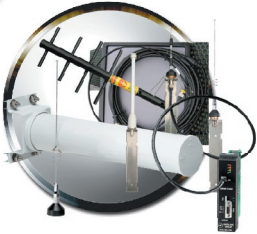


Accessories

Antennas

- Rugged construction for reliable performance
- Omni & directional
- Excellent performance
- Mounting hardware
- Antenna subsystems for 900MHz and 2.4GHz



Coax cables

- Tested coax and connector assemblies
- One piece for indoor or combining components
- Two-piece lower loss outdoor for lightning arrestor insertion and panel pass-through

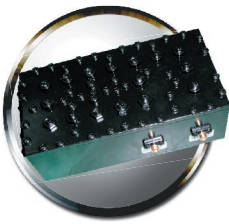
Data cables

- Available to interface with most industrial equipment
- Standard 5 foot lengths
- High quality “standard”

Data-Linc configures its full line of quality antennas, coax and data cables to ensure simple, trouble-free installation. This free service provides a known standard solution, reducing integration issues, labor costs and installation time.

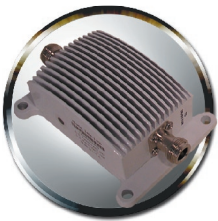
BPF900 band pass filter

- Out of band interference rejection
- High selectivity and volume production
- Reasonable insertion loss
- Radio performance improvement in noisy environments
- Increased noise reduction capacity when installed in series
- License-free 900 MHz band
- Compatible with all Data-Linc 900 MHz wireless modems and I/O extenders



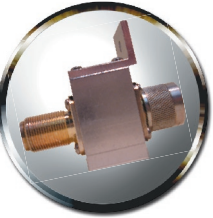
FLA2410 802.11b power amplifier

- “b” mode amplification to 1 W transmit
- 16dB gain low noise receiver
- Fully weatherized
- Built-in lightning protection
- Coax powered with power injector



Lightning arrestor

- Recommended for all outdoor installations
- Maintenance free and multi-strike capable
- Fully weatherized housing and connectors
- Panel and bulkhead mounts



RS232 Accessories

- Active Fan-in/Fan-out 4 port splitter
- RS232 to RS485 converter
- RS232 to RS422 converter



Back to Basics: Antennas 101

Data-Linc Group offers a broad assortment of high quality antennas. The wireless serial and Ethernet modems have a specified range of up to 25 miles using omni directional antenna. However, using an external antenna will improve performance and may increase range. Yagi antennas are often used for longer point-to-point links and omni directional antennas for shorter links or for Repeater sites. Remember, these are simply guidelines as proper placement may supersede the antenna type.

Antenna Selection

Selecting the right antenna is paramount to antenna performance. One factor to consider is antenna gain. Gain is achieved at the expense of beamwidth: higher-gain antennas feature narrow beamwidths while the opposite is also true.

Omni Directional

The omni directional is designed for use in any direction. This antenna radiates and receives equally well in all horizontal directions. The gain of an omni directional antenna can be increased by narrowing the beamwidth in the vertical or elevation plane. The net effect is to focus the antenna's energy toward the horizon. Omni directional antennas with different gains are used to improve reception and transmission in certain types of terrain. A 0 dBd gain antenna radiates more energy higher in the vertical plane to reach radio communication sites that are located in higher places. These are better suited in mountainous and metropolitan areas where interference from tall buildings occurs. A 3 dBd gain antenna is the compromise in suburban and general settings. A 5 dBd gain antenna radiates more energy toward the horizon compared to the 0 and 3 dBd antennas to reach radio communication sites that are further apart and less obstructed. The 5dB is best suited in deserts, plains, flatlands and open farm areas.

Directional Antennas

Directional antennas focus energy in a particular direction and are used in some base station applications where coverage over a sector by separate antennas is desired. Point-to-point links also benefit from directional antennas. Yagi and panel antennas are directional antennas. They must be oriented in one particular direction so the radio signal is focused toward the antenna of the device with which you wish to communicate.

Installation Guidelines

One key to proper installation is height. Generally range is improved by mounting the antenna as high as possible. Avoid installing the antenna next to solid objects such as walls, buildings, towers or girders. Reflected radio energy may drastically reduce antenna performance. Six feet from any solid object, including Earth, is the rule of thumb.

Avoid installing the antenna near electrical sources, such as power lines, electrical motors, solenoids, high power radio signal sources or nay high-voltage power usage). Aside from reducing antenna performance due to electrical noise, there is always the possibility of electrical shock.

Line of sight (LOS) is an imaginary "straight line" from point A to point B. The radio carrier is deflated by obstructions that block the signal path. To ensure constant, solid communications, antennas should be visible to each other.

Again, omni directional antennas should be mounted as high possible. The four angled wires, called ground radials, should be rotated until they are angled downward. This increases antenna efficiency. The Yagi antenna should be mounted so the cross sections attached to the central spine (or elements) are oriented vertically as depicted in the photo to the left. The central spine should be pointed toward the other antenna. The Yagi antenna should never be mounted vertically (shown right) as radio energy is radiating upwards rather than at the receiving antenna.

Data-Linc offers a broad line of antennas— each designed to enhance performance on any application.