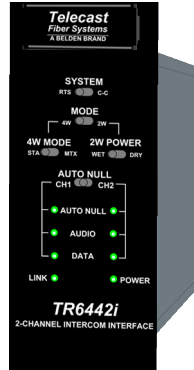


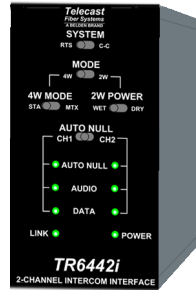
## Model TR6442i Fiber Optic Intercom Link



**TR6442i**  
Viper II Rack Mount  
or Throwdown



**MTR6442i**  
Viper II Throwdown



**MTR6442i-MML**  
Mini-Mussel Shell Enclosure

### Extend two channels of Partyline or Digital Matrix intercom over a single strand of fiber.

Telecast's CommLink™ is a fiber-optic transceiver system that uses one strand of fiber to carry two channels of "production intercom," insuring robust voice and data connectivity over distances far beyond the capacity of copper cables. It is compatible with the industry's most popular intercom systems:

- Partyline:
  - Clear-Com®
  - RTS® TW
- Digital Matrix
  - Clear-Com® MatrixPlus/Eclipse
  - RTS® Adam/Cronus/Zeus
- Generic 4-Wire and Data
  - Two Channels of bi-di audio
  - Two paths of bi-di data
  - RS422 or RS485

The system can link one partyline system to another partyline system, a matrix frame to two keypanels, or act as a two-wire to four wire hybrid adaptor via fiber or as a standalone local unit.

#### TWO-WIRE PARTYLINE MODE

Simply plug two channels of Clear-Com® PL (two XLRs) or RTS® TW (one XLR) into each CommLink module and connect them with a fiber cable. The system will "translate" between two systems so that you can have Clear-Com® at one end and RTS® at the other. It even translates the call lights.

#### Advanced DSP Auto-Nulling

Once the system is connected, a simple toggle of the AUTO NULL switch provides for a high quality digital system null of the two-wire system, no matter what the load, without the need for manual adjustments.

#### Power up to 10 beltpacks:

Each CommLink™ module can be powered from the Partyline intercom circuit without an external power supply, like a beltpack. Alternately, with a 12VDC power source, the CommLink unit can act as a Partyline power supply, providing enough 30VDC current to support approximately ten beltpacks.

#### FOUR-WIRE MATRIX MODE

The system seamlessly links a MatrixPlus/Eclipse (Clear-Com®) or Adam (RTS®) family matrix frame and two of the system's keypanels over a fiber strand. All of the keypanels' functionality is supported, including displays, controls, and communications to the matrix frame. It is just like they are connected via copper cable

#### PARTYLINE-to-MATRIX "HYBRID" MODE

Use the CommLink system to connect a matrix frame in the control room or truck with two partyline channels in the venue, without the need for a separate hybrid adaptor.

#### STANDALONE HYBRID ADAPTOR

A single CommLink™ unit can act as a standalone digital system interface/system-to-system adaptor, utilizing its state-of-the-art digital auto-nulling system. Connect two-wire intercom systems to legacy fiber systems, two-way radios, satellite links, TV cameras, and other communications devices with 4-wire circuits.

#### MORE RELIABLE, LONGER RANGE

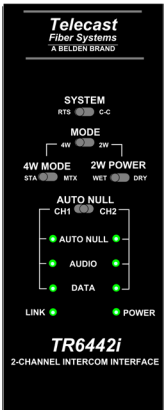
Eliminating the copper cable for the bulk of your intercom connection improves reliability, lowers the cable cost, and increases the distance you can connect your intercom users by several times.

### Features

- *Transports two intercom channels via one strand of single mode fiber up to 30 KM*
- *Infrastructure Fiber*
- *Tactical Fiber cable*
- *Compatible with most Partyline and Digital Matrix intercom systems*
  - *Two-Wire Partyline:*
    - *Clear-Com®*
    - *RTS® TW*
  - *Matrix:*
    - *Clear-Com® MatrixPlus/Eclipse*
    - *RTS® Adam/Cronus/Zeus*
- *Advanced Automatic Digital Nulling*
- *Internal power supply can provide power for up to 10 Clear-Com® or RTS® beltpacks.*
- *Advanced hybrid interfaces two two-wire intercom lines to two four-wire lines*
- *Uses a single common ST connector*
- *Immune to RF interference and ground loops.*
- *Front panel status monitoring*
- *Available in three mechanical configurations:*
  - *Rack-mountable in Viper II Frame*
  - *Viper II Throwdown*
  - *Mini Mussel enclosure for harsh environment*
- *Acts as a stand-alone (non-fiber) dual-channel digital hybrid interface*
- *Made in U.S.A.*

