link communications

Powerful IP Based Radio
& Satellite Interoperability.

MSATiP& MSATiP-LMR

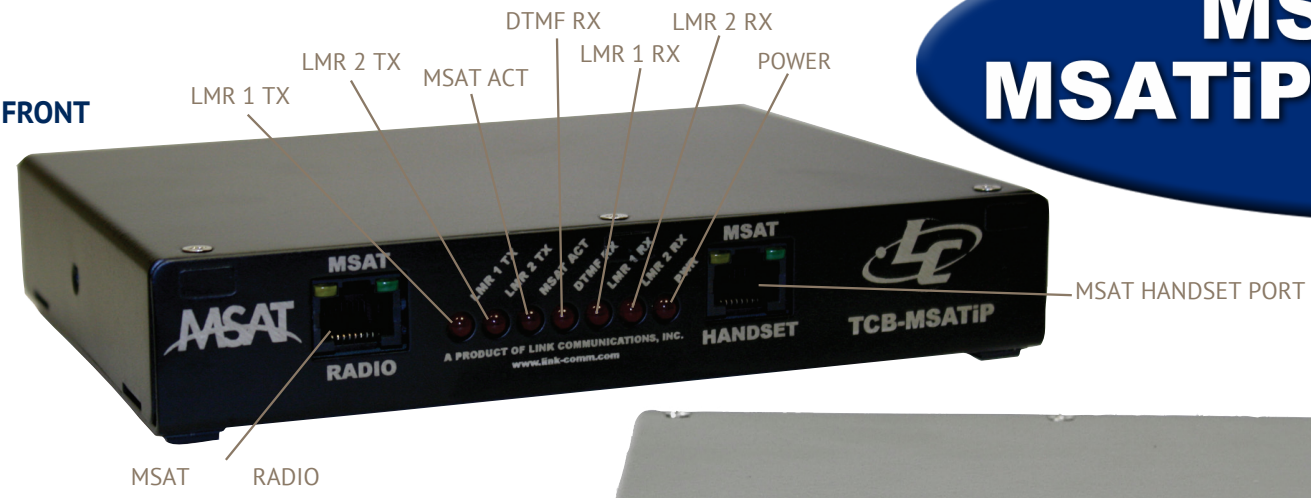
An IP based solution for the MSAT-G2 satellite based radio. The MSATiP system is a powerful DSP based communication system that enables operation between the MSAT-G2 satellite based radio and a single or multiple G2 handsets over an IP network. The system supports connections between the MSAT-G2 radio, its handset and VoIP based communications over IP. Enables operation over IP and when using a second MSATiP can IP remote the handset to any IP address. Communicate over IP and as a bonus provides two Land Mobile Radio ports enabling radio and MSAT satellite PTT interoperability. Windows™ GUI software provides full computer control, operation, management and duplex streaming.

MSATiP & MSATiP-LMR FEATURES:

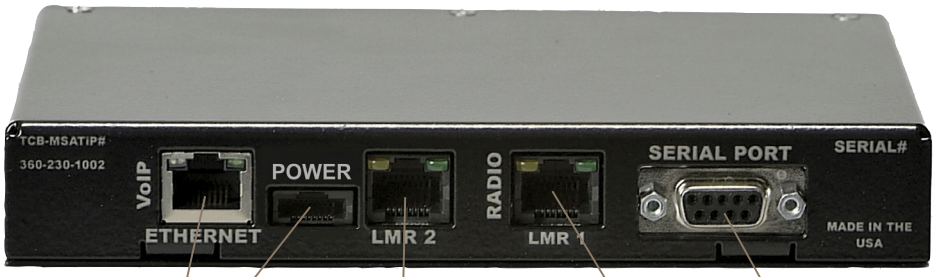
- Integrated VoIP and network management software enables MSAT Handset to access the G2 over a network connection
- Allows MSAT-G2 and two radios to be accessed, interconnected and operated from a Windows™ based computer
- An ideal interface to remotely operate the MSAT-G2 securely over IP up to 5 seconds per port. This feature allows access to satellite and trunking based radio systems without losing audio due to the access delay
- Powered from the MSAT-G2 radio or an external +12VDC power cube *(included)*
- Includes under dash mounting bracket that supports both the TCB-MSATiP and the MSAT-G2 radio
- Windows™ GUI software includes management and duplex streaming VoIP audio enabling full computer control and operation
- Powerful 600 MIPS Digital Signal Processed (DSP) based operation. Includes a user adjustable Digital Audio Delay, up to 5 seconds per port
- Large assortment of radio interface cables available for both handheld/mobile radios and includes support for 5/6 pin MIL-STD Audio
- Includes a user adjustable Digital Audio Delay, up to 5 seconds per port.
- Digital Spooling allows access to satellite and trunking radio systems without losing audio due to the access delay.

