drivers, however they both have a similar growth inhibitor, which is funding.

The availability of funding for these systems in the past has been limited in many areas, primarily due to the condition of the global economy. Basic infrastructure and critical projects have taken the front seat, as they should, and DAS systems have been pushed to the back burner, if not completely off of the stove. Now, with the economy improving and funding more readily available, the focus on In-Building Communications is seeing resurgence.

Public Safety agencies and Enterprise has been struck with major budget downsizing over the past 18 to 24 months. Part of the problem has been that DAS systems were not put into budgets at the beginning of the budgeting cycle, but instead were added mid-year as special projects. When agencies are forced to cut back spending and even furlough employees, it is difficult to justify spending on special projects. This year, many organizations are putting DAS in the budget early, and listing them as necessary expenditures because they recognize the importance of communications both inside the building spaces as well as the macro environment. As the economy gradually improves, it is likely we will see more projects in the Public Safety market than ever before in 2011.

In the carrier world, there has been a rush to build out macro infrastructure all across the nation. Every Tier 1 carrier has had very aggressive growth in towers and base station sites in an effort to remain competitive in the ever growing mobile voice and data market. However, what the carriers are running into, not unexpectedly, is physics. The carriers are coming to the hard realization that no amount of outdoor tower sites will effectively cover the indoor spaces, where the majority of us use our data hungry mobile devices. Therefore, many carriers have aggressive budgeting next year for DAS systems. The budgets range from a few million to around a billion dollars for fully funded DAS systems to support their network inside buildings nationally.

These figures represent huge opportunities for integrators, contractors, suppliers, and of course distributors. Talley carries all the active and passive products that are approved for use in all the tier one and two carrier networks, as well as Public Safety networks.

Give Talley a call today and speak with one of our In-building experts to find out how we can go after these new and exciting opportunities.



At Andrew Solutions, we know all too well how a hastily designed mount can render the highest-performing antenna average. As one of the world's most respected providers of microwave antennas, we see it every day. So when our customers asked us to design structural support systems to ensure the best possible performance from their antennas, we approached it from the perspective of an antenna engineer...not an accountant.

### Introducing Andrew's line of Universal Microwave Structural Support Solutions

This innovative family of solutions is uniquely designed to increase stability within the entire structure, allowing your antenna to perform as designed. So you increase your quality of service, maximize spectrum capacity, and reduce your overall cost of ownership. It all adds up to significant OPEX savings.

Today, Andrew's resolve and wisdom are helping guide the entire industry to a new level of antenna performance. Our efforts—as well as our innovations—are ongoing. Just what you'd expect from a leader.



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## Talley's Online Store

[www.talleycom.com/store](http://www.talleycom.com/store)

When was the last time you placed an order on Talley's online store? If it's been a while, you are missing out on some newly added products, site upgrades and even some FREE gifts.



Our improved search engine allows you to determine how you want to search for your product. You can search a keyword within a part number, category, description or manufacturer. We have also added an auto suggestion feature. Type in only a few characters and this new feature will give you a list of parts that contain the characters that you were entering. How much faster will that be?

You also have the capability to email specification sheets from our site to yourself or anybody you want. We've also added additional sorting capabilities to all the pages. You can sort by date, order number, purchase order number or required date. Let's not forget all the FREE items you can get with your order, just by adding a promo code. Where do you get them? Visit our website, see page two and of course keep an eye out for these promotional codes on all Talley material you receive!

