ZD-500W
LD-MOS BROADCAST
UHF POWER AMPLIFIER

ZD-500W is a full LD-MOS Broadcast Power Amplifier designed for both digital and analog applications. The unit is the state of the art in terms of easy assembly, reliability and performances. The complete unit can assure the compliance to all relevant international standards.

- **Full LD-MOS Power Amplifier**
- **500Wps Out**
- **150Wrms Out DVB-T**
- **DTV (8 VSB): 275Wrms**
- **BroadBand (470-862 MHz)**
- **Designed for SKD sales**
- **Internal cabling free**
- **Easy maintenance without special tools**
- **RS232-RS485 interface**
- **Control software included**
- **Extremely strong mechanical structure**

This picture is a mere example, it does not bind the provided product

Electrical Data

Voltage Supply	220Vac +15% -20% nominal 100-240Vac 50-60Hz for Pout up to 150Wrms 176-240Vac 50-60Hz for Pout over 150Wrms
Power Consumption	1500W @500W Ps Black Field @650MHz (typ.) 850W @150Wrms DVB-T @ 650MHz (typ.)
Current Consumption	7.5 A max @ 220 V PF > 0.97 analog application
Operating Temperature	0 to +45 °C
Humidity	Up to 90% (non condensing)
Gain Stability	0 to 45 deg. +/-0.5dB[1]
Gain	56dB nom. ±2dB (fine ADJ available)
Power Out (@1dB compression)	Min. 600W (Typ. 700W)
Input Return Loss	Min. -16dB (Typ. -20dB)
Output Return Loss	Min. -18dB (Typ. –22dB)
Load Mismatch **(CW 500W F_0 860MHz VSWR=2:1) all phase angle**	No degradation
P_{out} Common Amplif.	550W Ps IMD < -46dB Red Field (without precorrection)
P_{out} DVB-T	150Wrms shoulder < -36dBc (with precorrection)
DTV (8 VSB)	275Wrms
P_{out} PEP	700W IMD < -27 dBc

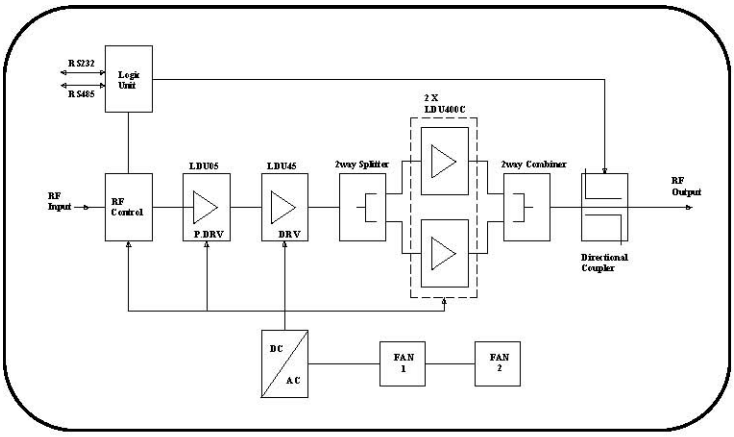
Mechanical data and Interfaces

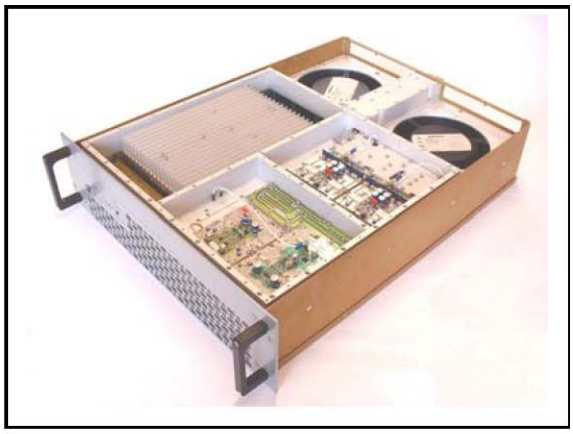
Dimensions	19” 3HU std 600mm depth[2]
Weight	21 Kg.
RF in	N connector rear panel
RF out	7/16” connector rear panel
RF mon	SMA connector rear panel
RS232	D 9 poles front and rear panel
RS485	D 9 poles rear panel
Local Enable	Switch front panel Two-pole connector rear panel

[1] WARM UP: To achieve the stability vs temperature correct value when the equipment is cold, please wait 30 minutes at least after switching on. [2] See pag. 4

