



TACTICAL COMMUNICATIONS BRIDGE

www.tcb2.net

TCB-2

- **Powerful DSP based digital audio interface**
- **Color LCD Touch Screen allows field configuration, port monitoring and radio adjustment control**
- **Adjustable VOX detector Non-VOX based COR inputs**
- **Supports Analog, Digital and cellular radios**
- **Modular design with support for up to 10 radios allows custom configuration and quick field servicing**
- **Support for several cellular and PTT style mobile phones**
- **Built-In Digital Audio Delay minimizes Trunking receiver clipping**
- **Front panel / DTMF control to change operational modes**
- **Dual Telephone module supports Pots/2/4 wire interface (option)**
- **10 W Speaker / microphone feature supports local dispatch operator position**
- **Large assortment of radio interface cables available for both handheld/mobile radios**
- **Web Page Ethernet Interface for remote control operation**
- **Operates from +12VDC (AC Adapter Included)**
- **Priced to meet your Budget:**



The Tactical Communications Bridge 2 (TCB-2) performs as the connection point between two radio systems. Acting as the mode independent connection device, the TCB-2 offers interoperability for up to 10 radios, at an affordable price without sacrificing features.

The TCB-2 incorporates many features, including radio interoperability, simplex and duplex repeater operation, different protocol radio connection, radio link extender and cross-band repeater operation. The TCB-2 is an ideal interface between Analog and Digital trunked radio systems. Operators utilizing iDen PTT phones can easily connect the phone with other conventional or trunking radio systems, utilizing the available radio interface cables.

Radio interfacing is accomplished using the built-in radio settings database along with one of the custom radio interface cables. The TCB-2's radio database contains all the settings needed for the selected radio to operate correctly with pre-defined audio level settings. This ensures that the connected radio's audio is correct and interfaced at the correct level.

Interfacing to a trunked radio system is accomplished by selecting the appropriate radio from the radio database. Within the radio's profile is the mode of operation for the radio. When a trunked radio is selected, the TCB-2 enables the digital audio delay feature. The delay minimizes the receiver clipping which can occur when connecting to a trunked system. The TCB-2 has a total of 4 seconds of digital audio delay capacity, per radio port, available during both conventional and trunked radio operation. The digital audio delay is included as a no-cost standard feature.

Utilizing the color LCD touch panel display, the users can monitor a port's activity, input data and parameters without the need for a computer. Direct sunlight viewing, and night time operation is possible with the user controlled backlight. The graphical display will aid in the operation and configuration of the TCB-2.

When operating the TCB-2 with the included Console interface feature, a local speaker and microphone port is available. The operator can then use the LCD touch screen for typical dispatch operation. There is no need to have additional pieces of equipment when using the local console position. A 10 watt speaker system, along with a headphone jack, will provide plenty of audio for use in a noisy environment.

The user can control the configuration of the five radio talkgroups utilizing the radio's DTMF keypad. Local control of the TCB-2 is accomplished utilizing the LCD Touch panel display. Offsite configuration is handled with the built-in Ethernet interface.

Field service and upgrading of radio cards can be handled in the field of operation. Additional radio interface cards can simply be installed by sliding the new card into the desired slot, from the rear of the TCB-2.

For more information on the TCB-2, currently supported radios, options, documentation and pricing, contact your nearest authorized dealer or visit the TCB-2's support site, www.tcb2.net.

 **Link Communications Inc.**
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Tactical Communications Bridge 2 Specifications