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## Talley Offers Site Master Certification Course

As a member of the wireless communications industry, you know the importance of quickly adapting to the emerging technologies, products and applications. And with tight budgets and even tighter time lines, training your staff is not an easy task. Fine-tuning your staff's present skills, while enhancing their expertise with newer, more efficient methods has become more difficult than before. This is why Talley regularly provides Anritsu's Site Master™ Certified Line Sweeping Course. These two-day instructor led training courses focus on RF line sweep theory and technology. All attendees will be given the opportunity to take the Site Master™ Line Sweep Certification exam. With the passing grade, attendees will be provided with photo ID certification, an exclusive card signifying their skills and knowledge of the Site Master operation and line sweeping techniques. Talley offers this certification for \$1,350 per seat. Some of the topics covered are:

- Technical aspects of line sweeping
- How to set up a line sweep
- How cable length and cable type affect line sweep measures
- RF line sweep theory and technology
- How to use distance-to-fault to get accurate and meaningful DTF results

Better yet, Anritsu's classes are designed to fit YOUR schedule. Training sessions can be held at your facility or any of Talley's distribution centers (class limitations and room requirements do apply). For a full class schedule, agenda and advanced registration visit our website at [www.talleycom.com](http://www.talleycom.com) under the News & Events section for a full listing of our 2011 classes. You can also contact Kenny Ng at 562.906.8034 to learn more about having an Anritsu Site Master Certified Line Sweeping course at your facility.



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<b>POWER DIVIDERS / COMBINERS</b>  <p>2 way through 16 way in N, SMA, BNC, TNC and 7/16 DIN connector styles from 0.4 to 18.0 GHz</p>	<b>ATTENUATORS</b>  <p>Most available in 1 dB increments from 0 - 40dB. Power ratings from 2 to 170 Watts</p>	<b>RF COAXIALS</b>  <p>Power ratings from 1 to 500 watts and frequency ranges up to 18 GHz</p>	<b>DIRECTIONAL &amp; HYBRID COUPLERS</b>  <p>Average power handling from 100 to 1000 standard coupling values of 1, 6, 10, 20, 30 and 40 dB</p>
<b>DC BLOCKS</b>  <p>Available in N, SMA, BNC, TNC and 7/16 DIN configurations. Power ratings to 100 watts (2.3 kW peak)</p>	<b>INTEGRATED ASSEMBLIES</b>  <p>Low noise &amp; mounts an integrated assembly with any of our standard RF Microwave products to our RF panels, shelves, or enclosures</p>	<b>RESISTORS</b>  <p>Common bands from 0.5 - 2.5 GHz and 0.2 to 2.7 GHz in 0714 DIN, SMA, BNC &amp; TNC configurations with RF power ratings to 100 watts (3 kW peak)</p>	<b>CIRCUITRY &amp; ISOLATORS</b>  <p>In both N &amp; SMA formats connects with average power ratings from 2 to 200 watts. "Panda" Program y bands between 0.7 - 18.0 GHz</p>



To learn more about MECA products, please call Talley.  
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## Bud Industries - Perfect Solution

Bud Industries provides the perfect lightweight solution to your 19" racking requirements with its ARR-1272 series of aluminum relay racks. Perfect for installations where easy access to components is a top priority, these sturdy yet lightweight racks have many great features. Made from strong durable and corrosion resistant aluminum extrusions, they come with panel mounting holes that are #12-24 tapped on EIA spacing and are both in the front and in the rear.



The 19" x 77" panel space units provide significant mounting space for all of your 19" mount components. The ARR1294 Series allows for the mounting of 23" equipment. These racks are easy to assemble with only one person since they weigh only 37 pounds (40 pounds for the 23" wide version) and come in your choice of natural finish (NF) or black textured powder coat (BT). Bud can help you complete your project by providing many accessories including shelves, brackets, power strips and so much more. Note a shorter version (42") is also available.

Part #	Panel Space	Overall Height	Finish
ARR-1272-NF	77" x 19"	84"	Natural
ARR-1272-BT	77" x 19"	84"	Black
ARR-1294-NF	77" x 23"	84"	Natural
ARR-1294-BT	77" x 23"	84"	Black

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## PCTEL's New Chrome Nut Antenna Series Continued - Page 1

PCTEL's new chrome nut antenna series supports numerous wireless voice and data applications in an attractive, cost effective platform:

- Mobile Public Safety
- Commercial, Service and Delivery
- Livery and Taxi Fleets
- Telemetry and SCADA
- Field Measurement and Wireless
- Network Optimization




To learn more on PCTEL's new chrome nut antenna series or any other PCTEL product, please contact your Talley specialist at (800) 949-7079.

