



- **Compact Enclosure Suitable for Outdoor Mounting**
- **Includes Integrated Power Supply**
- **Suitable for Uplink or Downlink Applications**
- **Up to Four Foxcom Modules per Unit**
- **Large Variety of Options Available**
- **Can include Bi-directional Serial Data Transceiver**



Outdoor Unit Fiberoptic Interfacility Links

The Foxcom Series 4003 Outdoor Unit (ODU) is an outdoor enclosure providing weatherproof protection for Foxcom Sat-Light Interfacility Links. Any Foxcom Interfacility Link component can be installed outdoors, even in extreme weather conditions, eliminating the need for environment controlled shelters. Foxcom's Sat-Light Interfacility Links (IFLs) offer a high performance, cost effective alternative to conventional coaxial cable systems.

The Sat-Light IFLs function as a transparent link between the satellite antenna and the Network Operations Center (NOC) or control room. System limitations in using coaxial cable are overcome by the simplicity and performance of fiberoptic connections to provide the highest levels in signal quality. Sat-Light Transmitters convert the RF signal to an optical signal by direct modulation of a semiconductor laser diode. At the receive end the optical signal is converted back to an RF signal by a photodiode.

The 4003 ODU can be fitted with any combination of four (4) L-Band and/or 70/140 MHz IF transmitters and receivers, or serial transceiver. When configured with transmitters in a downlink application both satellite polarities can be accommodated. In an uplink configuration an ODU mounted near the antenna, holding several receivers, can feed a standalone up-converter, block converter, or transceiver. The series 4003 ODU can also be configured as a transceiver for VSAT applications. The unit includes an integrated power supply.



ODU

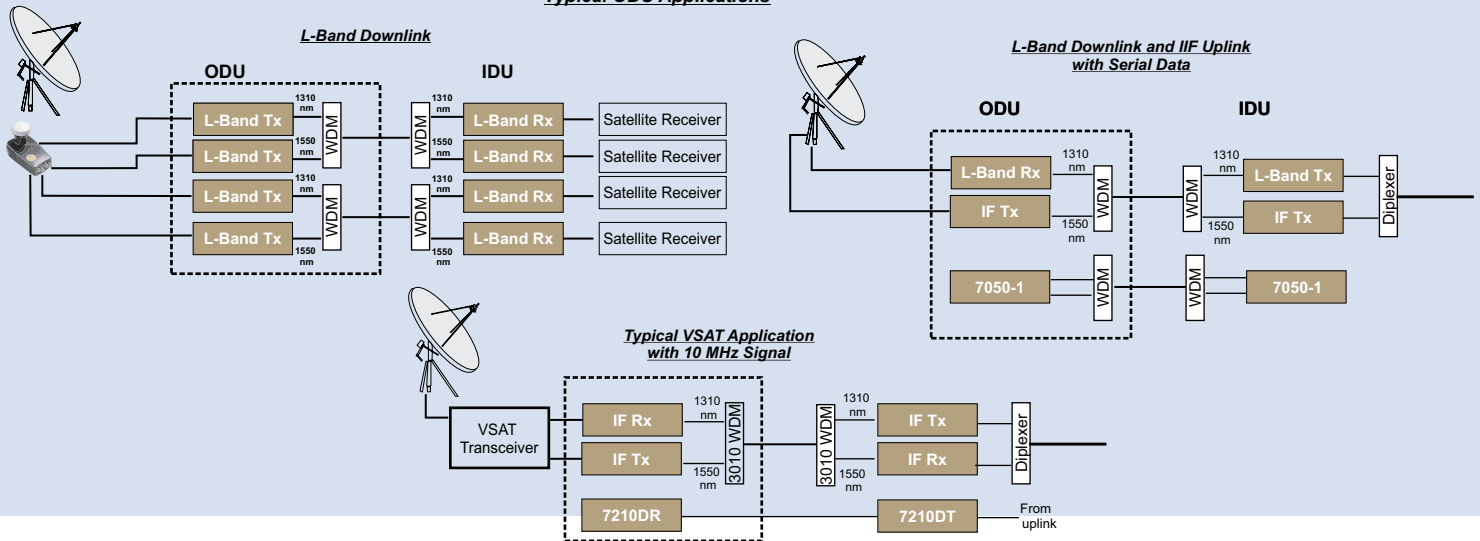
Outdoor Unit Fiberoptic Interfacility Links

Foxcom offers a wide range of products to meet your specific Satcom needs. Short distance downlink applications can best be achieved using our cost effective Fabry Perot laser products while more demanding long distance or multi-carrier applications can be met using our high dynamic range DFB lasers delivering excellent signal quality even under varying conditions.