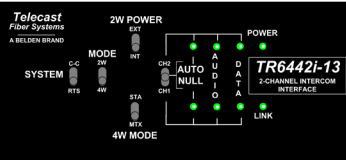
### Applications

- *Remote Outside Broadcasting (sports and entertainment)*
- *Electronic News Gathering (E.N.G.)*
- *Satellite News Gathering (S.N.G.)*
- *Theme Parks and Theatres*
- *Corporate Video Production*
- *Industrial Testing Environments*



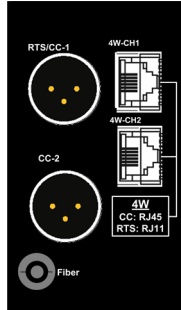
Viper II

**FRONT PANEL:** Four toggle switches provide for easy configuration of the unit into the desired mode. A fifth switch allows separate autonulling of each two-wire intercom channel. LEDs provide easy status monitoring at a glance.

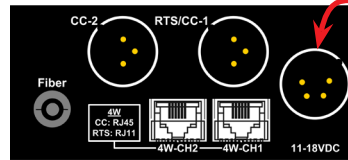


Mini-Mussel

**REAR:** XLR connectors are used for two-wire RTS or Clear-Com intercom channels. Two modular RJ connectors accept RJ45 plugs for connecting to Clear-Com MatrixPlus frames/keypanels or RJ11 plugs for RTS Adam frames/keypanels.

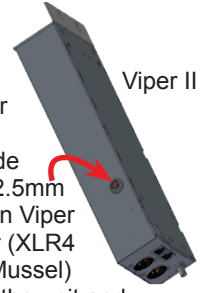


Viper II

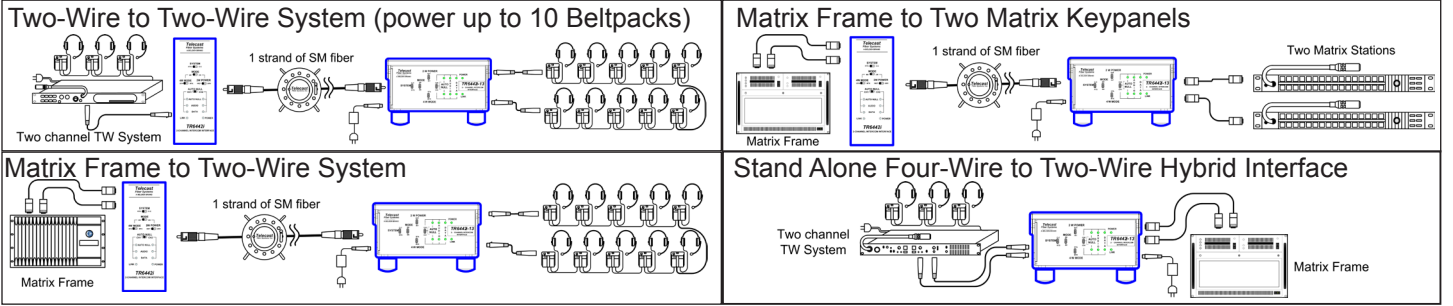


Mini-Mussel

Connect 12VDC via a connector mounted on the side (locking 2.5mm circular on Viper II) or rear (XLR4 on Mini-Mussel) to power the unit and up to ten beltpacks. Or get power from the TW intercom line.



