

STC 8360UD

L-Band Synthesized UP/Down Converter



The STC 8360UD is a high-performance, fully synthesized L-Band Up/Downconverter indoor unit, housed in a light standard 1RU (1.75 in.) 19" wide rack, providing space-saving and convenient solution for systems, requiring frequency conversion between 70 MHz and LBand interfaces.

The unit contains independently synthesized L-Band Up and Down converter modules, monitor and control microprocessor board, internal reference source and AC voltage auto-sensing power supply.

Impressive amplitude linearity, ultra low phase noise, far exciding IESS 308 / IESS 309 requirements, low spurious, high dynamic range make the converter ideally suitable for SCPC, MCPC, DAMA with high data rates transmission and advanced digital modulation.

Applications

- **Fly-Away Terminals**
- **Satellite multi-service systems**
- **Satellite ground stations**
- **VSATs**

Key Features

- User friendly interface
- Independently synthesized up and down frequency conversion
- Dual conversion frequency plan
- Exceptional amplitude linearity, very low intermodulation
- RS485/RS422 and RS232 remote monitoring and control interface
- Software selectable spectrum inversion on down-converter
- Excellent phase noise, far exceeding IESS 308/309 standard
- Cable slope equalizer
- Smart 2 fans air cooling system

Options

- High stability 10 MHz reference oscillator
- DC output to SSPB +24V 2.5A max (other voltages available)
- 10 MHz reference out mute control
- 125 KHz synthesizer step size
- 10MHz reference signal and 24VDC support for outdoor units
- External 10MHz reference input with automatic sense
- Unit internal temperature monitoring
- Output RF Power Indicator

Table 1. Technical Specifications

Upconverter		General	
IF Input		Internal Reference	
Frequency Range	52 to 88 MHz	Standard option	
Connection	50Ω BNC Female	Frequency	10 MHz
Power Levels	-20 to -40 dBm	Stability (0 to 50 °C)	± 1ppm (Standard)
L-band Output		Output Level	+5dBm nom
Frequency Range	950 to 1525 MHz	Phase Noise	-100dBc/Hz at 10 Hz
Connection	50Ω SMA-Type		-130dBc/Hz at 100 Hz
Output Power at P1db	+15 dBm nom		-145dBc/Hz at 1 kHz
Synthesizer Step Size	1 MHz (125KHz optional)		-150dBc/Hz at 10 kHz
Performance		Frequency Control	10ppm in 0.04ppm steps
Conversion Gain	10 to 30 dB, 0.5 dB step	High Stability Option	
Gain Linearity (over 10dB)	± 0.5 dB	Frequency	10 MHz
Gain Linearity (over 20dB)	±1 dB	Stability (0 to 50 °C)	± 0.05ppm (High Stability)
Amplitude response over any 36 MHz	±0.5 dB typ* (±0.75 dB max)	Output Level	+15dBm nom (custom adjust)
Amplitude response over 575 MHz	±0.5 dB typ* (±1 dB max)	Phase Noise	-120dBc/Hz at 10 Hz
Harmonics	Better then -60dBc		-140dBc/Hz at 100 Hz
Phase Noise	-65dBc/Hz at 10 Hz		-145dBc/Hz at 1 kHz
	-78dBc/Hz at 100 Hz		-150dBc/Hz at 10 kHz
	-82dBc/Hz at 1 kHz	Frequency Control	1ppm in 0.004ppm steps
	-86dBc/Hz at 10 kHz	External Reference Input	
	-96dBc/Hz at 100 kHz	Frequency	10MHz
	-106dBc/Hz at =>1 MHz	Input Level	0 dBm nom
Noise Figure	15 dB max	Frequency Stability	As Required
Spurious carrier related	-60 dBc max@	Mechanical	
Spurious, non-carrier	-60 dBm max	Width	19", standard rack mount
3 rd Order Intermodulation	-60 dBc @ 0 dBm Pout	Height	1U(1.75")
Input and Output VSWR	1.5:1	Depth	13", plus connectors
		Weight	4.8 lb (2.2 kg)
Downconverter		Power Requirements	
L-band Input		Voltage	115/230 VAC (auto-ranging)
Frequency Range	950 to 1525 MHz	Frequency	47 to 63 Hz
Connection	50Ω SMA-Type	Power consumption	20W (without LNB and SSPB)
Power Levels	-75 to -35 dBm	Operating Temperature	
Synthesizer Step Size	1 MHz (125KHz optional)	0 to +50 °C	
IF Output		M & C system	
Frequency Range	52 to 88 MHz	Remote control interface	RS-422/485, RS-232
Connection	50Ω BNC	Local control interface	LCD 20x2, 16 keypad
Power @ P1db	+15 dBm nom	Security (optional)	Password protection
Performance		Alarms	TX/RX LO lock failure
Conversion Gain	25 to 45 dB, 0.5 dB step		Temperature
Gain Linearity (over 10dB)	±0.5dB		LNB current
Gain Linearity (over 20dB)	±1 dB		External alarms input
Amplitude response over any 36 MHz	±0.5 dB typ* (±0.75 dB max)		Summary Failure Relay
Amplitude response over 575 MHz	±0.5 dB typ* (±1 dB max)	External Interface Options	
Harmonics	Better then -60 dBc	DC output to LNB	+24V, 1 A max
Spurious, carrier related	-60 dBc max	DC output to SSPB	+24V, 2.5 A max
Spurious, non-carrier	-60 dBm	10 MHz Reference output to LNB	Up to +15 dBm at LNB input connector
3 rd Order Intermodulation	-60 dBc @ 0dBm Pout		
Phase Noise	-65dBc/Hz @10 Hz	10 MHz Reference output to SSPB	Up to +15 dBm at SSPB output connector
	-75dBc/Hz @ 100 Hz		
	-76dBc/Hz @ 1 kHz		
	-85dBc/Hz @ 10 kHz		
	-94dBc/Hz @ 100 kHz		
	-110dBc/Hz @ => 1MHz		
Noise Figure	15dB max		
*+25°C			

Typical Specification. Subject to change without notice.