

## Alcatel 9774- C-Band Synthesized DownConverter

### Product description

The Alcatel 9774 - series of Down-Converters operating in the C – communication band offer the best quality/performance spec's available on the market.

- An extended M&C feature list allows easy integration in existing Earth Station equipment and is upwards 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 Switchover to external 5 or 10 MHz Reference frequency.

### Main Characteristics

- Excellent phase noise providing margin w.r.t. IESS 310 specification
- Extended remote control interfaces as TCP/IP,RS232/RS485.
- High performance is offered with a cost effective conversion scheme.
- Optional N+1 redundancy switch

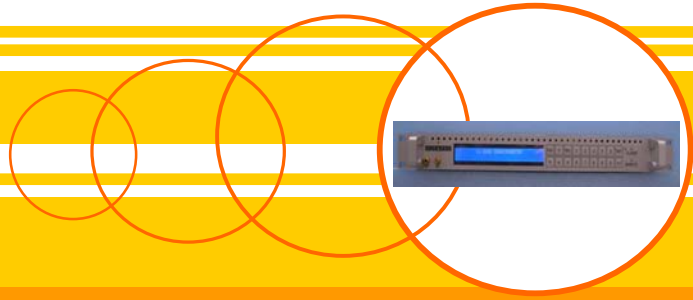
### Ordering info

A9774-304	3.625-4.200 GHz	70 MHz
A9774-305	3.625-4.200 GHz	140 MHz
A9774-306	3.400-4.200 GHz	70/140 MHz
A99774-350	N+1 option	

### Applications

- Used for Voice, data and digital/analogue video transmissions.
- Full compliance with international performance specifications like IESS 308, IESS 309 and IESS 310





## Down-Converter Specifications

- Input section  
RF input frequency: 3.4 (3.625) to 4.2 GHz
- Output section  
IF output frequency:  
70 MHz  $\pm$  20 MHz  
140 MHz  $\pm$  36 MHz  
Level at 1 dB compression :  
+15 dBm min typ 20 dBm
- Transfer Characteristics  
Noise figure: 12 dB at 0dB attenuation  
  
Gain : 45 dB  $\pm$  2 dB  
Gain Slope : 0.05 dB / MHz  
Gain flatness over RF Band :  $\pm$  1 dB  
IF Band :  $\pm$  0.38 dB  
Gain adjustment : 30 dB in 1 dB steps  
-> continuous over  $\pm$  1dB  
  
Gain stability :  
 $\pm$ 0.25 dB per day at 23°C  
 $\pm$ 0.5 dB between 0 and 40 °C  
  
IM3 distortion:  
60dBc at 0 dBm output SCL  
  
Image rejection : 80 dB  
Spurious, carrier related : -65dBc  
( at 0dBm output )  
Spurious, non-carrier related: -80 dBm  
LO leakage : -80 dBm  
Harmonics: -50 dBc  
  
AC line spurs: -45 dBc  
input power : +15 dBm  
  
Group Delay per 40 MHz :  
Linear : 0.03 ns/MHz  
Parabolic : 0.01 ns MHz<sup>2</sup>  
Ripple : 1 ns peak to peak  
  
AM/PM conversion : 0.1°  
( for output up to 0dBm )

(\*) contact Manufacturer

## Local Oscillators

Stepsize : 1 kHz /125 kHz  
Frequency stability using internal reference  
per year:  $\pm 10^{-9}$   
per day:  $\pm 10^{-8}$   
  
Phase noise at  
10 Hz : -60 dBc/Hz  
100 Hz : -80dBc/Hz  
1 kHz : -86 dBc/Hz  
10 kHz : -91 dBc/Hz  
100 kHz : -96 dBc/Hz  
1MHz : -117 dBc/Hz  
superior to IESS-309 : <2.8 ° RMS

## Environmental

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

## Power Requirements

Input voltages:  
90 to 260 V AC / 47 to 63 Hz

Power consumption : 45 W

## Interfaces

RF input interface : 50  $\Omega$  SMA-type female  
Return loss : 20 dB min.

IF output interface : 50  $\Omega$  SMA-type female  
Return loss : 23 dB min.

- M&C : RS232/485, TCP/IP, SNMP (\*)

### Alcatel Contacts

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\*) Specifications subjected to change without notification

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