

NEW GENERATION OF GaN BASED SSPAs/BUCs FOR GOVERNMENT & DEFENCE SATCOM

Using cutting-edge **GaN technology**, the new X SSPA family offers outstanding performance in indoor operations

INNOVATIVE TECHNOLOGY

State-of-the-art technology offering outstanding performance in a compact packaging. **High reliability** solutions for harsh environmental and operational conditions.

Options to increase the number of power stages and achieve **higher output powers**.

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) and 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

- * Highly efficient
- * Super high linear power
- * Multicarrier operation
- * Superior lifetime based on GaN-tech
- * High MTBF
- * Redundant configurations (1:1, 2:1, N:1)
- * Simple operation & maintenance
- * Air or liquid cooled



OTHER FEATURES

- * Automatic Control Mode: AGC, ALC
- * Monitoring: input, forward & reverse output power
- * Ethernet

OPTIONS

- * Redundant systems 1:1, 2:1, N:1
- * SNMP
- * Indoor controller
- * Receive reject filter (external)
- * Harmonic filter (external)
- * Air exhaust MEC interface (air cooling)
- * Breaker panel

CONTACT

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NOTICE

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

Unless otherwise specified, tests have been done at 23 °C.

ELECTRICAL

Operating frequency range	7.9 - 8.4 GHz
Output power ($P_{SAT (typical)}$)	55 dBm
Output power ($P_{LINEAR (typical)}$)	52 dBm
3 rd order IMD (2 tones 5 MHz apart*)	-25 dBc @ P_{LINEAR}
Gain @ P_{SAT}	>60 dB
Gain flatness	±1.0 dB p-p max
Gain stability over 24 hours	±0.25 dB @ constant temperature and drive level
Gain variation over temperature	±1.5 dB over the whole range
Attenuation adjustment range	20 dB whit in 0.1 dB steps
Input VSWR	<1.3:1
Output VSWR	<1.3:1
Mute	>45 dB
Noise power density	-75 dBm/Hz between 7.9 – 8.4 GHz -140 dBm/Hz between 7.25 – 7.75 GHz (with external RX rejected filter)
Spurious @ P_{LINEAR}	-65 dBc
Harmonics @ P_{LINEAR}	-60 dBc
AM/PM conversion	<2 °/dB up to P_{LINEAR}

* As for MIL-STD-188-164B: the max. combined transmit power of 2 equal amplitude CW carriers when any individual intermodulation product power is -25 dB relative to the combined power of the 2 CW carriers

POWER SUPPLY

Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ P_{SAT}	800 W

INTERFACES & PHYSICAL

Dimensions (W x H x D)	483 x 266 x 560 mm - RF unit 6RU panel height (air cooling) 343 x 120 x 508 mm - 343 x 120 x 684 mm with pipes (water cooling)
Weight	<23 kg
Interfaces	RF Input: N (f) RF Output: WR112 (CPR-112) RF Forward output sample: N (f) M&C: RJ45 (f) & DB15 (f) AC Input: 3-pin C14 (m), 90-260 VAC, 6A, 50/60 Hz Water cooling interface: quick connect coupling connectors System status: tricolour status LED
Coolant (liquid)	Fluid: inhibited glycol / distilled water mixture Inlet temperature: 20 °C to 30 °C Inlet pressure: < 5 bar

MONITOR & CONTROL

Remote control	RS-232 / RS-485 / Ethernet
Monitor parameters	Input power / Output forward & reverse power / Temperature / Summary alarms
Internal self protection	Temperature (>85 °C) / Reflected power / High input or output power

ENVIRONMENTAL

Operating temperature	0 °C to +50 °C
Storage temperature	-40 °C to +85 °C