

STRATA

Portable Microwave Link System

OVERVIEW

STRATA's modular design removes the constraints of traditional portable radios giving you the ultimate flexibility in deploying a microwave link. The field proven system can easily be swapped between mobile, airborne, or fixed applications depending on where they're most needed.

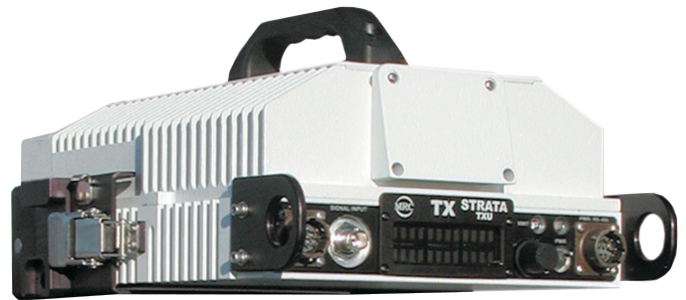
STRATA's versatility lets you adapt quickly to any situation whether it is simplex, duplex, or a multi-hop link. Transmitters and receivers can be configured for analog, digital, or switchable analog/digital.

Vislink offers system designs to meet your requirements, including 1 Box, 2 Box, Split Box and Duplex and Diplex Systems.

The STRATA system is scalable, making it a cost effective investment for your immediate as well as future needs, allowing you to build and expand your system, as needed.

ANTENNAS

Vislink offers a wide range of antennas to fit any STRATA system configuration, including omnidirectional antennas for mobile and airborne applications, and parabolic and MegaHorn antennas for fixed or portable links.



Features

- Easy Installation for Tripod, Airborne, or Vehicle
- Weatherized, Lightweight Rugged Design
- Cost Effective Modular Solutions
- Multiple configuration types: Simplex, Half Duplex, Full Duplex, or Diplex Configurations
- Front Panel or Remote Control

Applications

- Outside Broadcast
- Portable ENG Newsgathering
- Mobile Applications
- Airborne Applications

	2 GHz TXU	2 GHz HPU (Optional)	7 GHz TXU	7 GHz HPU (Optional)	13 GHz TXU	13 GHz HPU (Optional)
Power Output	+29 dBm	+38 dBm	+31 dBm	+37dBm	+30dBm	Consult Factory
DC Input	+11 to 36Vdc	HPU powered from TXU	+11 to 36Vdc	HPU powered from TXU	+11 to 36Vdc	HPU powered from TXU
Weight	7 lbs. (3.2Kg)	9.6 lbs. (4.32 Kg)	13.4 lbs. (6.03Kg)	9.6 lbs. (4.32 Kg)		9.6 lbs. (4.32 Kg)
Operating Temperature	-4° F to 122° F (-20° C to +50° C)					
Operating Humidity	95% @ 50° F to 104°					
Operating Altitude	15,000 feet (4,572 meters)					

TRANSMITTER

MPEG Encoder Specifications:

SDI Input: ANSI/SMPT 259M Level C
 270Mb/s, 525/625 Component
 HD-SDI, SMPT 292M @ 1.485 Gbps, 75 ohms
 2 Stereo Audio De-embedding provided AES/EBU
 Composite Video: Composite (75 ohms) 1 Vpp NTSC/PAL
 BNC / Return Loss, Minimum 28 dB at 6MHz
 Chroma/Level (Selectable): . . . 4:2:2 Profile @ Main Level or
 4:2:0 Profile @ Main Level
 Frame Size: Horizontal Res. 720 pixels
 Vertical Res: 480/525 NTSC, 576/625 PAL
 Video Encoding Rate: 2 to 30 Mbps Constant Bit Rate (4:2:2)
 1.5 to 15 Mbps, Constant Bit Rate (4:2:0)
 Latency (Selectable) – Bit Rate Dependent:
 Standard Mode: . . . <200 ms / Low Delay Mode: <100 ms
 VBI Processing: Extended Picture Mode (4:2:2)
 Closed Caption: Supports line 21 (NTSC) CC EIA 608 std
 Audio Coding: MPEG-II layer 2 (ISO/IEC 13818-3)
 ISO/MPEG 11172.3 Layer II (MUSICAM)
 Digital Audio Inputs (Configurable):
 Supports AES/EBU audio inputs (2 pairs)
 balanced inputs – 48 KHz sampling
 Audio Channels (select):
 Analog audio (2 stereo pairs) balanced, 600 ohm/
 600 ohms High Z (selectable)
 Min. Audio Bit Rate:
 192 Kbits/channel, 384 Kbits stereo
 Lower audio bit rates down to 128 Kbits selectable
 Audio Input Levels: +18 dBm clip level
 Transport Stream Output: . . . Fully DVB compliant DVB-ASI
 per ISO/IEC 13818-2 (188 byte packets) continuous bit rate
 Output Monitor Port - Front Panel Connector (70 MHz):
 Encryption: BISS-1, BISS-E
 Video input: NTSC/PAL, ASI

