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Ultra extended GaN Ku SSPA
12.75-14.80 GHz / 600W
Outdoor

New generation of GaN based SSPAs/BUCs for broadcast satcom

USING CUTTING-EDGE **GAN TECHNOLOGY**, THE NEW Ku SSPA FAMILY OFFERS OUTSTANDING PERFORMANCE IN OUTDOOR OPERATIONS

Multicarrier operation

No memory effects and limited back off guaranteeing unlimited carriers.

Modularity

A combination in phase of SSPAs 600 W delivers **output powers up to a few kWs** on a built-in redundancy and hot swappable amplification modules.

Efficiency & Reliability

Super linearity for maximum useable output power to provide customised linearisation independent of the modulation method used.

Robust performance guaranteed through individual unit testing over temperature at factory. Built-in output isolator for protection against reflected power.

Advanced packaging and cooling techniques enable the equipment to be operated in the toughest environments.

Monitoring & Control

Full M&C capability through RS-485/USB (ASCII commands) or with the option of an Ethernet port (Telnet, HTTP with embedded user-friendly web page or SNMP).

Discrete lines for mute and turn on/off functions and a summary alarm (form C relay and discrete) for speedy operation.

Key Features

* Super extended frequency band
* Highly efficient
* Super high linear power
* Multicarrier operation
* Superior lifetime based on GaN-tech
* High MTBF
* Detachable power supply module
* Redundant configurations (1:1, 2:1, N:1)
* OPEX savings
* Weatherproof
* Compact design
* Simple operation & maintenance

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Technical specifications

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OTHER FEATURES

* Automatic Control Mode: AGC, ALC
* Pressure window
* Output RF calibrated sample port
* Ethernet port

OPTIONS

* Extended temperature range: -40 ºC, +55 ºC
* Redundant systems 1:1, 2:1, N:1
* Indoor controller
* Receive reject filter (external)
* Harmonic filter (external)
* SNMP
* High stability internal reference

ACCESSORIES & SPARES

* Set of fans
* Detachable power supply

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Information contained in this document is subject to change without notice.

Unless otherwise specifications, tests have been done at 23 ºC.

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RF performance

Operating frequency range	12.75-13.25 GHz & 13.75-14.80 GHz (simultaneously)
Output power ($P_{SAT\ (typical)}$)	57.8 dBm @12.75-14.50 GHz / 57.5 dBm @14.50-14.80 GHz
Linear output power ($P_{LINEAR*}$)	56.8 dBm @12.75-14.50 GHz / 56.5 dBm @14.50-14.80 GHz
Gain	>65 dB
Gain flatness	<3 dB p-p @12.75-13.25 GHz & @13.75-14.80 GHz, <1 dB peak to peak any 40 MHz
Gain variation over temperature	± 1.5 dB over full operating range
Attenuation adjustment range	25 dB in 0.10 dB step
Input VSWR	≤1.5:1
Output VSWR	≤1.3:1
Spectral regrowth	-25 dBc @ $P_{LINEAR*}$
Spurious	-60 dBc max @ $P_{LINEAR*}$

** For single carrier with modulation DVB-S, 4Mbaud, roll-off: 0.25, ModCod QPSK-3/4, occupied bandwidth 5MHz, measured @1.0x symbol rate*

Power Supply

Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ P_{SAT}	2600 W

Interfaces & Physical

Dimensions (L x W x H)	550 x 360 x 280 mm
Weight	68 Kg
Interfaces	RF input: SMA (f)
	RF output: WR75 grooved / RF sample: SMA (f)
	AC line: 3-pin MIL circular (RT00144PNH)
	M&C: 19-pin MIL circular (UT0016-19SH)

Monitor & Control

Remote control	RS-485 / USB / Ethernet
Monitor parameters	Forward & Reverse output power / Input power / Temperature / Summary alarms
Internal self protection	Temperature (>85 ºC) / Reflected power / High input-output power

Environmental

Operating temperature	-30 ºC to +55 ºC
Storage temperature	-40 ºC to +85 ºC
Humidity	100 % condensing