

## AC7000-A050UX1NB

### Features

- Design For Digital TV
- LDMOS Power Amplifier
- Broadband (470 - 860MHz)
- Output DVB-T/H Power 100 Watts
- Ultra-linear Design
- RS232/RS485/USB Interface
- OMT Software
- Squelch Function
- Plug and Play



### RF Performance

<b>Operating Frequency Range</b>	470-860MHz
<b>Input/Output Impedance</b>	50Ω
<b>Input Signal Range</b>	-10 to 0dBm
<b>P1dB</b>	typical >800W
<b>P<sub>out</sub> DVB-T</b>	47dBm to 51dBm step 0.1dB
<b>Shoulder(Without Precorrection)</b>	>32dB@100W
<b>Output Power Stability</b>	±0.2dB from 470MHz to 860MHz
<b>Squelch Switch ON/OFF Threshold</b>	-10dBm<ON<0dBm
<b>Input Return Loss</b>	>18dB
<b>Output Return Loss</b>	>22dB
<b>Monitoring Signal Intensity</b>	Pout(dBm)-45dB/±0.5dB

### Electrical Requirements

<b>Power Supply</b>	100-240V AC 50/60Hz
<b>Power Consumption</b>	<1000W @ 100W RF Output

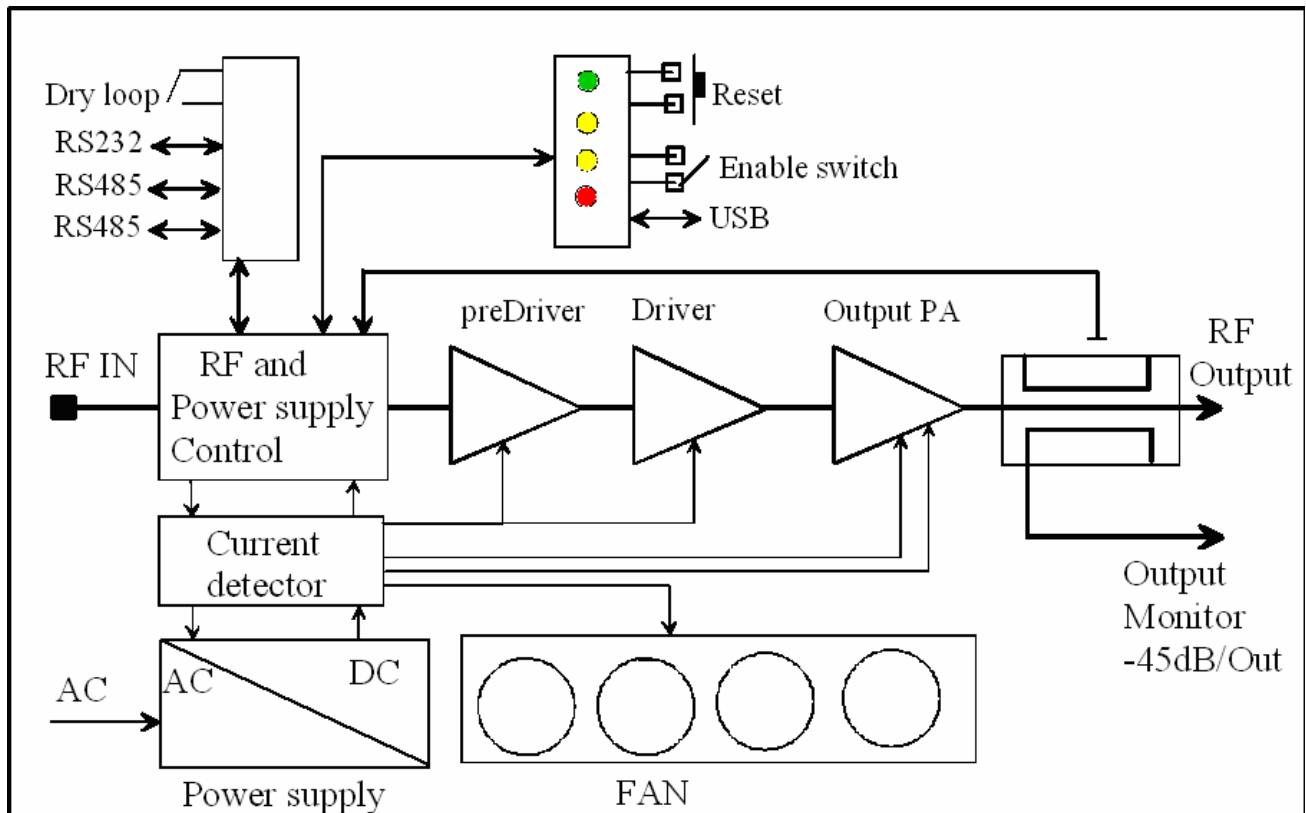
### Environmental

<b>Operating Temperature</b>	0 to +45°C
<b>Storage Temperature</b>	-25 to 70°C
<b>Humidity</b>	Up to 90% (Non condensing)
<b>Cooling</b>	Fan Cooling

