

# SureFlex™ Premium Cable Assemblies



## Premium Performance Guaranteed

- Low Passive Intermodulation (PIM), VSWR, DTF
- Completely weatherproof (mated/unmated)
- 100% factory tested
- Rapid response designs

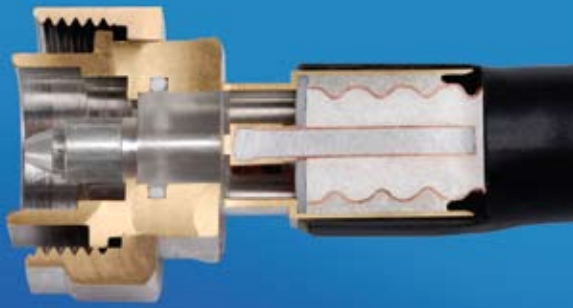
# Designed to Meet a Whole New Set of Challenges

From 2G to 3G to 4G—there is no such thing as “business as usual”. The dynamics driving the build-out of today’s wireless networks are quickly evolving. As technology advances, pumping more data through less spectrum, standards regarding RF performance are becoming more and more stringent. The lead time for site development is growing shorter; the ability to respond instantly to scheduling volatility and opportunities in the market is critical.

At each individual site, the transmission line system is becoming more and more complex. Multiple dual-band antennas per sector, tower mounted amplifiers, remote radio heads, diplexers, OMTs, feeder cable, splitters. At the heart of it all—connecting and inter-connecting the various elements—are your cable assemblies. Dozens of them. Each must deliver consistently superior electrical performance. If any one of them fails, the cost to troubleshoot and replace it can be steep. When it comes to your network—base station to tower top—there can be no weak link.

**Introducing SureFlex™ Premium Cable Assemblies from Andrew Solutions. Premium performance—guaranteed.**





## More than a great product, it's a superior process.

SureFlex is a manufacturing process—developed and patented by Andrew Solutions—that uses a 360-degree lead-free solder joint to physically bond the connector to the jumper. This highly-controlled manufacturing process creates a jumper assembly with better long term reliability and higher RF performance.

**Automated Cable Preparation:** The SureFlex process begins with the jacket being removed from the cable end. Specialized machinery cleans the cable surface and preps for connector attachment.

**Solder Connection:** The connector and cable end are bonded on both the inner and outer contact surfaces using a continuous and consistent bead of solder to ensure best RF performance.

**Pin Depth:** The depth of the center conductor is carefully monitored in real-time to ensure consistent VSWR performance.

The final assembly guarantees electrical performance and weather resistance, to IP66 and IP68 standards, even unmated. It's even backed by an iron clad 10-year warranty.

## Premium RF Performance

Using a patented process, SureFlex™ cable and connectors are physically bonded to create an assembly that delivers outstanding RF results where it matters most. Passive Intermodulation (PIM), Voltage Standing Wave Ratio (VSWR), and Distance-to-Fault (DTF).

- **Guaranteed PIM of -116 dBm**
- **Guaranteed VSWR of 1.06**
- **Guaranteed DTF of -34 dB**

When compared to competitive field-fitted assemblies, SureFlex provides better protection against environmental degradation. The 360-degree lead-free soldered connection resists the loosening effects of tower vibrations and provides an absolute seal from water ingress on the outer conductor ensuring protection even if the cable's jacketing gets damaged. Each assembly complies with IP66 and IP68 for protection against moisture ingress in the mated or unmated state to ensure superior RF performance that lasts.

## Rapid Response—Same Day Shipping

SureFlex Cable Assemblies are specifically designed for today's highly-volatile build-out schedules. With Andrew Solutions' Rapid Response Program, we pledge same day shipment for the most commonly used assemblies. Andrew Solutions' strategic distribution network supports just-in-time delivery. As a result, you know you'll have the right jumper assembly on-hand without having to carry the additional inventory.

## Online Factory Performance Measurements

As part of the manufacturing process, Andrew Solutions factory tests each and every assembly for PIM, VSWR, and DTF. Each assembly is serialized and the test data is then made available online at: <http://www.commscope.com/assemblydata>

Once installed, the long term performance and reliability of your SureFlex assemblies are supported by Andrew Solutions' iron-clad 10-year warranty.

Visit [www.commscope.com/andrew/eng/product/trans\\_line\\_sys/assemblies](http://www.commscope.com/andrew/eng/product/trans_line_sys/assemblies) for locations and conditions for same day shipments.