## TALLEY TRIVIA ?

### Machine used for lifting heavy weights?

A. Fitch B. Capstan C. Rebar D. Tarm

The first 20 correct answers will receive a free Talley gift. See the next issue of the Talley Sheet for the answer to the above question. Please submit your answer via e-mail to [sales@talley.com](mailto:sales@talley.com). Answer to Q4-2010 question is B: Antenna.



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## Larsen SPWB22150

Larsen offers a family of high quality SPOTS! portable antennas which match to a variety of radios. The Larsen SPWB22150 is a wideband (136-174 MHz) antenna with excellent coverage across the entire frequency range. The SPWB22150 (SMA female connector) is ideally matched to the following radios:

Kenwood TK-2180  
Kenwood TK-290  
Kenwood TK-5210  
Kenwood TK-5220  
NexEdge NX-210  
NexEdge NX-200

The SPWB22150 can be used as a replacement for the following products:

Laird EXH-150-SFU (145-155 MHz)  
Laird EXH-155-SFU (150-160 MHz)  
Laird EXH-160-SFU (155-160 MHz)  
Laird EXH-170-SFU (165-174 MHz)  
Kenwood KRA-26M (148-162 MHz).

For more information on the SPWB22150 or the full Larsen SPOTS! offering, consult your Talley expert at 800.949.7079. For your convenience you may also purchase Larsen products online at [www.talley.com.com/store](http://www.talley.com.com/store).



## Newmar's Centurion II Power System

Newmar's new Centurion II power system offers incredible functionality, flexibility and scalability in a low profile 2 RU (3.5") shelf. The new Centurion II features three power bays that accept 1,000 or 2,000 watt rectifiers in 24 or -48 VDC in high reliability N+1 redundant configuration, enabling easy configuration to site power requirements.

The system accepts 90-250 VAC power factor corrected input, producing up to 6 kW (111 amps) DC output. Battery temperature compensation sensor is a standard feature for precise charging of back-up batteries in varying climatic conditions. An integrated 16 position DC circuit breaker distribution panel features in-shelf protection for critical loads, and are fitted to 'tripped breaker' alarms. In addition, battery disconnect breakers are standard to protect the system and allows for easy replacement of batteries while the system is running. A built-in low voltage disconnect circuit protects batteries from extreme discharge and loads from receiving low voltage during an extended utility power outages.

The system also features a programmable digital controller with alpha numeric display read-out of system parameters with TCP/IP interface and SNMP monitoring/logging of critical functions including rectifier voltage and current, circuit breaker trip, and LVD activation. A built-in control feature allows remote shut down and activation of rectifiers for periodic battery testing and backup power data logging. Complete system integration by Newmar is included providing a turn-key system for your DC power needs. Contact your Talley sales representative.



## Transtector's Surge Protection Lowers Passive Intermodulation (PIM)

PIM stands for Passive Intermodulation, which is an undesired effect that is typically caused by non-linear mixing of two or more frequencies in passive devices like cables and connectors. PIM causes "noise" that can interfere with RF signal reception and lead to dropped calls, reduction in cell capacity or limited coverage resulting in loss of mobile connection and consequently revenue.

Certain physical phenomena cause passive components to become mixers, modulators and frequency multipliers. Among those are loose metal to metal contacts, use of ferromagnetic materials, contaminations, surface oxides, insufficient thickness of plated metal or contacts between dissimilar metals.

Ensuring low PIM becomes especially relevant when intermodulation causing products fall into the receiving band, one antenna is shared by two or more transmitters or the receiver sensitivity is very high. At times, signals from a nearby site can become a source of interference as well. Since PIM effects increase significantly as the average transmit power level increases, PIM interference becomes an increasingly disruptive problem as the base station becomes further loaded.