HD Encoder Specifications

HD MPEG-2 4:2:0MP@HL 5-100Mbps
 MPEG-2 4:2:2MP@HL 5-100Mbps Y (Optional) Resolution
 (HxVx frame rate)
 1280x720p 50/ 59.94/ 60Hz
 1920x1080i 25/ 29.97/ 30Hz
 1920x1080p 24/25/30/23.976/29.97Hz
 1920x1080pSF 24/25/30/23.976/29.97Hz
 Encryption: BISS 1 & E to 70Mbps
 Audio:
 HD-SDI 4 embedded channels (2 stereo) SMPT 299M
 AES (128 bit) to internal specification
 Audio MPEG-2 layer 1
 MPEG-2 layer 2
 Linear PCM (using SMPT 302M encapsulation)
 Transport of compressed audio (Dolby D & E) on AES Input

COFDM Specifications

COFDM IF Output (Monitor): 70 MHz @ -5 dBm
 COFDM Bandwidth (Selectable): . . . 6 MHz, 7 MHz, 8 MHz
 COFDM Carriers: DVB-T specifications 2K Carriers
 Modulation Type: QPSK, 16QAM, 64QAM
 FEC: 1/2, 2/3, 3/4, 5/6, 7/8
 Guard Intervals (Selectable): 1/32, 1/16, 1/8, 1/4
 70 MHz Carrier Insert Capability

Analog Audio & Video Modulator

Monitor Outputs: 70 MHz signal/pass thru
 Level output/Impedance: +2 dBm Analog/75 Ohms
 Signal Inputs: . Video, Composite 70 MHz (-10 dBm Analog)
 Video Mute: 70 MHz test tone - auto
 FM Deviation (Selectable): 3 MHz and 4 MHz - peak
 Video Input/Return Loss: 1 Vpp (75 ohms)
 525/625 line / > 26 dB
 Plug in Video Filter Options: 4.2, 5.0, 5.5 MHz

Video Response: ± 0.25 dB @ or within video filter bandwidth

Video Performance:

S/N: > 68 dB (weighted per RS-250C)
 S/H: > 63 dB (weighted per RS-250C)
 Diff. Phase / Gain: 1 degree / 1 %
 Baseband Response: 10 KHz to 8 MHz
 +0.5 dB / 8 MHz to 12 MHz <2 dB
 Audio Channels: 4 Channel Analog
 Line level: +8 dBm (600 ohms)
 Subcarrier input tune range: 4.5 MHz to 8.59 MHz
 Tunable in 2 KHz steps

Audio Performance:

Frequency Response (40 Hz - 15 KHz):±1.0 dB
 (40 Hz - 10 KHz):±0.5 dB
 THD: 0.5 % @ 1 KHz (75 KHz deviation)
 2.0 % @ 1 KHz (200 KHz deviation)
 Signal/Noise: 68 dBm (min.)
 Output Impedance (select): 600 ohms bal./10K ohms
 Output Level (adjust): +8 dBm - Line Level
 nominal (0 dBm to +18 dBm)

Audio channel crosstalk: 60 dB
 Emphasis: 50 µs/75 µs, flat - jumper selectable
 Control Interface: . . . 2 wire serial comm. port as DC input

Wayside Channel

Embedded data channel on MPEG Module
 (Uses the RS-232 port for DCE Data Path)
 Data Rates 1200, 2400, 4800, 9600, 19200, 38400

