

Alcatel 9774- Ku-Band Synthesized Upconverter

Product description

The Alcatel 9774-series of Upconverters operating in the Ku-communication band offer the best quality/performance spec's available on the market.

- A full M&C feature list allows easy integration in existing Earth Station equipment and is upward compatible by remote upgrading via internet.
- Thanks to an increased modularity in the design concept, a very high reliability can be reached with very low spurious behaviour.
- RF,IF and internal Reference Monitoring ports are available.
- Automatic Switch-over to external 5 or 10 MHz Reference frequency.

With an Extended bandwidth range from 12.75 to 14.8 GHz , it will comply with future specifications and reduces component count in Earth Station equipment..

Ordering info

| | | |
|------------|-----------------|------------|
| A9774-311 | 13.75-14.50 GHz | 70 MHz |
| A9774-312 | 13.75-14.50 GHz | 140 MHz |
| A9774-313 | 12.75-14.80 GHz | 70/140 MHz |
| A99774-350 | N+1 option | |

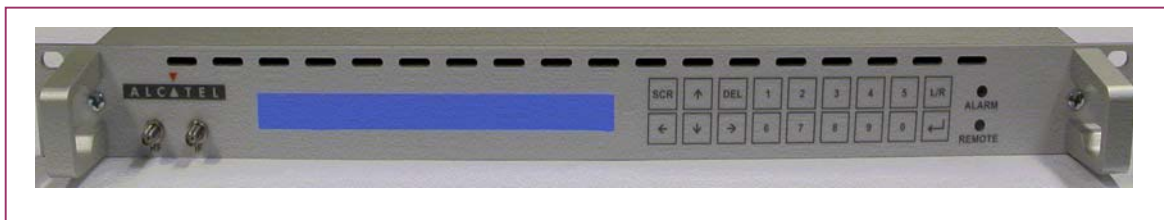
Main Characteristics

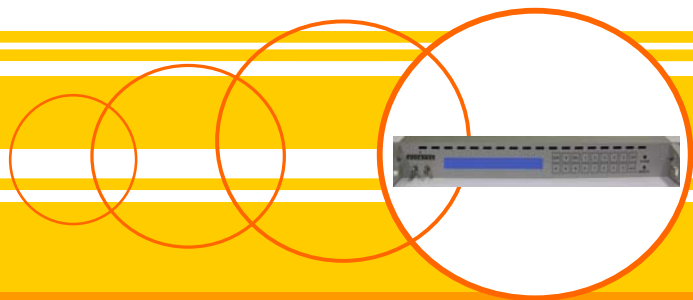
- Excellent phase noise providing margin w.r.t. IESS 310 specification
- Extended remote control interfaces as TCP/IP, RS232/ RS485.
- Cost effective dual conversion is offered to meet high performance.
- Extended bandwidth in order to comply with future standards.
- Optional N+1 redundancy switch.

Applications

- Voice, data and digital/analogue video transmissions.

Full compliance with international performance specifications like IESS 308, IESS 309 and IESS 310, ETSI EN 301 443





Transmit section

- RF output frequency :
12.75 (13.75) GHz to 14.8 GHz
- IF input frequency :
70 MHz \pm 18 MHz
140 MHz \pm 36 MHz
- Output Level at P1dB : +15 dBm
- Frequency step size : 1kHz / 125 kHz
- Gain : 30 dB \pm 2 dB
Gain Slope : 0.05 dB / MHz
- Gain flatness: \pm 0.38 dB over IF-Band
- Gain adjustment range: 30 dB in steps of 1dB continuous over \pm 1.0 dB
- Gain stability :
 \pm 0.25 dB per day at 23°C
 \pm 0.5 dB between 0 and 40°C
- IM3 distortion : -50 dBc at 0 dBm output SCL

Spurious outputs

- AC line harmonics : -45 dBc
- Image rejection : 80 dB
- Spurious carrier related: -60 dBc (0 dBm output)
- Spurious non-carrier related: -80 dBm
- Harmonics: -50 dBc

Local Oscillators

- LO leakage: -80 dBm
- Frequency stability using internal reference
per day : $\pm 10^{-9}$
per year : $\pm 10^{-8}$ vs temperature 0 to 50°C
- Group Delay per 40 MHz:
Linear : 0.03 ns/MHz
Parabolic : 0.01 ns MHz²
Ripple : 1ns peak to peak

- LO phase noise superior to IESS-309 : < 2.8° RMS (DSB, 100 Hz to 1 MHz)

Environmental

- Weight : 9 kg max
- Operating temperature range : 0 to 50°C

Power Requirements

- Input voltages : 90V to 260 VAC/47 to 63 Hz or
- Power consumption : 60 W

Interfaces

- IF interfaces : 50 Ω SMA-type female, VSWR : 1.2:1
- RF output interface : 50 Ω SMA-type female VSWR : 1.2:1

M&C : RS232/485,TCP/IP,SNMP*

Alcatel Contacts

Alcatel Alenia Space Antwerp N.V.
Berkenrodelei 33
2660 Hoboken
Belgium
Tel : +32 3 829 50 50
Fax : +32 3 829 50 02

For further information, please contact

aasa.info@alcatelaleniaspace.com

www.alcatel.be/space

*) Specifications subjected to change without notification