The ODU line of products allows for a great deal of flexibility when designing a system. Any combination can be integrated in the unit: four transmitters, four receivers, or a combination of both. Different models can be installed in the same enclosure. Different application needs can be addressed. If desired a 10 MHz reference signal or a Data Transceiver can be installed, providing Monitoring and Control (M&C) capabilities. For redundant links a 1:1 switch can also be included.

Most product options offer manual gain control (MGC). MGC provides a means to ensure maintenance of a unity gain on the fiber optic link under your particular design requirements. The ODU contains an internal power supply sufficient for any combination of transmitters and receivers chosen. Prime power to the ODU is via a weather tight connector from a AC power supply. A LED indicator showing operational status is provided on the ODU. Internal LNB power selection and monitoring and alarms are available. The molded cast housing provides protection of the internal components from the ambient weather conditions.

Typical ODU Applications

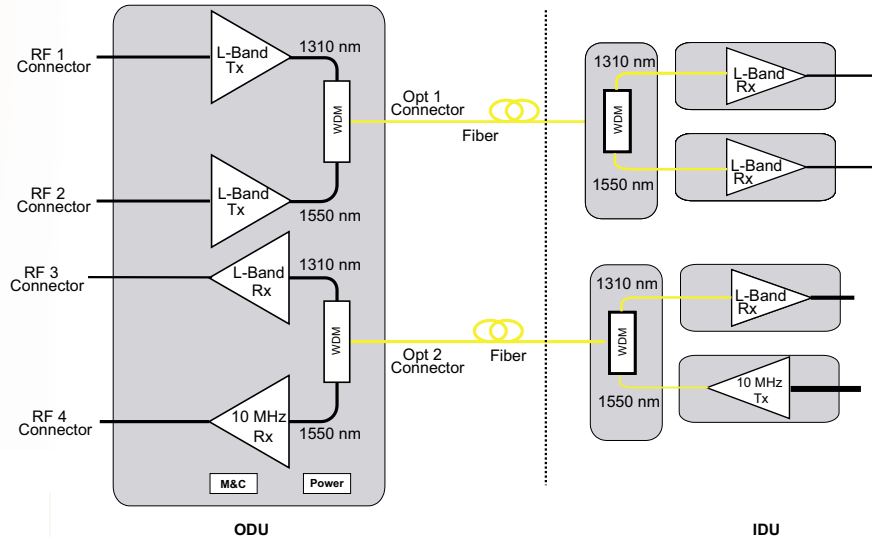


Note: The drawings above are samples of typical combinations. Many other applications are possible. Please consult with your Foxcom Representative for more details. The 7050-1 is a serial data link. The 7210D provides a 10 MHz reference signal.

ODU Functions

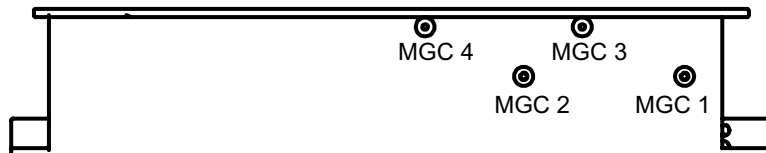
WDM

As can be seen in the pictures and figures describing the ODU, there are four RF connectors but only two optical connectors. Foxcom Sat-Light links can transmit signals at both 1310 nm and 1550 nm. Both wavelengths can be transmitted over a single fiberoptic cable by employing wavelength division multiplexing (WDM). How does WDM work? The basic idea is that each signal is transmitted at a specific optical wavelength (color). Foxcom's 3010 Diplexer then combines the two wavelengths and transmits them over a single fiber. At the receiving end, a second 3010 Diplexer reconverts the signal back into the two wavelengths.



MGC

The ODU comes equipped with MGC. Each module is controlled separately, allowing each link to achieve unity gain. Unity gain is provided by adding a fixed amount of amplification such that the loss of the link is overcome and the output power level is thus equivalent to the power level of the input to the link. Note: Most, but not all Foxcom units are provided with MGC. Refer to the L-Band and 70/140 MHz IF Band data sheets for more details.



M&C

Foxcom's Model 7050-1 is a complete duplex fiberoptic link for data transmission. The Model 70500-1 Fiberoptic Data Transceiver provides the capability to transmit serial data which can be used for passing Monitor and Control data (M&C) from on-site communication equipment such as testing and measuring equipment, redundancy switches, antenna pedestals, broadcast equipment, etc. With the Model 7050-1 in your fiber IFL you can easily locate problems and choose predetermined solutions from your M&C system.