RECEIVER

MPEG Decoder

Delay Mode: 40 ms
 Chroma Profile: 4:2:2/4:2:0
 Line Standard: 526/625
 GOP Structures: Variable GOP
 Horizontal Resolution: 720, 704, 544, 352 Selectable
 Vertical Resolution: 576 (625 line), 480 (525 line)
 Bit rates: 4:2:0 – 1.5 Mbps – 15 Mbps
 4:2:2 – 2.0 Mbps – 50 Mbps
 Audio Coding: MPEG-II layer 2 (ISO/IEC 13818-3)
 ISO/MPEG 11172.3 Layer II (MUSICAM)
 Audio Channels: 4 Analog
 AES/EBU Digital Audio Option
 SDI with Embedded Audio
 Bit Rates: 32 to 448 Kbits/s
 Sampling: 32 KHz and 48 KHz
 Composite Video Output: . . . NTSC (w/wo pedestal) /PAL

SD Decoder (HD Optional)

	Standard
SD	4:2:0 MP@ML
	4:2:2 P@ML
HD	4:2:0 MP@ML
	4:2:2 MP@ML

COFDM Demodulation

(DVB-T Compliant)
 IF Input: 70 MHz
 Input Range: . . . -10 dBm nominal, (-10 dBm to -12 dBm)
 Bandwidth (Selectable): 6 MHz, 7 MHz, 8 MHz
 Threshold: . . . C/N-within 2 dB of ET51 300 744 Standard
 COFDM Acquisition Speed: 100 Msec (typical)
 Modulation Type: QPSK, 16QAM, 64QAM
 Output: DVB-ASI, SDI, MPEG Composite
 Packet Length: 188 bytes
 Forward Error Correction (FEC)-Auto Detect:
 1/2, 2/3, 3/4, 5/6, 7/8
 Guard Intervals-Auto Detect: 1/32, 1/16, 1/8, 1/4
 (selectable using presets)

Analog Audio & Video Demodulator

Level Input: (0 dBm to -2 dBm) 0 dBm nominal
 Impedance: 75 ohms
 Composite Outputs: . . . Switched outputs / Baseband/video
 Video Output: 1 Vpp (75 ohms) 525 /625 line
 Return Loss: >26 dB
 Plug In Video Low Pass Filters: . 4.2 MHz, 5.0 MHz, 5.5 MHz
 Video Response: ±0.25 dB @ within video filter bandwidth
 Video Performance (15 MHz L/C IF Filter):
 Signal/Noise: >68 dB (weighted per RS-250C)
 Signal/Hum: >63 dB (weighted per RS-250C)
 Differential Phase: 1 degree
 Differential Gain: 1%
 Chroma/Luminance Gain: 4%
 Chroma/Luminance Delay: ±20 nS

Threshold (2 GHz): -87 dBm @ 37 dB video S/N
 Threshold (7 GHz): -86 dBm @ 37 dB video S/N
 Field Tilt: 1%
 Output Level Adjust: +3dB to -6dB, squelch
 1 Vpp @ 4 MHz peak deviation - nominal
 1 Vpp @ MHz peak deviation
 Baseband Response: 10 KHz to 8 MHz +0.5 dB
 8 MHz to 12 MHz < 2dB
 Audio Channels: 4 Independent Subcarriers
 Subcarrier input tune range: 4.5 MHz to 8.59 MHz
 tunable in 5 KHz steps (local/serial control)
 programmable presets

Audio Performance:

Frequency Response: (40 Hz to 15 KHz):±1.0 dB
 (40 Hz to 10 KHz): ± 0.5 dB
 Threshold: 0.5 % @ 1 KHz (75 KHz deviation)
 2.0 % @ 1 KHz (200KHz deviation)
 Signal/Noise: 68 dB (min)
 Output Impedance:
 600 ohms balanced/10 K ohms (selectable)
 Output Level (adjust): +8 dBm – line level – nominal
 (0 dBm to +18 dBm) – local/serial
 Audio Channel Crosstalk: 60 dB
 De-emphasis: 50 µs/75 µs, flat – jumper selectable

Wayside Channel

Embedded data channel on MPEG Module – (uses
 connections on the RS-232 port for DCE Data Path)
 Data Rates: 1200, 2400, 4800, 9600, 19200, 38400