<u>Power and Size</u>	
Voltage / Current / Temperature	11V .. 18V DC / 1200mA DC @ +12V/DC 2 pin Anderson Power Pole Connector -4 ° F to 158 ° F (-20 ° C to 70 ° C)
Size/Weight	9.0" deep x 8.750" width x 5.250" high, Weight with carrying handle 8.0 Lbs (3.83kg)
Included Radio Ports	6 radio ports, RJ-45 connector (Balanced Input / Output, COR, CTCSS and VOX). Opto-Isolated COR / CTCSS inputs
<u>Audio Characteristics</u>	
Input Level / Range / Response	150mV p-p .. 8V p-p , 96dB (16 bit digital conversion ADC). > 50K ohms, AC Coupled, 2Hz - 3.5 KHz (-3dB point)
Output Level / Range / Response	0V p-p .. 4.30V p-p, 96dB (16 bit ADC). 600 ohms, AC Coupled. 15Hz - 3.5 KHz (-3dB Point), (600 Ohm Load)
Dispatch Local Speaker/Microphone	2"x4", 10 watts nominal, 15 watts max, 1/8" stereo headphone jack. RJ-45 microphone option (HMN-3596a or equivalent)
<u>I/O Characteristics</u>	
COR and CTCSS Inputs	0V - 48V, Optical Isolated with a 4.7K ohm load. Programmable active high/low condition
Access Modes	VOX (Activates on audio), COR, CTCSS, COR and CTCSS, COR or CTCSS
PTT Output	0V - 200V, 2 Amp, Opto-Isolated FET (RJ-45)
Optional I/O boards	Contact Link Communications, Inc for you analog/digital I/O requirements
<u>Digital Characteristics</u>	
DSP Processor / Firmware	100 MIPS floating point Analog Devices DSP radio card processor. 66 MIPS Motorola system control uProcessor
Audio CODEC	16 Bit @ 16 KHz sample rate, 8 KHz input/output bandwidth
Liquid Crystal Display (LCD)	320 x 240 Color TFT Graphical LCD w/integrated Touch Screen. LCD Backlight either ON, OFF or User Adjustable Timer
RS-232 and Ethernet Port	RS-232 port up to 115 K baud. 10/100 Ethernet port. Windows(tm) Remote Control Software GUI included
Voice Over Internet Protocol (VOIP)	16 Bit @ 16 KHz PCM (TCB-2 to TCB-2 Connections) and (TCB-2 to Windows(tm) GUI Interface)
<u>Operating Modes</u>	
Conventional, Trunked, Duplex	Half /Full duplex radios. Duplex repeater mode enables on-site repeater operation from a TCB-2 single radio port
<u>Audio Delay Description</u>	
Fixed Audio Delay	Each radio ports receiver supports a digital audio delay up to 5.0 seconds, adjustable in 0.1 second increments
<u>Database Description</u>	
Radio Database	The TCB-2 contains a radio database that has the set-up information for up to 50 radio types. The user can simply select the type of radio connected to each radio port. Once selected, the receiver and transmitter setting will be automatically recalled for the selected radio. No adjustments should be needed when setting up a radio. The radio technician can also edit the radio's settings to exactly match the connected radio. If a radio is not found in the radio database, the radio technician can develop their own profiles using the radio set-up utility.
<u>Options Available</u>	
Radio Cables	Most handheld / mobile radios are supported and more are added weekly. Custom cables are available for most radios that are listed in radio database. Contact Link Communications for pricing and availability cables and radios not listed.
Additional Radio Port Cards	The TCB-2 supports 10 radio interfaces. It comes with 3 interface cards, 2 radio ports/card. Additional Cards Available
Telephone Interface (TIM)	The TCB-2 TIM supports two analog telephone lines. Features on the telephone are similar to the radio ports
E&M Type Interfaces	The TCB-2 supports several E&M interfaces utilizing special interface cables. Contact Link for more information
Mobile operations case	A mobile operations, shock mount case is available for the TCB-2. The case will hold a TCB-2 and six mobile radios. It is constructed of ABS plastic and has both front and rear removable covers along with caster wheels for mobility
Mobile Carrying Case	A mobile carrying case is available, housed in the Pelican Cases 1650 series case with a handle and wheels
19" Rack Mount Shelf	A 19", 3U (5 1/4") rack mount shelf is available for mounting the TCB-2 in a standard equipment 19" rack
Nextel(tm) phone interface	The Nextel(tm) phone interface is housed in a 2U (3 1/2") rack mount shelf and powers/charges the phone during operation



For immediate pricing and quoting for all your TCB product needs, visit www.tcb2.net

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