

# AC1000 Amplifier

AC1000 is a single active output amplifier with 42 dB gain. It offers high output level (113 dB $\mu$ V, 112 channels) and supports 1006 MHz/85 MHz bandwidth. It has optional CATVisor or HMS compatible transponder for monitoring and control.

## Features

- 1 GHz bandwidth
- Remote power supply with PFC
- Amplifiers stages use GaN HEMT and GaAs pHEMT technology
- 1...3 outputs by internal splitting
- Can be updated later to an optical node
- Excellent ESD and surge protection
- Fixed station memory for electrical identification
- Electrical gain & slope control modules available
- With AC6951 transponder module: CATVisor or HMS compatible transponder with wide frequency ranges, ALSC with fully user programmable pilots, downstream spectrum analyser and upstream signal quality monitoring

## Benefits

### Especially wide gain range

In AC1000 GaN, the input and output amplifier stages are both based on high performance solutions that make the usable gain range especially wide. The amplifier can be used in distribution purposes in high gain mode but also as a line amplifier with lower gain.

### Easily updated in the field

AC1000 GaN comes with basic amplifier functions. Using either passive or active plug-in modules it can also be modified to carry out more sophisticated tasks like a two-way optical node. The required modules can be factory installed, but it is also possible to update the amplifier later in the field.

### Built-in elements with options

All essential return path elements such as ingress switches are built-in on the motherboard but for example the return amplifier module can be chosen according to the required performance.

# Specifications

Downstream signal path (values with duplex filters)	
Frequency range	47...1006 MHz
Return loss	20 dB
Gain	42 dB
Input attenuator control range	20 dB
Input equaliser control range	25 dB
Interstage slope	8 dB
Flatness	±0.4 dB
Group delay	2 ns
Test point	-20 dB
Transponder connection	-19 dB
Input by-pass attenuation	-2 dB
Noise figure	4.4 dB
Umax(112 QAM channels)	113.0 dBuV
CTB 42 channels	117.0 dBμV
CSO 42 channels	117.0 dBμV
XMOD 42 channels	114.5 dBμV
CTB 110 / 77 channels	79.0 / 87.0 dB
CSO 110 / 77 channels	74.0 / 76 dB
XMOD 110 / 77 channels	73.0 / 76.0 dB

Upstream signal path (values with duplex filters)	
Frequency range	5...85 MHz
Return loss	18 dB
Gain	21 / -6.0 dB
Ingress switching	0 / -6 / < -50 dB
Attenuator control range	20 dB
Equaliser control range	7 dB
Flatness	±0.5 dB
Test signal injection point	-30 dB
Transponder connection	-26 dB
Noise figure	7.5 dB
Output level, DIN 45004B	113.0 dBμV
CINR	> 63 dBc

General	
Power consumption (65 / 230 VAC)	19.0 / 20.0 W
Supply voltage	27...65 VAC, ±33...90 VDC / 205...255 VAC
Maximum current feed through	8.0 A / port
Hum modulation	70 dB
Resistance for remote current	25 mΩ / port

Input / Output connectors	PG11
Test point connectors	F female
Dimensions (h x w x d)	245 mm x 255 mm x 100 mm
Weight	3.0 kg
Operating temperature	-40...+55 °C
Class of enclosure	IP67
EMC	EN50083-2
ESD	4 kV
Surge	6 kV (EN 60728-3)