MINI-Tx UHD

THE WORLD'S SMALLEST ULTRA LOW-LATENCY, ULTRA HIGH-DEFINITION WIRELESS TRANSMITTER

KEY FEATURES

- *UHD / HD mini transmitter*
- *Video formats up to 2160p59*
- *Camera control via dual integrated UHF receivers*
- *HEVC (H.265) & AVC (H.264) video encoding at 8/10-bit 4:2:2/4:2:0*
- *Up to 32Mbps video bit rate (63Mbps with dual pedestal)*
- *Compact size (85 x 56 x 28 mm)*
- *Low latency (typical link latency < 80ms)*
- *4 channels of embedded SDI audio*
- *2 channels of analogue audio (mic / line level + phantom power up to 48v)*
- *MPEG1L2 audio encoding*
- *Integrated GPS, accelerometer, and Wi-Fi*
- *HDR-capable (HLG, PQ, S-log3)*
- *Integrated user interface with optional control via Wi-Fi and Bluetooth*
- *Power and BSI Data over SDI (HD only)*
- *Tx frequency options from 1.4 to 7.5GHz*
- *Single UHD and independent Quad HD encodes up to 1080p59*

General Description

The award winning Mini-TX UHD is the world's smallest ultra-low latency UHD wireless video transmitter on the market, measuring just 85mm long by 56mm wide and 28mm deep. It can transmit in two entirely different frequency bands via its software-defined radio, offering complete on-site spectrum flexibility without the need for changeable radio modules. But, even with its compact size, the Mini-Tx UHD includes all the features expected from a traditional wireless video transmitter, and more, with pre-distortion, GPS, Wi-Fi, and a 3-axis accelerometer as standard and a dual UHF receiver to add robustness and flexibility to the camera control.

The Mini-Tx UHD also includes changeable connector panels for different applications, like a single UHD/HD video input, Quad HD/Single UHD inputs or Quad HD with power and control over SDI. Additional features available with the Mini-Tx UHD include video formats up to 2160p59; HEVC and AVC video encoding at 8/10-bit 4:2:2/4:2:0; up to 32 Mbps video bitrate per pedestal; four channels of embedded SDI audio; two channels of analogue MIC/Line selectable audio with MIC phantom power; MPEG1L2 audio encoding; support for HDR; and Tx frequency options from 1.4 to 7.5 GHz. The transmitter also allows power and BSI data to be transmitted over SDI (HD only), removing the need for separate power supplies and minimizes other cabling costs.

The Mini-Tx UHD has a proven track record of operational use within the NEP group and its ultra-compact size and rich feature set has seen it replace bulky conventional radio camera-back transmitters as well as being extensively deployed in body worn, POV, drone and in-car applications.

The Mini-Tx UHD is a ground-breaking product that has revolutionized professional wireless broadcast production, allowing NEP to truly bring content to life.

For further information about the Mini-Tx UHD, see https://www.bsintl.com/.

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TECHNICAL SPECIFICATIONS | MINI-Tx UHD

Video

Input Format	12G/ Dual 6G and Quad 3G / HD SDI
Supported Resolutions	3840x2160p59/50/29/25/24/23, 1920x1080p59/50/29/25/24/23, 720p59/50, 1920x1080i59/50(Interlaced), Square division UHD, 2048x1080p, 4096x2160p
Video Encoding	HEVC (H.265) and AVC (H.264)
Max Bit Rate	63.3 Mbps
Bit Depth	10-bit or 8-bit
Chroma Format	4:2:2 & 4:2:0
Quad Features	Independent HD encoder control, Independent bit rate control

Audio

Embedded SDI	Up to 4 Channels
Analog	Up to 2 Channels
Analog Level	Mic/Line Selectable
Analog Level Max	+18 dBu (balanced)
Analog Phantom Power	User selectable 5V, 8V, and 48V
Analog Encoding	MPEG1-L2

Connectors

RF Tx Out	2 x SMA(f)
UHF Rx In	SMA(f)
SDI Video In	HD-BNC(f)
Analog Audio In	LEMO 0B 6-pin(f)
Camera Control	LEMO 0B 7-pin(f)
Audio/Camera Control	Lemo 0B 9-pin(f) (Quad version only)
Power	LEMO 0B 2-pin(f)
USB	Micro type A/B 5-pin(f)

RF (Tx)

Scheme	DVB-T
Bandwidth	5, 6, 7, 8 MHz
Frequency Bands	1.4-1.6GHz & 6.4-7.5GHz 2.0-2.5GHz & 6.4-7.5GHz
Tuning Step	250kHz
Level	10 – 100 mW (inc. Pre-Distortion)
Pedestal	Single & Dual
DVB-T Bit-rates	3.8 to 31.7 Mbps per pedestal

RF (Rx)

Band	430-470 MHz (dual frequency diversity)
Bandwidth	25 kHz
Tuning Step	6.25 kHz & 10kHz

Physical

Dimensions	(85.0x55.3x28.4) mm (incl. connectors)
Weight	185g (Single Input), 190g (Quad Input)

Environmental

Temperature	-20 to +45 degrees C
Humidity	95% non-condensing
Sealing	IP65

Camera Control

Protocols	Sony, BSI, Grass Valley, Ikegami, Visca, In Car, POV, Pelco, DreamChip
Data Format	CAN Bus, RS232, RS485 serial
Return Data	Status, CAN bus, Battery (Volts), Temp, GNSS, etc.
Tx Remote Control	RF Freq, Power, Modulation, Audio gain, etc.
Data Transmit*	Power and BSI Data over SDI (HD only)
Camera Power	Battery volts (2A current limit)
Integrated GNSS	GPS (L1 C/A), Galileo (E1 B/C), BeiDou (B1 L), GLONASS (L1 O/F)
Local & Remote UI	LCD display and Joystick navigation, Wi-Fi (iPhone/ Android), Ethernet (via USB)
Integrated Accelerometer*	Not initially supported
Integrated Wi-Fi	2.4GHz 802.11b/g/n
Integrated Bluetooth*	Not initially supported

Future Releases (*)

Supported Resolutions	PSF formats
Scheme	DVB-T2, ISBD-T
Integrated Accelerometer	9-axis 3D Accelerometer, Gyroscope and Magnetometer
Integrated Bluetooth	Bluetooth 4.1
Data Transmit	Power and BSI Data over SDI (UHD)

NOTE: Specifications are subject to change without notice.

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