

SOLO7 – Nano Transmitter

COFDM – Video, Audio Telemetry and IP Products



April 2016 Data Sheet



The SOLO7 Nano Transmitter is an ultra-miniature COFDM digital video transmitter from Domo Tactical Communications (DTC), designed specifically for covert video installations and body-worn applications.

With proven DTC COFDM technology at its core, the exceptionally small size and low power consumption (typically 3.7W) of the SOLO7 Nano Transmitter make it the product of choice for covert video hides, or applications requiring long term battery power deployments, small unmanned aerial vehicles, and body-worn or body-wire use.

The SOLO7 Nano Transmitter employs ultra-low latency High Profile H.264 (MPEG-4 AVC) encoding for excellent image quality retention over the wireless link. MPEG-4 ASP video encoding is also available for backward compatibility with older DTC video transmission products. Equipped with integral COFDM modulation, the SOLO7 Nano Transmitter is ideal for establishing rugged wireless video links in numerous environments, including mobile and urban. Offering several user-selectable modes that trade off image quality against range, the SOLO7 Nano Transmitter is very well suited to all mission types.

The SOLO7 Nano Transmitter supports both industry standard DVB-T modulation and DTC Narrowband (2.5 MHz), Ultra Narrowband (1.25 MHz) and Ultra-X (625 kHz) bandwidths. The narrowband modes allow users to share scarce spectrum allocation extremely efficiently.

The SOLO7 Nano Transmitter is supplied in a simple aluminium lightweight case and features an industry standard reliable SMA transmit connector. Video, control and power interfaces use two Omnetics connectors.

The SOLO7 Nano Transmitter can be controlled via either USB or via RS232. The versatile and intuitive DTC Field Controller can also be used to configure and control the SOLO7 Nano Transmitter.

Security is ensured with optional AES128/256 Encryption.

The SOLO7 Nano Transmitter will transmit images in a non-line of sight environment up to 750m, depending on mode and frequency.

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Specification:

IO			
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 3-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			
Input Format	PAL, NTSC (with or without pedestal)		
H.264 Compression	AVC / H.264 / MPEG-4 Part 10 High profile level 4.0		
ASP Compression	ASP / MPEG-4 Part 2 with NB modulation 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 40ms (mode dependant)		
Encoder Bitrates	0.25Mbps to 32Mbps		
Audio			
Audio Input	Analogue stereo pair or Differential mono +4dBu Max input level (up to 63dB gain)		
Sample Rate	32kHz, 48kHz		
Coding Modes	2 channels stereo or mono MPEG Audio Layer 1 64-448kbps MPEG Audio Layer 2 32-384kbps		
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	
		Type	ABS 32bit as standard AES128/256 (optional)
		Physical	
		Dimensions	L 58mm, W 36mm, H 16.5mm (L 66mm inc mounting lugs)
		Weight	60g
		Power	
		DC Input	5.9V to 17.8V reverse polarity protected
		Power Consumption	Typically 3.7W @ 100mW RF power 3.0W @ 10mW RF power Consumption varies depending on RF power, temperature and frequency variant
		Environment	
		Temperature Range	-10 to +50 °C
		Humidity	Less than 85% Non-Condensing
		Product Codes:	
			Please see configurator table on the following page.
		Products are available to security users in licensed frequency bands. Encryption licences are subject to export control. These products are not approved for use by unlicensed users. Commercial products are available if used in appropriate licensed frequency bands.	

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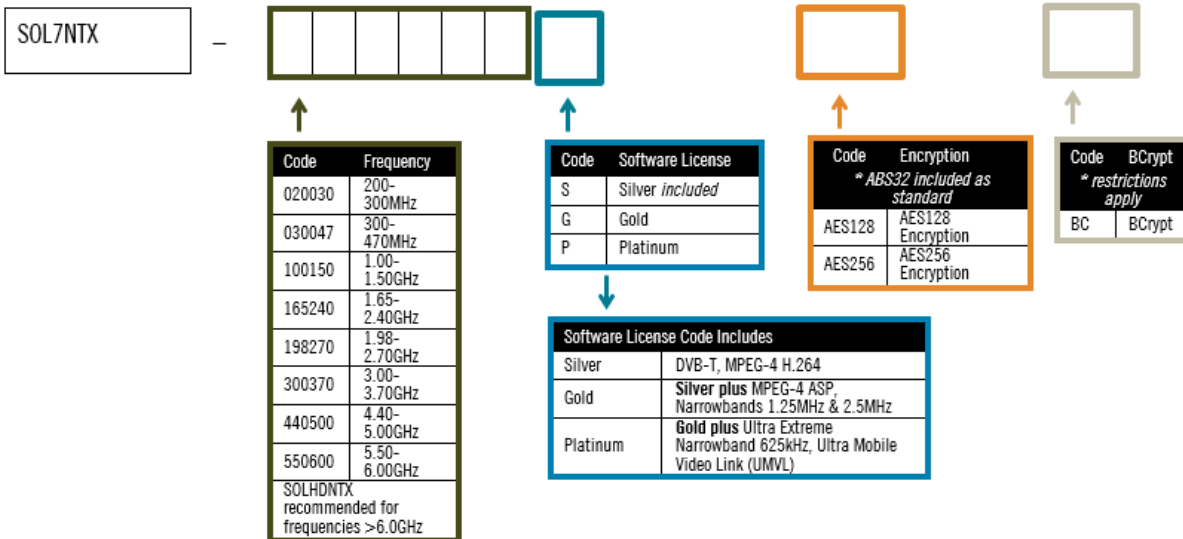
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Family: Transmitter Product: SOLO7

Export of Encrypted Products is Subject to United Kingdom Regulatory Export Controls

DTC Sales Code

Please enter required codes



Product Code Includes	
AP007377	Micro-B USB Cable
CA0002	12V DC Power lead Lemo-wire 3m
CA2253	NTX DC Power / Control Cable
CA2254	NTX Audio / Video / Data Cable
COBDC	Cobham Device Controller (USB stick)

Compatible Products (sold separately)	
SOL5RX	SD Receiver
SOL5RXIF	SD Receiver
SOL4NNV	Handheld SD Receiver
SOL4MIV2	Tactical SD Receiver
PRORXB	HD Receiver
PRORXD	Dual HD Receiver
SOL7NNV	Handheld HD Receiver
SOL7MIVHD	Tactical HD Receiver

Related Accessories (sold separately)	
CA0001	RS232 Cable-LemoDsub9
CA2250	NTX DC Power Cable
CA2370	NTX DC Power / FCON Cable
CA2298	NTX 9-way Breakout Cable
CA2485	NTX 6-way Breakout Cable
NTXBAT	NTX 7.4V Battery Pack (2250mAh)
NTXBATCH	NTX Battery Charger (multi-region)
SOLAMP500mW	500mW Booster PA, 4W Power Consumption
SOL7NAMP1W	1W Nano PA, 3-5W Power Consumption
Antennas	Various frequencies available

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