DTC

SOL7HDNTX
SOLO7 HD Nano Transmitter

Overview:

The HD Nano Transmitter enables production teams to offer viewers stunning high definition images from the heart of the action, in situations never previously possible due to equipment size and battery run-time constraints.

The small size and ultra-low power consumption make the HD Nano TX ideal for a range of applications from Point of View links to UAV drone installations, enabling true long range HD broadcasting from these increasingly popular devices for the first time. Optional lightweight, low power consumption amplifiers are also available for even greater range capability.

Features and Benefits:

Ultra-low latency High Profile H.264 SD and HD encoding

Video formats up to 1080p60 and optional 4:2:2 chroma sampling

Industry standard DVB-T modulation for interoperability with existing systems

Domo Broadcast UMVL modulation for enhanced high frequency/high speed performance

Controlled via USB or RS-232, can be configured by DTC Field Controller

Ideal for unmanned vehicles, point of view, on-board camera and video assist applications

Compact packaging with ultra-miniature connectors

Very low power consumption: typically 7.5W

Exceptionally small size: 67mm x 68mm x 22mm

Weighs only 135g

Product Information:

Product Includes

AP007377	Micro-B USB cable
AP007587	Quick Start Guide (QSG)
AP007619	BNC to phono adaptor
AP008574	DTC Device Controller (USB stick)
CA0002	12V DC power lead Lemo-wire 3m
CA2152	Standard HDMI (A) to micro HDMI (D) cable
CA2253	DC power/control cable
CA2254	Audio/video/data cable
CA2396	DIN 1.0/2.3 to BNC female cable

Accessory Options (sold separately)

CA0001	RS232 cable Lemo to 9-way D-sub
CA2250	DC power cable
CA2370	DC power/FCON cable
CA2298	9-way breakout cable
CA2485	6-way breakout cable
NTXBAT	Battery pack 7.4V (2250mAh)
NTXBATCH	Battery charger (multi-region)
SOL7NAMP1W	1W Nano PA, 3-5W power consumption

Related Documents

Resource ID 100145	SOLO7 Transmitter Family User Guide

Domo – Video, IP and Sensors

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Technical Specification:

IO

HDMI	Micro HDMI Type D
SD/HD/3G-SDI / ASI	DIN 1.0/2.3 (or BNC via CA2396)
Composite video	9-way tri-lobe (CA2254 yellow RCA)
Stereo audio	9-way tri-lobe (CA2254 white/red RCA)
RS232 data	9-way tri-lobe (CA2254 4-pin OB Lemo)
Camera power	9-way tri-lobe (requires CA2298)
S-Video	9-way tri-lobe (requires CA2298)
Power	6-way circular (CA2253 4-pin OB Lemo)
RS232 control	6-way circular (CA2253 3-pin OB Lemo)
USB control	Micro-B USB
RF output	SMA (100mW/50mW/10mW modes)

DVB-T Modulation

DVB-T bandwidth	8MHz, 7MHz and 6MHz modes
DVB-T FEC	1/2, 2/3, 3/4, 5/6, 7/8
DVB-T constellation	QPSK, 16QAM, 64QAM
DVB-T guard interval	1/4, 1/8, 1/16, 1/32
DVB-T bitrates	3.732Mbps to 31.668Mbps

Narrowband/UMVL Modulation

NB bandwidth	2.5MHz, 1.25MHz and 625kHz modes
UMVL bandwidth	8MHz, 7MHz and 6MHz modes
NB/UMVL FEC	1/3, 2/3
NB/UMVL constellation	QPSK, 16QAM, BPSK, 8PSK
NB/UMVL guard interval	1/8, 1/16
NB bitrates	144kbps to 4.879Mbps
UMVL bitrates	1.317kbps to 14.869Mbps

Video

SD input format	PAL, NTSC (with or without pedestal) 720x576i 50Hz 720x480i 59Hz
HD input format	1920x1080i 60/59.94/50Hz 1920x1080p 30/29.97/25/24/23.97Hz 1920x1080psf 30/29.97/25/24/23.97Hz 1280x720p 60/59.94/50Hz
3G input format	1920x1080p 60/59.94/50Hz* (via 3G-SDI level A/B only not HDMI)
H.264 compression	AVC/H.264/MPEG-4 Part 10 High profile level 4.0 4:2:0 or 4:2:2 (optional)
ASP compression	ASP/MPEG-4 Part 2 with NB modulation and SD only
Coding options	Horizontal scaling of 3/4, 2/3, 1/2, 1/4 Vertical scaling of 1/2, 1/4 Sub-frame rate of 1/2, 1/4, 1/8, 1/24
Encoder delay	1s to 10ms (mode dependent)
Encoder bitrates	0.25Mbps to 32Mbps

Audio

Analogue audio input	Analogue stereo pair or differential mono +4dBu max input level (up to 63dB gain)
Analogue microphone bias	Off or 2V selectable
Digital audio input	SD/HD/3G-SDI 2 digital stereo pairs HDMI 1 digital stereo pair
Sample rate	32kHz, 48kHz
Coding modes	4 channels stereo or mono MPEG audio layer 1 64-448kbps MPEG audio layer 2 32-384kbps

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Technical Specification (con't):

Other

RS232 data input	1k2 to 115k2, 7/8 bit, no/odd/even parity
Remote control	RS232 & USB control from PC GUI application or other device
Front panel	None, use FCON field controller

Encryption

ABS 32-bit	Standard
AES 128/256-bit	Licensed (subject to export control)

Physical

Dimensions	L 67mm, W 68mm, H 22mm
Weight	135g

Power

DC input	5.9V to 17.8V reverse polarity protected
Power consumption	Typically 4.5W to 7.5W @ 100mW RF power with additional 2.0W for >6.0GHz

Consumption varies depending on RF power, temperature and frequency variant

Environment

Temperature range	-10°C to +50°C
Humidity	Less than 85% non-condensing

Frequency

020030	200-300MHz
030047	300-470MHz
100150	1.00-1.50GHz
165240	1.65-2.40GHz
198270	1.98-2.70GHz
300370	3.00-3.70GHz
440500	4.40-5.00GHz
550600	5.50-6.00GHz
640700	6.40-7.00GHz **
700750	7.00-7.50GHz **
810890	8.10-8.90GHz **

Software License Code

Silver (included)	DVB-T, Ultra Mobile Video Link (UMVL), MPEG-4 H.264
Gold	Silver plus MPEG-4 ASP, Narrowband 1.25MHz & 2.5MHz, SDI Ancillary Data
Platinum	Gold plus Ultra Extreme Narrowband 625kHz
AES128TX	AES 128-Bit Encryption
AES256TX	AES 256-Bit and AES 128-Bit Encryption

* 3G-SDI support subject to maximum encoder resolution limitations in initial software release of 960x1080p60/59.94 or 1280x1080p50

** Additional consideration required for thermal management due to increased power consumption

Export of encrypted products is subject to United Kingdom regulatory export controls.

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