MSATiP
MSATiP-LMR

FRONT



BACK



MSATiP & MSATiP-LMR SPECIFICATIONS

POWER & TEMP

Voltage	11V .. 18V DC
Current	300mA DC @ +12V/DC
Temperature	-4º F to 140º F (-20º C to 60º C). *Voltage obtained from the MSAT-G2 radio when interfaced with the included 12" RJ-45 CAT-5 cable.*

SIZE

Depth	5.375 inches (136.5 mm)
Width	6.625 inches (168.3 mm)
Height	1 inch (25.4 mm)
Weight	8 ounces (0.23 kg)

AUDIO CHARACTERISTICS

Input Level	150mV p-p .. 8V p-p , 96dB *(16 bit digital conversion ADC)*
Range	> 50K ohms, AC Coupled
Response	2Hz - 3.5 KHz (-3dB point)
Output Level	0V p-p .. 4.30V p-p, 96dB (16 bit ADC)
Range	600 ohms, AC Coupled
Response	15Hz - 3.5 KHz (-3dB Point), (600 Ohm Load)

I /O CHARACTERISTICS

RJ-45 MSAT Radio Connector	12" Jumper between MSAT-G2 radio & TCB-MSATiP unit.
RJ-45 MSAT Handset Connector	Connects MSAT-G2's handset to MSATiP-LMR for dual use between handset & TCB-MSATiP-LMR interface.
COR & VOX Inputs	0V - 48V, Optical Isolated w/ a 4.7K ohm load. Programmable active high/low condition.
RJ-45 LMR Radio Connectors	Two LMR radios can be connected to MSATiP-LMR. Connects external half or full duplex LMR radio using radio cables.

OPERATING MODES

Conventional/ Trunked/ Duplex	Half /Full when operating in PTT mode, Full Duplex in Telephone Mode. Always duplex on VoIP feed.

DIGITAL CHARACTERISTICS

DSP Processor	600 MIPS fixed point. Analog Devices
Firmware	DSP processor. Embedded Linux OS.
Audio CODEC	16 Bit @ 16 KHz sample rate, 8 KHz input/output bandwidth.
RS-232	RS-232 port up to 115 K baud.
Ethernet Port	10/100 Ethernet port. Windows™ *Remote Control Software GUI included.*
Voice Over Internet Protocol (VoIP)	16 Bit @ 16 KHz PCM, g.711 RTP and RTP Multicast. SIP support.

ACCESS MODES

VOX	*(Activates on audio),* Hardware line from receiver detect (COR)
PTT Output	Software based for the MSAT-G2 radio.

AUDIO DELAY DESCRIPTION

Fixed Audio Delay	Each radio ports receiver supports a digital audio delay up to 5.0 sec, adjustable in 0.1 sec. increments

DATABASE DESCRIPTION

Radio Database	Radio database w/ set-up info. for up to 50 radio types. User selects the type of radio connected to each radio port. Then, receiver & transmitter setting is automatically recalled for selected radio. No adjustments needed when setting up a radio. Technician can edit the radio's settings to exactly match connected radio. If a radio isn't found in database, tech can develop own profiles using radio set-up utility..

OPTIONS AVAILABLE

Radio Cables	Most handheld/mobile radios are supported & more are added weekly. Custom cables are available for most radios listed in database.

link communications
+1-406-245-5002
www.link-comm.com