Leading the market with its proprietary coaxial RF surge protection, PolyPhaser, part of the Protection Technology Group, has developed several high-performance ultra low PIM products enabling carriers to further optimize their networks. The TSX Series offers significantly lower PIM – 155 dBC at a frequency range of 698 MHz to 2.7 GHz at -26dB return loss. It also provides DC pass and DC block options and is weatherproof with a bulkhead mount bidirectional broadband filter. The product offering covers the 700 MHz extended frequency band used in LTE. Its bidirectional capabilities provide strong support for both domestic and international applications.

For information on the TSX Series, specific products or general inquiries, please contact a Talley representative today - (800)949-7079.

## Need Training & Certification?

Talley offers Training & Certification for the RF Wireless Communications Industry.

**Call 800.949.8034 to register today!**

## Shedding Some Light On Fiber Product

Optical systems are more and more prevalent in our wireless networks today. The advent of this technology migration brings with it new terminology and concerns to be addressed with each application. At the base of these concerns is selection of the correct optical fiber, connector type, connector polish, and associated components. Below provides some basic information related to working with optical fiber. Terminology and Acronyms:

### Optical Fiber

- um = micrometer: 1 millionth of a meter; 50um, 9um, 125um refers to diameter
- nm = nanometer: 1 billionth of a meter; 1310nm, 1550nm refers to frequency
- MM = multimode: 62.5um, 50um; most common MM glass core diameters
- SM = singlemode: 8um – 10um; with 9um most common SM glass core diameter
- Core = the light transmission area of an optical strand
- Cladding = layer with a lower refractive index causes the light to reflect internally
- Buffer Coating = layers of plastic coating strengthen fiber strand & absorb shock

### Connectors

- Back Reflection = Reflectance of light pulse back towards the transmit source
- Polish = connector end face; PC, UPC, APC
- Connector Type: SC, LC, FC, ST are common connectors
- Ferrule = Connector post; protrudes out of connector body & surrounds fiber
- Ceramic Ferrule = Zirconia ceramic post offers best operating temperature range
- Polymer Ferrule = Polymer post offers good price/performance characteristics
- Stainless Ferrule = Stainless steel post provides good performance at lower price

### Physical Contact & Polish

- PC Polish = Physical Contact; back reflection of -30 to -39 dB
- SPC Polish = Super Physical Contact; back reflection of -40 to -49 dB
- UPC Polish = Ultra Physical Contact; back reflection of -50 to -59 dB
- APC Polish = Angle Physical Contact; back reflection of -60 to -65 dB

### Mating Connectors: Feed Through Adapters

- Simplex = Single fiber strand assembly
- Duplex = Two fiber strand assembly; most often for a TX and RX strand of fiber
- Adapter = Female Feed-thru; allows mating of assemblies in a panel

### General Information

- Kevlar = aramid yarn strength member surrounding a fiber strand(s)
- Breakaway Swivel = used when pulling fiber, prevents cable rotation and excessive pulling force
- Furcation Tube = A protective tube added to multi-strand assemblies
- Fan-out Kit = Method for breaking out individual strands from a multi-strand cable



While this is certainly not an all-encompassing overview, you begin to understand that many variables are at play when selecting optical components. Remember, a good place to begin is with standards. Establish what standards you need to comply with and then contact your Talley Sales Expert to assist you at (800)949-7079 or visit us at [www.talleycom.com](http://www.talleycom.com).

## Times Microwave Systems New LP-STRL Series

Times Microwave Systems new LP-STRL series is part of its Times-Protect™ line of innovative RF lightning and surge protection products.



The LP-STRL series is an exceptional DC blocked design with outstanding surge performance designed for the new LTE (Long Term Evolution) and Public Safety requirements in the 680 MHz to 2200 MHz range. With its excellent PIM performance, low insertion loss and low return loss over the entire operating band and superior surge performance, the Times-Protect™ LP-STRL product family is unequalled. Its fully weatherized construction meeting IP67 standard allows for outdoor as well as indoor installation.

