

## STC 83801U

### IF to C-Band Synthesized Frequency Upconverter



STC 93801U fully synthesized frequency Upconverter is providing a high-performance, convenient and economical solution for systems, requiring IF to C-Band interface.

Impressive amplitude linearity, low phase noise, spectral purity, high dynamic range make this converter ideally suitable for all current high speed data transmission rates and advanced digital modulation schemes.

### Applications

- **Fly-Away Terminals**
- **Satellite News Gathering Uplinks**
- **Satellite multi-service systems**
- **Satellite ground stations**

### Key Features

- Standard and Extended C-Band models
- Fine 1KHz Frequency resolution
- High amplitude linearity
- Excellent phase noise
- Low group delay distortion
- User friendly interface
- Smart 2 fans air cooling system
- Customization to user requirements and logo is available

### Options

- Redundancy switching capabilities
- Built-in output RF Power monitoring
- Ethernet remote monitoring and control
- Automatic sense of external 10 MHz reference

**Table 1. Technical Specifications**

		<b>General</b>	
<b>IF Input</b>		<b>Internal Reference</b>	
Frequency Range	70MHz ±18MHz (140MHz ±36MHz Opt 1)	Frequency	10 MHz
Connection	50Ω BNC Female (75Ω F optional)	Stability (0 to 50 °C)	± 1E-8 ppm
VSWR	1.5:1	Phase Noise	-120dBc/Hz at 10 Hz -140dBc/Hz at 100 Hz -145dBc/Hz at 1 kHz -150dBc/Hz at 10 kHz
<b>C-band Output</b>		Frequency Programmable Control	10ppm in 0.04ppm steps
Frequency Range	5850 MHz to 6425 MHz standard 5845 MHz to 6650 MHz extended	<b>Mechanical</b>	
Model STC83801U - A	5850 MHz to 6425 MHz standard	Width	19", standard rack mount
Model STC83801U - B	5845 MHz to 6650 MHz extended	Height	1U(1.75")
Connection	50Ω SMA-Type	Depth	13", plus connectors
Output Power at P1db	+10dBm nom	Weight	5 lb (2.3 kg)
Synthesizer Step Size	125 KHz	Construction	Aluminum Chassis
VSWR	1.5:1	<b>Power Requirements</b>	
<b>Performance</b>		Voltage	115/230 VAC (auto-ranging)
Conversion Gain	-10 to 20 dB, 0.5 dB step	Frequency	47 to 63 Hz
Gain flatness over any 36 MHz	± 0.5* dB typ (±0.75 dB max)	Power consumption	25W
Gain flatness over the band	± 0.75* dB typ (± 1dB max)	<b>Operating Temperature</b>	
Group delay	Linear 0.025ns/MHz Parabolic 0.015ns/MHz <sup>2</sup> Ripple 1ns p-p	0 to +50 °C	
Gain stability		Local control interface	LCD 20x2, 16 keypad
- over 24h	±0.25dB @25°C	Alarm	TX LO lock failure
- 0°C -+50°C	±1dB	<b>M &amp; C Interface</b>	
Harmonics	Better then -60dBc	- RS-422/485 9-pin D (M)	
Phase Noise		- RS-232 9-pin D (M)	
		- Summary Failure Relay	
		<b>Options</b>	
		<b>1 - Dual IF</b>	IF = 140MHz ±40MHz
		<b>2. RF/IF sample test points</b>	-20dBc SMA connector
		<b>3 - External reference in</b>	Automatic sense of 10 MHz external reference with custom level. BNC (F)
		<b>4. Serial M &amp; C</b>	- RS-232/422/485 9-pin D (M)
		<b>5. Ethernet M &amp; C</b>	Ethernet Interface
		<b>6. N-Type F connector</b>	On C-Band input
		<b>7 - Frequency band</b>	Custom frequency bands available
		<b>8. Redundancy Ready</b>	Redundancy switching capabilities
		<b>9. L-band monitoring</b>	L-band output SMA F connector
		<b>10 - Custom logo</b>	
<b>Spectrum sense</b>	Non-inverted		

\*+25°C

Specification is subject to change without notice.