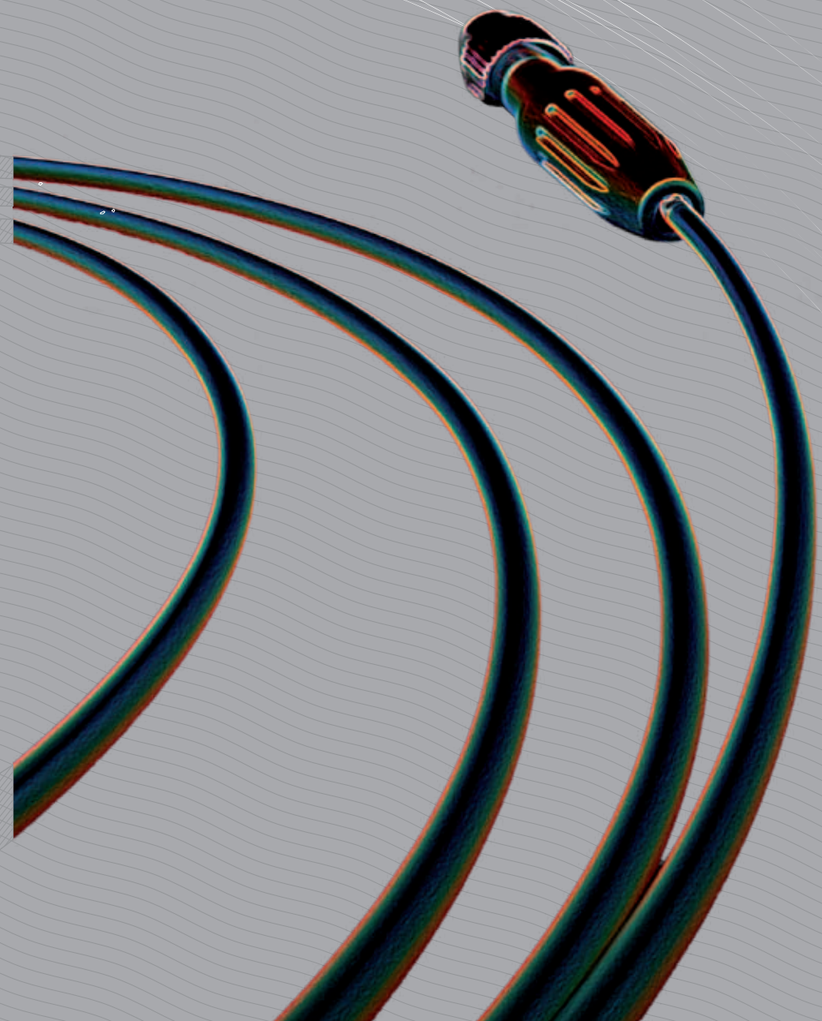
/2010 Edition
/Innovation Brochure

/ The Innovation in OPTIC FIBER



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/ FREEWAVE

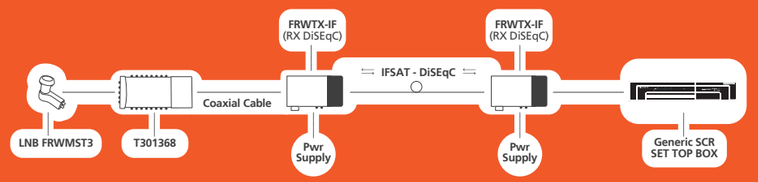
/ THE INNOVATION / WWW.RITAR.COM

The Innovation in Optical Fiber Products

Existing Wire networks in modern multimedia times need to be adapted to meet with recent requirements .Networks ,originally designed for transmission of broadcastings and TV programmes will also be used in the near future to serve for transmission of interactive services (e.g ,internet access,cable modems, DVB-T etc).
Those new complex applications are in need of technical innovations development, which are impossible to do on existing cable networks. For this reason and increased market demands, we've developed new advanced devices. Here we offer a very flexible fiber optic family.