The LP-STRL series has high power handling capability and will withstand multiple strikes. Among the main features of the new LP-STRL series of RF lightning protection products are:

Excellent passive intermodulation (PIM) performance

- Outstanding IL/RL characteristics
- DC blocked for superior surge performance
- High surge current rating
- Broadband multi-strike design
- High power rating over the entire frequency band
- Fully weatherized housing to IP67 standard

Times-Protect™ LP-STRL surge arrestors available are:

- LP-STRL-NFF (N female on surge & protected sides)
- LP-STRL-NMP (N male on protected side & N female on surge side)
- LP-STRL-NMS (N male on surge side & N female on protected side)
- LP-STRL-DFF (DIN female on surge & protected sides)
- LP-STRL-DMP (DIN male on protected side & DIN female on surge side)
- LP-STRL -DMS (DIN male on surge side & DIN female on protected side)





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## New Covert Antennas from STI-CO®

STI-CO® covert antennas are chosen by thousands of law enforcement agencies nationwide. Many more new covert vehicles are arriving without exterior antennas. STI-CO® met this challenge by developing a wide variety of new hidden styles that continue to meet covert communication needs.

The VHF Bumper Antenna is completely hidden behind the front and rear bumpers of the vehicle that are non-metallic and performs better than similar styles currently on the market! This diversity antenna covers 20 MHz in the VHF frequency range so it will not detune easily. It installs with super-strong adhesive tape included in the packet. Also included are 2 antenna elements, cable and connectors.

Totally hidden behind the rear window, the Rear Deck Antenna's discreet size and color blends in with the defogger wires making it very hard to spot from outside the vehicle. It will easily adapt to different window angles and heights on most full and mid-size sedans and may be fine tuned for optimal performance. The popular STI-CO® Stinger is now available in 7-800, and PCS frequencies for radio, cellular and mobile data. Mounting under the headliner above the rear window of a car or the side window of an SUV, it's perfect for both covert and overt vehicles.



Recognized as the undisputed leader in covert antennas for more than 40 years, STI-CO is ISO 9001:2008 and DBE certified and backs up their product line with well-trained technical support and a solid five-year warranty.

### General Information

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- Fan-out Kit = Method for breaking out individual strands from a multi-strand cable

Please contact your local STI-CO® expert at 800.949.7079 or visit our website at [www.talleycom.com](http://www.talleycom.com) to purchase STI-CO Products.



## Analyze Your Radio Frequency Spectrum Remotely!



### Bird® SignalHawk™ Rack-mount 100 kHz - 3.6 GHz

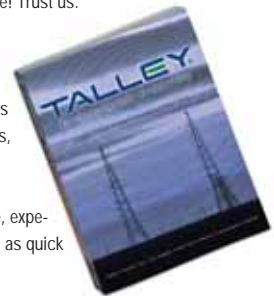
Over an Ethernet network, remotely analyze the performance of your system and diagnose problems from any computer on your network, whether in the same room or half way across the state.



## Wireless Communications Product Guide-2011

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Our new Vol. 24 Product Guide is a comprehensive reference book, which provides you with detailed specifications for thousands of products to help you determine exactly which product fits your needs. This widely used industry tool has new manufacturers, new products and the newest technology.



The benefit of doing business with Talley is getting the knowledge, experience and customer care you need to get your project done right, as quick and cost effective as possible. That's the Talley experience.

Using our Wireless Communications Product Guide, you will understand the Power of Experience.

## Talley's New Website

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## Trade Shows

February 7-8	APCO Western Reg	Ontario, CA
February 7-9	2011 UTC (8,9,10)	Reno, NV
February 18	ACES	Honolulu, HA
February 22-23	NATE 2011	Oklahoma, OK
March 9-11	IWCE 2011	Las Vegas, NV
March 22-24	CTIA 2011	Orlando, FL

Talley will hit the road for more than 20 trade shows in 2011. For an updated list of trade shows that Talley will be exhibiting in, simply log on to our website at [www.talleycom.com](http://www.talleycom.com) and click on the "News & Events" tab.

If we are able to provide free or discounted show passes they will be posted here as well. We hope to be in a city near you soon!

