

## Indoor-Outdoor Interlock-Armored Plenum-Rated Fiber Optic Cables

*New cable construction reduces installation time and associated expenses, as well as improves overall cable security.*

Since 1986, Hitachi Cable America (HCA), at its Manchester, New Hampshire facility has been building high-performance communication cables. When it comes to fiber optic cable, HCA's selection is second to none. As the list of possible applications for fiber optic cables grows on an almost daily basis, HCA's engineers are regularly designing new cable constructions to fill those needs. One of the more recent results of their efforts is a jacketed, interlock-armor, indoor/outdoor, plenum-rated (UL-listed) fiber optic cable with tight-buffered optical glass (further referenced as JIA I/O). The design offers a number of desirable features that will make installation easier and provide additional protection to the optical glass.

To accommodate most installations, the cable is available in 2 through 24-fiber constructions. All fiber optic glass types are available, including: 62.5 micron multimode (OM1), 50 micron multimode (OM2, OM3 & OM4) and singlemode (OS2). (OM3) is the most popular and offers 10 gigabit Ethernet support to 550 meters (OM4).

### Why should I use an indoor/outdoor fiber optic cable?

An indoor/outdoor rated cable offers a number of advantages over other cables. Because it is rated for outdoor and indoor plenum use, JIA I/O can bridge the gap between buildings, both in lashed aerial and underground conduit applications, penetrate the entrance facility of a building and, due to its plenum rating, continue through the building to the telecommunications room to be terminated. Unlike standard outside plant cables, which must be terminated within 50 feet of entering the building (per national electric code NFPA-70), JIA I/O plenum rated cable can run directly from one telecommunication room to another, regardless of the environment.

In addition to the interlock armor, this cable features an outer mold and fungus resistant jacket, as well as super absorbent polymers (SAP) in the inner cable which inhibit water migration within the cable. Even cables run within a building may encounter wet areas. Conduit that has been installed in or below the ground-level floor may collect water. In these instances, where the potential for water exists, an indoor/outdoor rated cable would be ideal. This cable also features tight buffered fibers which allow the installation of connectors without the use of a furcation (fan-out) kit, further saving time on installation.



What is the advantage of aluminum interlock armor?

In the past, indoor fiber optic cable was often installed in innerduct. Innerduct is essentially a plastic tube with a pull string inside it. This tube offered an additional layer of protection for the fiber optic cables inside it, as well as helped identify it in the building. However, using innerduct added cost. In addition to the cost, which in the case of plenum rated innerduct is significant, you had to install it and then pull the fiber optic cable through it. Innerduct also provided an easy pathway for other cables that were going in the same direction. This is not desirable since the contractor who is appropriating the pathway may not be overly concerned with damaging the fiber currently in it. JIA I/O does not permit the intrusion of other cables.

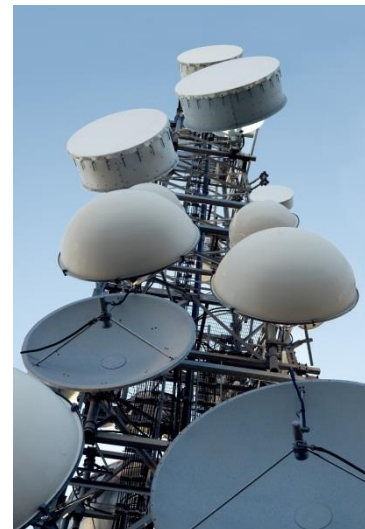


*Plenum rated Innerduct*

JIA I/O cables are smaller than cables and innerduct used together. In fact, HCA's 24-strand cable is less than half the size of a fiber optic cable in 1.5 inch innerduct. The smaller diameter makes it easier and quicker to install than cables in innerduct. The JIA I/O cable, due to its smaller diameter, also occupies less space in conduit allowing additional cables to be installed or smaller conduit or sleeves to be used. The cable features a black jacket, but is also available in orange, yellow and aqua.

Applications:

Fiber optic cables are used in an ever growing number of applications. From extending the Local Area Network to connecting wind mill and cell towers, fiber optic cables are everywhere. And, the diversity of the environments in which they are installed is also increasing. In addition, reliability has to be a given, since down time is unacceptable. Regardless of whether you are running a cable across campus or up to the tenth floor, install JIA I/O and you can be confident it will perform.



Hitachi Cable America's JIA I/O cable is a durable fiber optic cable that can withstand the elements, provide armoring against a litany of man-made hazards, be easily identifiable and provide unparalleled throughput. Since Hitachi Cable uses optical glass from Corning, the leading manufacturer of optical glass, throughput performance is exceptional. And, when used in a certified installation, Hitachi Cable's JIA I/O cable can be covered by a lifetime warranty.

To learn more, visit us online at [www.accu-tech.com/vendors/hitachi/](http://www.accu-tech.com/vendors/hitachi/) or contact us today.