AUC28 Series

IF / L-Band Converter

The AUC28 is a new, wideband cost effective series of 70MHz to L-Band Converters. Both the transmit and receive chains have independent synthesizers. These converters can be configured using an intuitive menu tree from a LCD front panel. They are also equipped with optional L-Band auxiliary ports both on the transmit and receive chains for integrated working with other L-Band systems.

The Converters can also be configured and monitored remotely on a PC using an RS232/RS422 interface. They provide 24VDC, a very stable and low phase noise reference of 10MHz for the BUC and a 15VDC and the reference for LNB. The BUC and LNB can be driven with cables up to 200ft.

These converters come in a standard 19" Rack of 1 RU height.

Features

- Extremely cost competitive
- Independent TX/RX synthesizers
- Highly reliable
- Front panel control
- Remote control using PC
- Low spurious emission meeting EN standards
- Built-in Redundancy control unit
- Very high dynamic range both for transmit and receive chains
- Extremely stable reference oscillator
- Wide transmit frequency range from 950 to 1750MHz
- Wide receive frequency range from 950 to 1750MHz
- Operates over 0ºC to +50ºC

Quality Assurance

All Agilis IDUs are designed and manufactured according to ISO 9001 Standard.

Agilis

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Technical Specifications

Power Supply

Input Voltage	100 to 240 Vac, 50/60Hz -48VDC (Optional)

10 MHz Internal Reference

Frequency Stability	< ±5x10-9
Temperature Stability	< ±3x10-8 over 0 to 50ºC
Ageing	< ±5x10-8/year
Phase Noise	
@10Hz	< -115dBc/Hz
@100Hz	< -140dBc/Hz
@1000Hz	< -150dBc/Hz
@10000Hz	< -155dBc/Hz

UPCONVERTER

Parameters

IF Input Frequency	70±18MHz 140±18MHz (Switchable)
RF Output Frequency	950 to1750 MHz
IF Input Range	-5 to -25dBm Typical
Frequency Step Size	500KHz
Reference Signal Stability	10-7/year, 10-9/day
Spurious	<-65dBm (Full Band, Carrier Unrelated) <-55dBc (Full Band, Carrier related)
Phase Noise	
@100Hz	-60dBc/Hz
@1kHz	-73dBc/Hz
@10kHz	-83dBc/Hz
@100kHz	-93dBc/Hz
Gain	20dB min at -35dBm input
Gain Stability	±1dB
Gain Adjustment Range	20dB with 0.5dB
Gain Flatness	
in 36MHz bandwidth	±0.75dB
in 800MHz bandwidth	±1dB
Input @P1dB	0dBm
Noise Figure	20dB nominal at maximum gain
Input Impedance	50Ω
Output Impedance	50Ω
Input VSWR	1.5:1 max
Output VSWR	1.5:1 max
Input Interface (IF)	BNC Female (Other options available)
Output Interface (RF)	N-Type Female (Other options available)
DC Voltage for BUC	+24VDC, 5A max +48VDC (Optional)

Option (L-Band Port)

RF Input Frequency	950 to 1750MHz
Gain	0dB typical
Gain Flatness	
In 36MHz Bandwidth	±2dB
In 36MHzBandwidth	±2dB
Gain Adjustment Range	20dB with 0.5dB steps
Input Interface	N-Type Female (Other options available)

Mechanical

Width	19” rack
Height	1U (44mm)
Depth	330mm including connectors
Weight	5kg
Color	Grey

Environment

Operating Temperature	0ºC to +50°C
Relative Humidity	Up to 95% (non-condensing)

DOWNCONVERTER

Parameters

RF Input Frequency	950 to 1750MHz
IF Output Frequency	70±18MHz 140±18MHz (Switchable)
Max RF Input Level	0dBm max with 40dB attenuation
Frequency Step Size	500KHz
Reference Signal Stability	10-7/year, 10-9/day
Spurious	<-60dBm (In Band, Carrier Unrelated) <-50dBc (In Band, Carrier related)
Phase Noise	
@100Hz	-60dBc/Hz
@1kHz	-73dBc/Hz
@10kHz	-83dBc/Hz
@100kHz	-93dBc/Hz
Gain	30dB min
Gain Stability	±1dB
Gain Adjustment Range	40dB with 0.5dB
Gain Flatness	
in 36MHz bandwidth	±1dB
in 800MHz bandwidth	±1.5dB
Output @P1dB	10dBm at maximum gain
Noise Figure	20dB nominal at maximum gain
Spectrum Inversion	Switchable (from front panel)
Input Impedance	50Ω
Output Impedance	50Ω
Input VSWR	1.5:1 max
Output VSWR	1.5:1 max
Input Interface (IF)	N-Type Female (Other options available)
Output Interface (RF)	BNC Female (Other options available)
DC Voltage for LNB	+15VDC

Option (L-Band Port)

RF Input Frequency	950 to 1750MHz
Gain	0dB typical
Gain Flatness	
in 36MHz Bandwidth	±2dB
in 36MHzBandwidth	±2.5dB
Output Interface	N-Type Female (Other options available)

Note: All specifications are subject to change without notice.
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