Data transmission protocols such as RS-422, RS-485 and RS-232 are supported (standard is RS-422/485). The data link requires one full fiber using WDM.

System Synchronization (10MHz reference link)

Foxcom's 7210T is an optical transmitter which receives high level 10 MHz reference signals from a hub and transmits them to an optical receiver (7210DR) located in outdoor ODU. This link provides high level, 0 to +6 dBm, low phase noise performance for accurate clock synchronization on a system from hub to antenna. Using the 7210 link an entire earth station can be safely and accurately synchronized for optimum network performance.



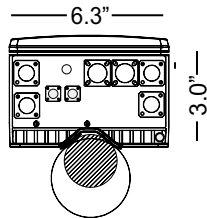
Our Company

Foxcom, established in 1993, is an international team of satellite professionals dedicated to delivering innovative high performance satcom products worldwide. Our global sales and marketing efforts are divided between our Princeton, NJ sales office supporting our customers in North and South America while our corporate headquarters in Jerusalem, Israel, supports sales into Europe, APAC and Africa. Foxcom's R&D, final assembly and testing take place in its Israeli headquarters delivering ISO 9001 certified products, meeting CE (European Union) and FCC approvals. Foxcom's MTBF ratings are among the highest in the world.

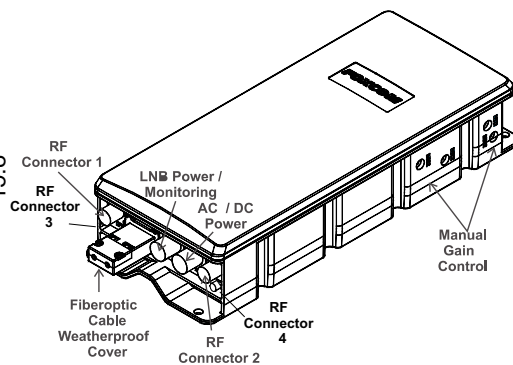
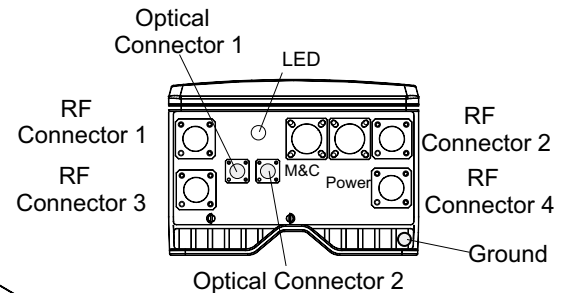
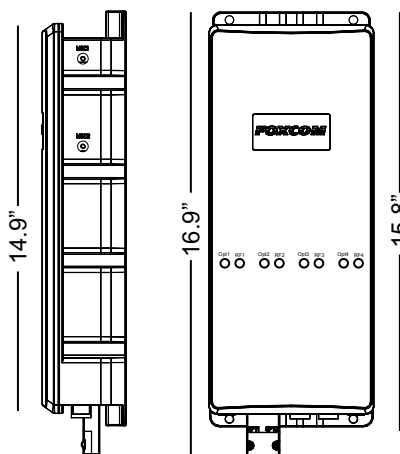
ODU

Physical Characteristics	
Enclosure Capacity	Up to 4 Units
Enclosure Size	14" x 6" x 3"
RF Connector	50 Ohm N type or 75 Ohm F-Type (specify in order)
Input Power	90 - 260 VAC, 50/60 Hz, 0.5 Amp (max.)
Power Consumption	20 Watts (max.)
Weight	5 Kilograms
Operating Temp. Range	-30 to +55° C
Storage Temp. Range	-40 to +85° C
Humidity	Humidity 95%, non-condensing
Dust and Water Protection	IP64

** For ordering information, please contact a Foxcom Representative



Installation Pole: 2" to 3"



Foxcom Inc.
Princeton Forrestal Village
136 Main Street, Suite 300
Princeton, New Jersey 08540
USA
Tel: 609-514-1800
Fax: 609-514-1881

Foxcom Ltd.
Beck Science Center
8 Hartom Street, Har-Hotzvim
P.O. Box 45092, Jerusalem 91450
Israel
Tel: +972-2-589-9888
Fax: +972-2-589-9898

E-mail: sales@foxcom.com

Website: www.foxcom.com

FOXCOM

Complete RF-2-Fiber Solutions

All specs are subject to change without prior notice. © Foxcom 2002. Doc. No. 130304-2