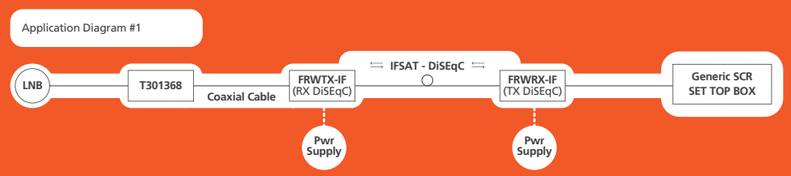
MAIN APPLICATION

Our bidirectional Tx-Rx (IF-DiSEqC) can transport any LNB and IP signal on optic fibre

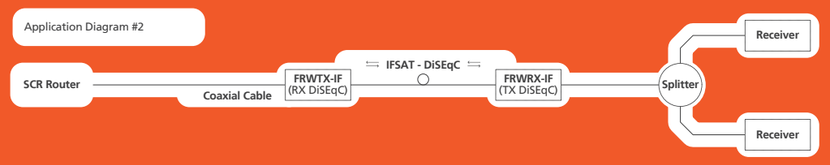


OTHER APPLICATIONS

Application Diagram #1



Application Diagram #2



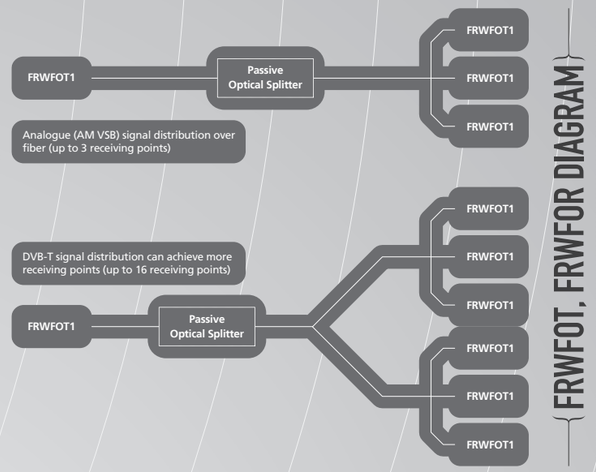
/ FREEWAVE OPTICAL FIBER PRODUCTS

FRWFOT1
Optical Transmitter

- compact die cast housing , low power consumption;
- high quality DFB Laser, optoinsulator built in;
- 1 GHz bandwidth;
- laser power monitor, for fault detection or laser lifetime;
- RF drive level adjustment, with predistorter circuit;
- SMD tecnology;
- suitable for small point-to-point link with AMVSB signals mixed with digital ones (COFDM /QAM);
- point to multipoint link with good optical budget;
- hi-rel switching power supply.

FRWFOR1
Optical Receiver Mininode

- small housing of the unit, low energy consumption;
- 1 GHz RF working platform with advanced GaAs technology;
- integrated 0dB or 5dB forward equalizer, to be changed with jumper;
- optical input level range from –9dBm to 0dBm;
- the unit is configured as two-way even RF level output;
- motherboard mounted in SMD technology;
- adapted two-way plug-in diplexfilter, so the output channel range can easily be changed;
- reverse channel FP-transmitter;
- highly efficient switched power supply.



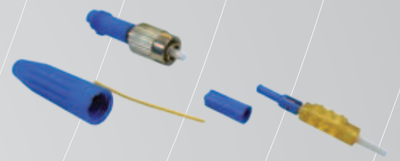
FRWOTX
TV RF Optical transmitters 4/6/8/10/13/16 CATV.

- 860MHz bandwidth
- high-performance DFB laser
- low noise, low distortion and pre-AMP to meet low RF input signal
- circuit design built with RF AMP and VCA
- separate CPU control board in each OTX module
- effective RF overdrive protection for LD
- effective ATC and APC enable precise optical power levels
- elective AGC and field MGC enables superior link optimization
- front panel -20dB RF test port
- RS232/485 and RJ45 Ethernet interfaces
- SNMP/Telnet /Web IE net work protocol
- advanced high efficiency switching power supply
- hot plug-in module position
- reliable thermal structure design

FRWOR860T-2M
Optical Receiver

FRWOR860T-2M is a two ways optical node with two outputs used for HFC network. This equipment has specials of high-performance, reliability and low price.