## Passive Intermodulation (PIM)

Defined as the unwanted signals generated by the non-linear mixing of two or more frequencies in a passive circuit, PIM is an obstacle to network efficiency.

Antennas and radios are now hyper-sensitive, susceptible to smaller and smaller levels of distortion. A 1 dB drop in uplink sensitivity due to PIM reduces coverage by 11% with significant reduction in data throughput.



## SureFlex: It's What's Now and What's Next

Looking ahead, Andrew Solutions SureFlex™ Premium Cable Assemblies help position you to take advantage of what is next. With its exceptional RF performance it is the best choice for 4G technologies like LTE and WiMax as well as the deployment of remote radio heads.

At the same time, no other cable assembly does more to save you time and money in the here and now. Environmentally rugged and shipped pre-assembled, ready-to-go, SureFlex Cable Assemblies simplify field construction, require fewer tools, reduce site costs and lower inventory carrying costs. OPEX savings that go straight to your bottom line. All while protecting your network against dropped calls and costly outages.

In this industry, there's no such thing as business-as-usual. Your network requires solutions that are continually evolving to meet ever-changing challenges. Now, when it comes to your cable assemblies, you can meet those challenges head on with Andrew Solutions SureFlex Premium Cable Assemblies.

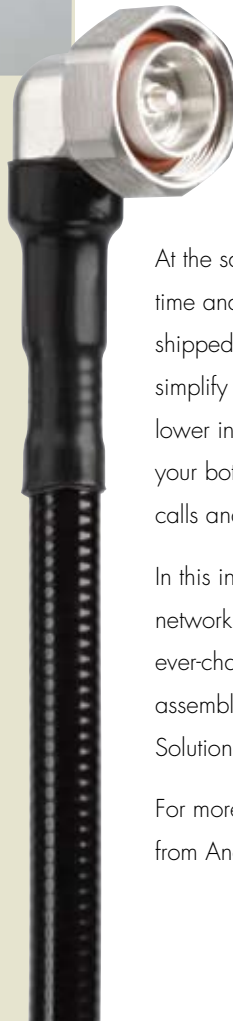
For more information on SureFlex™ Premium Cable Assemblies from Andrew Solutions, visit [www.commscope.com/andrew](http://www.commscope.com/andrew).

Every component in the RF path has the potential to contribute to PIM. Some of the more common causes include:

- Surface oxides
- Loose metal to metal contacts
- Surface contaminants such as solder splatters
- Contact between dissimilar metals
- Improperly torqued connections
- Structures or objects in close proximity to sites

Identifying PIM can be difficult as its symptoms are common characteristics of an under-performing system: reduced cell coverage, dropped calls, decrease in data transmission rate, lower quality of service. Localizing the offending components can be even more difficult.

Andrew Solutions understands these challenges and provides the right testing, engineering and manufacturing to ensure long term success. SureFlex Premium Cable Assemblies are just one example of how Andrew Solutions helps operators consistently meet system PIM performance levels.





## SureFlex™ Premium Performance—Guaranteed

SureFlex™ is a series of premium performance assemblies designed to help operators consistently meet system PIM performance levels, eliminate installation variables, and provide long term protection against moisture ingress and other environmental effects. It's performance that is individually tested and guaranteed in writing. And backed by Andrew Solutions' just-in-time distribution, your SureFlex assemblies are delivered when and where you need them without having to stock them. It all adds up to a level of reliability and savings that today's network demands.

More than a product, SureFlex is an innovative and evolutionary manufacturing process featuring premium Andrew Solutions components. At the heart of the SureFlex assembly are Andrew Solutions' HELIAX® cable and matching SureFlex connectors, specifically engineered to be used together.

The SureFlex components are then fused in-house to create an integrated assembly with the physical and electrical integrity that no field-fitted jumper can match. As a result, SureFlex delivers unmatched RF performance and environmental protection. And because SureFlex cable assemblies are pre-manufactured and tested in a tightly controlled environment, they arrive on-site ready to go. You save valuable time and potential connection error.

With Andrew Solutions' Rapid Response Program and strategic distribution network, SureFlex supports your just-in-time distribution needs, often providing same day shipping. In short, SureFlex delivers premium performance—guaranteed in writing.





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[www.commscope.com/andrew](http://www.commscope.com/andrew)

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