**Application Examples**



**Ordering Information**

MTR6442i-MML-13	Intercom transceiver & 4W/2W hybrid (w/autonull), RTS & C-C, MiniMussel, 1 SM fiber: int WDM @ 1310nm, ST conn. Reqs (M)TR64421-15.	
MTR6442i-MML-15	Intercom transceiver & 4W/2W hybrid (w/autonull), RTS & C-C, MiniMussel, 1 SM fiber: int WDM @ 1550nm, ST conn. Reqs (M)TR64421-13.	
TR6442i-13	Intercom transceiver & 4W/2W hybrid (w/autonull), RTS & C-C, V2 rack-mount, 1 SM fiber: int WDM @ 1310nm, ST conn. Reqs (M)TR64421-15.	
TR6442i-15	Intercom transceiver & 4W/2W hybrid (w/autonull), RTS & C-C, V2 rack-mount, 1 SM fiber: int WDM @ 1550nm, ST conn. Reqs (M)TR64421-13.	
MTR6442i-13	Intercom transceiver & 4W/2W hybrid (w/autonull), RTS & C-C, throwdown, 1 SM fiber: int WDM @ 1310nm, ST conn. Reqs (M)TR64421-15.	
MTR6442i-15	Intercom transceiver & 4W/2W hybrid (w/autonull), RTS & C-C, throwdown, 1 SM fiber: int WDM @ 1550nm, ST conn. Reqs (M)TR64421-13.	
ADAP-AC-04	AC Power Adapter for MML units; 120/240 VAC in; 4-pin XLR; 4A; 15 VDC	not shown
ADAP-AC-04LC	AC Power Adapter for Viper2 units; 120/240 VAC in; 2.5mm circ; 4A; 15 VDC	not shown
TDK-TR6442i & RMK-TR6442i	Throwdown and rack-mount convert kits for swapping V2 plates/panels	not shown

Note: The CommLink utilizes Wave Division Multiplexing (WDM) for bidirectional signal transmission on a single fiber strand. Hence, all fiber links must consist of a 1310nm unit (suffix "-13") at one end and a 1550nm unit (suffix "-15") at the other.

**Specifications**

**Intercom**  
 Number of intercom channels.....2

**2-Wire (TW/PL)**  
 Interface:.....Clear-Com PL: XLR3M x 2  
 RTS TW: XLR3M x 1  
 Max Level..2VP-P, @ 1KHz (equiv. to +18dBu in 4W)  
 Dyn. Range >85dB, ref. 2VP-P @ 1KHz  
 Freq. Response...+1/-3dB, 70Hz to 22kHz, ref. 2VP-P  
 THD+N <.1% @ 2VP-P  
 I/O Impedance (100Hz to 20KHz).....220Ω ±10%  
 Termination engaged (internal power)..... ≥10KΩ  
 Termination dis-engaged (external power)..... ≥10KΩ  
 Nulling:.....Automatic DSP  
 † properly terminated (internal or external)

**4-Wire (4W) Ports**  
 Interface:.....Clear-Com MatrixPlus/Eclipse: RJ45 x 2  
 RTS Adam/Cronus/Zeus: RJ11 x 2

Maximum Level (I/O, Unity Gain).....+18dBu  
 Dynamic Range.....>85dB, ref. +18dBu  
 Frequency Response...+1/-3dB, 35Hz-22kHz, ref. 0dBu  
 THD+N <.05% @ +17dBu @ 1KHz  
 Input Impedance.....10kΩ balanced  
 Output Impedance.....30Ω balanced  
 Data:.....Clear-Com: RS422, RTS: RS485  
 Crosstalk:.....>85dB

**Electro-Optical**  
 Operating Wavelength, standard.....1310/1550 nm (Wave Division Multiplexed)  
 Nominal Optical Loss Budget Values  
 TX Laser output power.....-7 dBm  
 RX Sensitivity, HD/SDI.....-22 dBm  
 Link/Distance Limit\*.....15dB optical loss (≥ 30Km\*)  
 Fiber Compatibility.....Single Mode  
 Optical Connector.....ST

**Mechanical/Environmental**  
 Dimensions (HxWxL)  
 Rack Mount.....5" x 2" x 10"  
 Throw Down.....4" x 2" x 10"  
 Mini-Mussel (without feet).....2" x 4" x 10"  
 Weight  
 Rack Mount/Throwdown.....1.375 lb  
 MiniMussel.....2.8 lb  
 Power Consumption  
 2W with Local Power.....3 watts@10-18VDC  
 Powered from 2W System.....6 watts@10-18VDC  
 4W System.....3 watts@10-18VDC  
 Temperature Range.....-25° to +55°C  
 Humidity Range.....0 to 95% RH, Non-condensing

**Compliance**  
 Laser Safety.....Class 1 Laser 21 CFR 1040.10  
 EMI/RFI.....IEC/EN 60825-1  
 RoHS

\*Maximum cable length varies due to optical cable quality, dirt/dust/contamination on connectors, and the number of in-line connectors.



© 2012 Telecast Fiber Systems, Inc.  
 Trademarks are property of their respective owners.  
 CL6442120404r5jh

Represented by:

324 Clark Street; Worcester, MA 01606 USA  
 Phone: (508)754-4858 FAX: (508)752-1520  
 telecast-sales@belden.com  
 www.telecast-fiber.com

Made in USA  
 Specifications subject to change without notice.