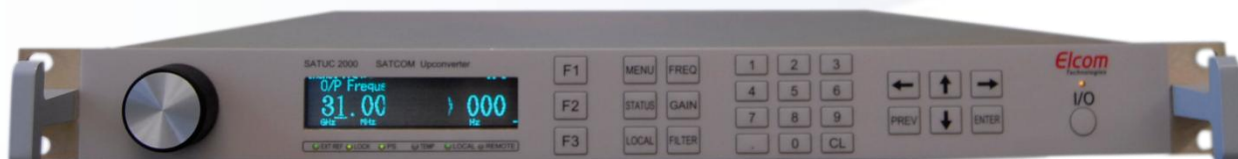


SATUC 2000

KA BAND UPCONVERTER WIDE IF BANDWIDTH



WIDE FREQUENCY RANGE: 27.5 to 31 GHz

FEATURES

- Very High Dynamic Range
- Fast Switching Synthesizer with 1 KHz Max Tuning Resolution
- Excellent Phase Noise Performance: $< 0.5^\circ$ RMS
- Up to 500 MHz Bandwidth 700MHz L band output
- 40 MHz Bandwidth 70 MHz Secondary IF Input
- Optional Manual Controlled Equalizer
- Advanced Front Panel Graphical Display
- Ethernet 10/100 BaseT, RS 232, RS422
- 1U 19" Rack Standard*
- Optional DSP Based Demodulator (DSR)

BENEFITS

- ELINT
- Synthetic Instrumentation
- SATCOM
- Radar Warning Receivers (RWR)



SPECIFICATIONS AT 25°C

FREQUENCY

Frequency Range:	27.5 – 31 GHz
Tuning Resolution:	1 KHz Max
Synthesizer Tuning Speed:	1 Millisecond (For faster tuning speed contact factory)
Frequency Accuracy vs. Temperature (Internal Ref):	< +/- 0.1 PPM
Long Term Aging (Internal Ref):	< 1 PPM per Year.
Phase Noise (Typical):	0.5° RMS Integrated from 100 Hz to 10 MHz.
Offset 1 Hz:	-25 dBc/Hz
Offset 10 Hz:	-55 dBc/Hz
Offset 100 Hz:	-75 dBc/Hz
Offset 1 KHz:	-85 dBc/Hz
Offset 10 KHz:	-88 dBc/Hz
Offset 100 KHz:	-90 dBc/Hz
Offset 300 KHz:	-90 dBc/Hz
Offset 1 MHz:	-120 dBc/Hz
Offset 10 MHz:	-130 dBc/Hz

RF SECTION

Output RL:	18 dB
Tx Noise	-129 dBm/Hz Max @ all Gain
Conversion Sense:	Inverting / Non Inverting for L Band and 70 MHz

DYNAMIC RANGE

Spurious @ Min Gain:	Carrier Dependent: -60 dBc Min @ RFinpu t = 0 dBm Carrier Independent: -80 dBm
Output IP3:	+23 dBm @ Max Attenuation
Output P1 dB:	+13 dBm @ Max Attenuation



WIDEBAND L BAND INPUT

Center Frequency:	700 MHz (Optional 1-3 GHz)
Bandwidth (3dB):	250 MHz (Optional 500 MHz)
IF to RF Gain:	30 dB /0.5 dB Steps
Gain Flatness Over IF BW:	1.25 dB Max Over 250 MHz
Group Delay Variation:	1 nsec Max @ 200 MHz
Manual Gain Control:	Programmed 31 dB, 0.5 dB Resolution
IF Signal Monitor:	-20 dBc
Impedance:	50 ohms
Input RL:	20 dB

IF INPUT

Center Frequency :	70 MHz
Bandwidth (3 dB):	40 MHz
IF to RF Gain:	30 dB /0.5 dB Steps
Gain Flatness:	1.25 dB Max Over 40 MHz
Group Delay Variation:	3 nsec Max @ 32 MHz
Manual Gain Control (MGC):	Programmed 31 dB , 0.5 dB Resolution
IF Signal Monitor:	-20 dBc
IF Output Impedance:	50 ohm
Input RL:	20 dB



PHASE COHERENT for DF APPLICATIONS (OPT- 117):

BUILTIN TEST (BIT)

CONTROL

Local Manual Control:

Remote Programming:

ENVIRONMENTAL

Operating Temp Range:

Non Operating:

Relative Humidity:

Altitude:

EMI:

Shock:

Vibration:

AC Power:

MECHANICAL

Size:

Optional Packages:

Weight:

REAR PANEL CONNECTORS

27.5 to 31 GHz RF Output:

RF Monitor:

L Input:

L Monitor:

VHF Input:

VHF Monitor:

LO Monitor:

Ethernet:

Remote Interface:

Summary Alarm:

Each converter could be configured as master LO or slave (Using External LO) by hardware jumper and software settings. The master receiver/converter will provide LO output to slave receiver/converter. Slave receiver/converter will accept external LO and provide LO output for Next Slave. In Slave Mode, Internal RF will be disabled

Power Supply Voltages, Three Phase Lock Alarm, O Temp.

All Functions, via Graphical Display Keyboard and Rotary Knob

Ethernet 10/100 base T, RS 422/ RS 485 and RS232

0° to +50 °C

-30° to +85°C

Up to 95%, Non-Condensing

10,000 Feet

Designed to Meet MIL-STD-461C, CE03 and RE02

MIL-STD-810E, method 516.4, Procedure VI

MIL-STD810E, method 514.4 Procedure I, Category Figure 514.4-15

95 to 265 VAC, 47-63 Hz, 100 Watts

19", 1U (1.75" H X 22" D X 17" W)

8.5", 2U (3.5" H X 22"D X 8.5" W), VME6U

20 Pounds

K - Connector

Super SMA F

BNC F

BNC F

BNC F

BNC F

SMA F

RJ 45

DEM - 9S

DE - 9D

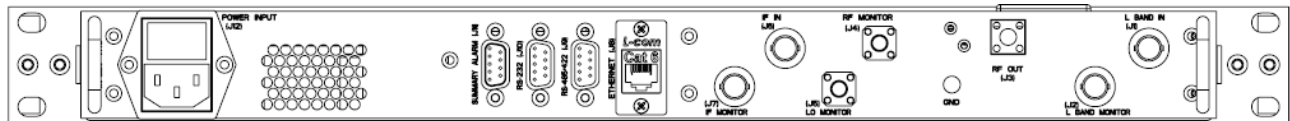


OPTIONS

OPT-109	1 GHz L-band Out put
OPT-110*	8.5", 2U (3.5" H X 22"D X 8.5" W)
OPT-112	Operating Temp Range (-20°C to +60°C)
OPT-117	Phase Coherent LO in/out
OPT-126	Aircraft Power Supply: 115 VAC, +/- TBD%, 400 Hz, 100 Watts
OPT-130	+28V +/-4 Vdc Input Power

* Contact factory

Specifications are subject to change without notice.



SATDC 2000 - REAR PANEL

* Subject to modifications

ABOUT ELCOM TECHNOLOGIES

Elcom designs and manufactures instruments and modules in the RF and Microwave frequency spectrum for broadband and narrow band applications in ATE, Aerospace/Defense, SIGINT and commercial communications. Proprietary technologies include low phase noise fast switching direct analog synthesis, low noise indirect PLL designs, and RF DSP up to 40GHz.

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