ZD-500W

Block Diagram





Remote control

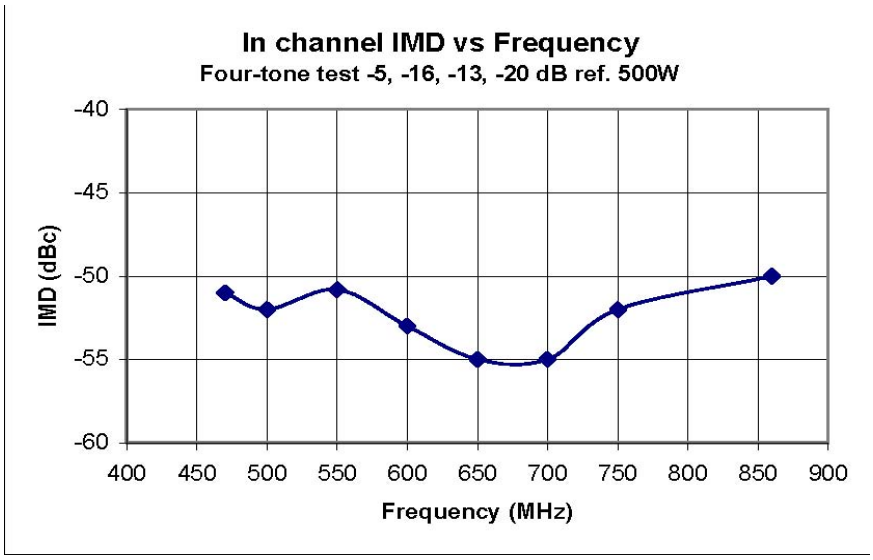
Enable	RF Enable ON/Stand By
GAIN (option)	Gain setting

Readable data by remote computer or Control Logic Unit (through RS232/RS485)

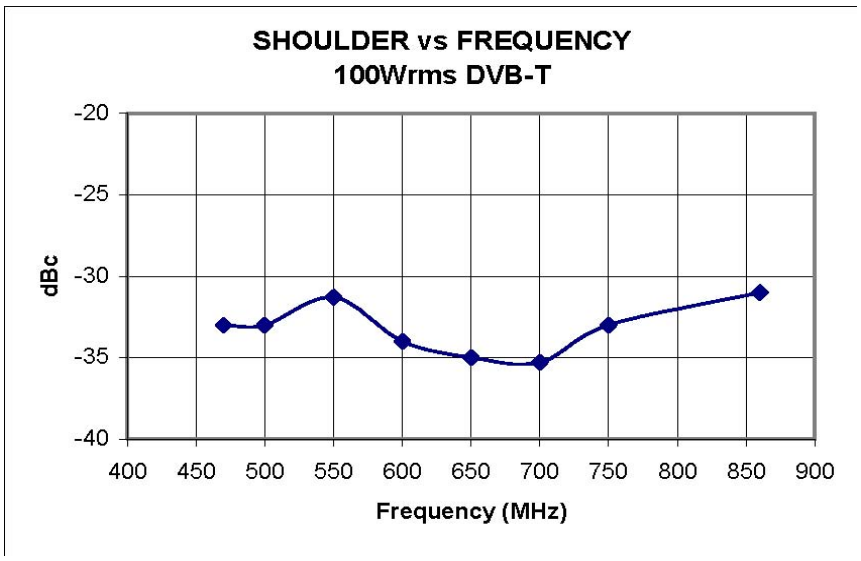
STATUS/ALARMS	**NOTES**
Enable	ON/STAND BY
RF Faults	ACTIVE if Gain < 6dB referred to nominal
PS Faults	ACTIVE if PS voltage absent
°C max	ACTIVE when RF Thermal Protection is ON
Pin max	ACTIVE when RF Overdrive Protection is ON
VSWR max	ACTIVE if VSWR max Protection is ON
I max	ACTIVE when Current is too high
MEASUREMENTS	
RF in	Input Power in mW (PS for analog, RMS for DVBT)
RF out	Output Power in W (PS for analog, RMS for DVBT)
RF DRV	RF Driver Output in W (PS for analog, RMS for DVBT)
RF Heatsink Temperature	Temperature in °C
IDC Driver	Value in A
IDC Final Stage 1	Value in A
IDC Final Stage 2	Value in A
VDC	PS Output Voltage

Self Protections

RF Thermal Protection	
Overdrive	Pin max must be set on the working channel with the used DVB-T or Analog signal
VSWR max	VSWR max must be set on the working channel with the used DVB-T or Analog signal
I max	



Without precorrection

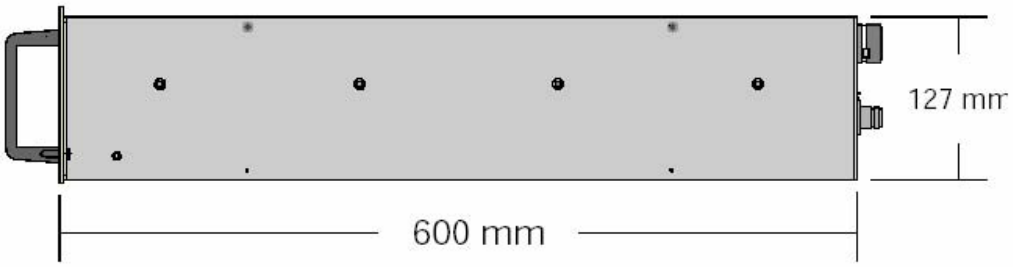


Without precorrection

Note: By the use of UBS DVB-T Modulator Mod. PT8750 + PT8731 option, and the proper precorrection, the ZD-500W is able to deliver 150Wrms at better than –36dBc shoulders on all the band.

ZD-500W

Side View



Top View