- water-resistant
- switch power supply Optical level use LED to display;
- -20dB level for output test.



FRWFCSH
FC connectors

These connectors are suitable for 900µm and 2 and 3mm cables. The combination of a ceramic ferrule and a precision nickel plated brass housing provides consistent long-term mechanical and optical performance. The Optronics FC connector is available in Singlemode PC and APC versions as well as multimode.
Connectors Features:

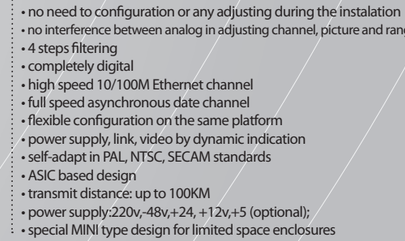
- compatible with all equivalent connectors;
- compliant with IEC 61754-13;
- available in 2mm patch, 3mm patch and 900 µm;
- termination procedures : prep cable end, Epoxy-Crimp-Polish;
- standard packaging: 100pcs Bulk packed;
- available in black, blue (2 & 3 mm boot), black, blue, (900 mm boot).

CMTS
Highly integrated DOCSIS compatible CMTS

- Compatible with both EURO DOCSIS1.1 & US DOCSIS1.1it also compatible with DOCSIS2.0 cable modem
- Support QoS
- Available in both 1X1(1DS,1US) ,1 X 2(1DS,2US),&1X4(1DS,4US)
- Available for VOIP service
- Customized design for cost sensitive operators
- Support up stream frequency automatic jumping to avoid disturbing frequency point
- Support upstream modulate mode and baud rate automatic change to insure perfect balance of upstream
- Support DHCP relay agent and PPPoE dial-up
- Bandwidth limit of both upstream and downstream
- Both CM and CPE could choose layer-2,layer-3 even mixed layer-2 & layer-3 working mode
- Optional internal high integrated DHCP/TFTP services mode
- It can be configured and operated by CLI, COM, SNMP
- Adopt high performance CPU to improve data processing capability
- Web management interface for convenient and cost effective operating
- Minimized 1U platform design, cost effective, easy to be piled and expanded

CABLE MODEM
Cable Modem

- Compatible with Windows® 95/98/2000/Me/NT/XP, Mac, Linux and UNIX
- Integrated A-TDMA and S-CDMA technology
- WHQL certified USB drivers for Windows® 2000/Me/XP
- New stylish case saves valuable desk space
- Front panel status LEDs and built-in HTML-based diagnostics
- Integrated EuroDOCSIS 2.0 A-TDMA and S-CDMA technology
- 10/100 Base-T Ethernet and USB connectivity
- Supports up to 32 users (1 via USB and up to 31 via Ethernet)
- Ethernet and USB connections bridged
- Remote management via SNMP
- Software upgradeable over the network
- Top-mounted stand-by button enhances network security to end-user
- Multi-language user guide



FRWOTX(*) / 1-64ch
Fiber Transmitter/Receiver TVCC

- no need to configuration or any adjusting during the instalation
- no interference between analog in adjusting channel, picture and range
- 4 steps filtering
- completely digital
- high speed 10/100M Ethernet channel
- full speed asynchronous date channel
- flexible configuration on the same platform
- power supply, link, video by dynamic indication
- self-adapt in PAL, NTSC, SECAM standards
- ASIC based design
- transmit distance: up to 100KM
- power supply:220v,-48v,+24, +12v,+5 (optional);
- special MINI type design for limited space enclosures

FRW80005
Ergonomically designed fibre stripper

This fibre optic stripping tool is designed to strip 250µm Buffer and 125µm fibre.

FRW80006
Fibre optic scribe with carbide tip

this well presented pen style scribe uses a 30° wedge shaped carbide tip. Its design makes for quick and precise cleaving of optical fibre.

FRWCLKIT008
Cleaning Kit for Optic Fibre

Cleaning cassettes (fiber cleaner)
Repeceable reel
Cleaning stick/swab
Cleaning IPA wipers
Cleaning air