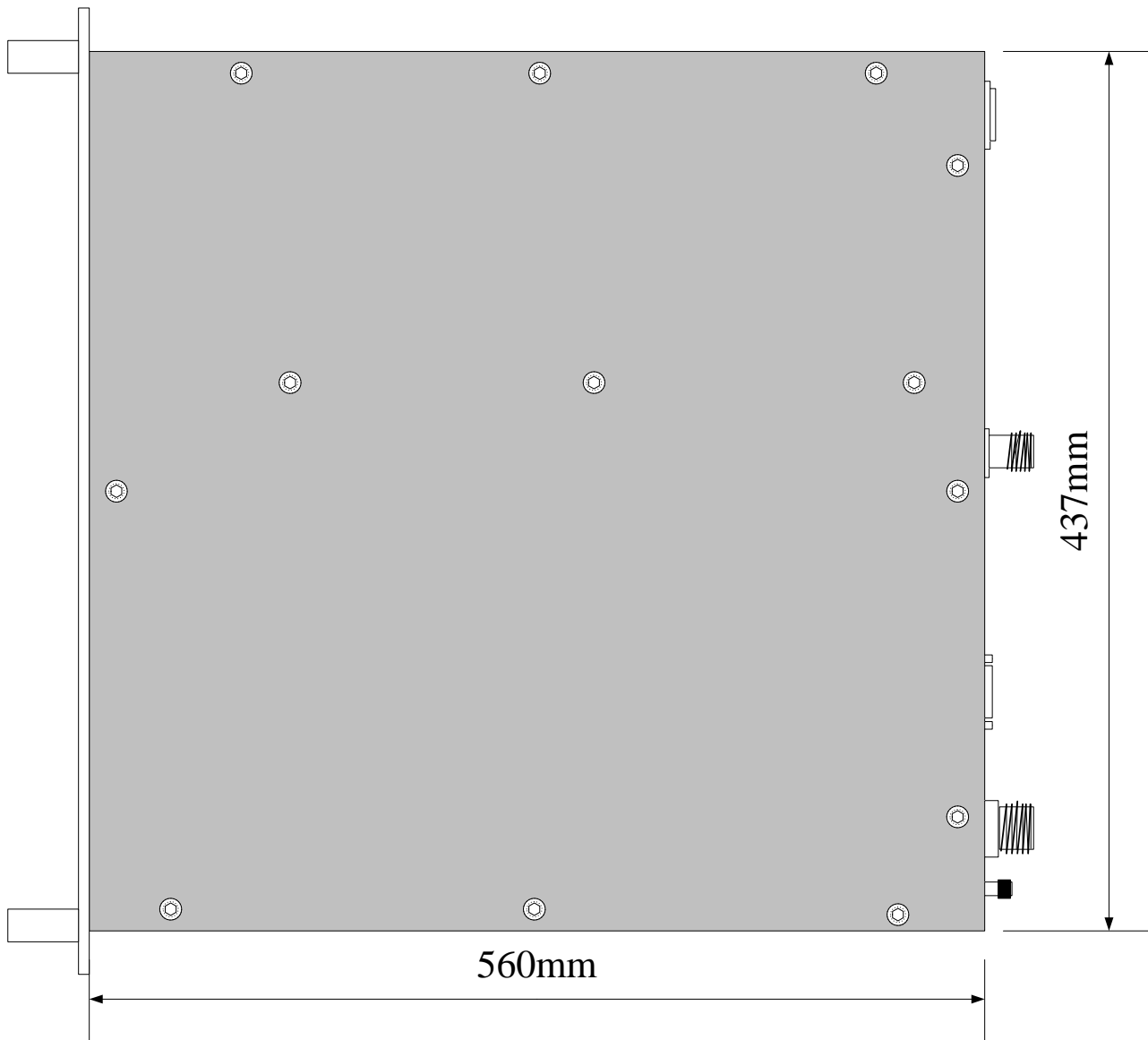
## Mechanical data and Interfaces

<b>Dimensions</b>	19" 3HU std 560mm depth
<b>Weight</b>	22.5Kg
<b>Main Power</b>	Rear panel
<b>RF Input</b>	N connector rear panel
<b>RF Output</b>	7/16 connector rear panel
<b>RF Monitor</b>	SMA connector rear panel
<b>RS232</b>	DB9 connector rear panel
<b>RS485</b>	RJ45 (2 parallel) rear panel
<b>USB</b>	Front panel
<b>Local Enable/Disable</b>	Switch front panel Two-pole connector rear panel

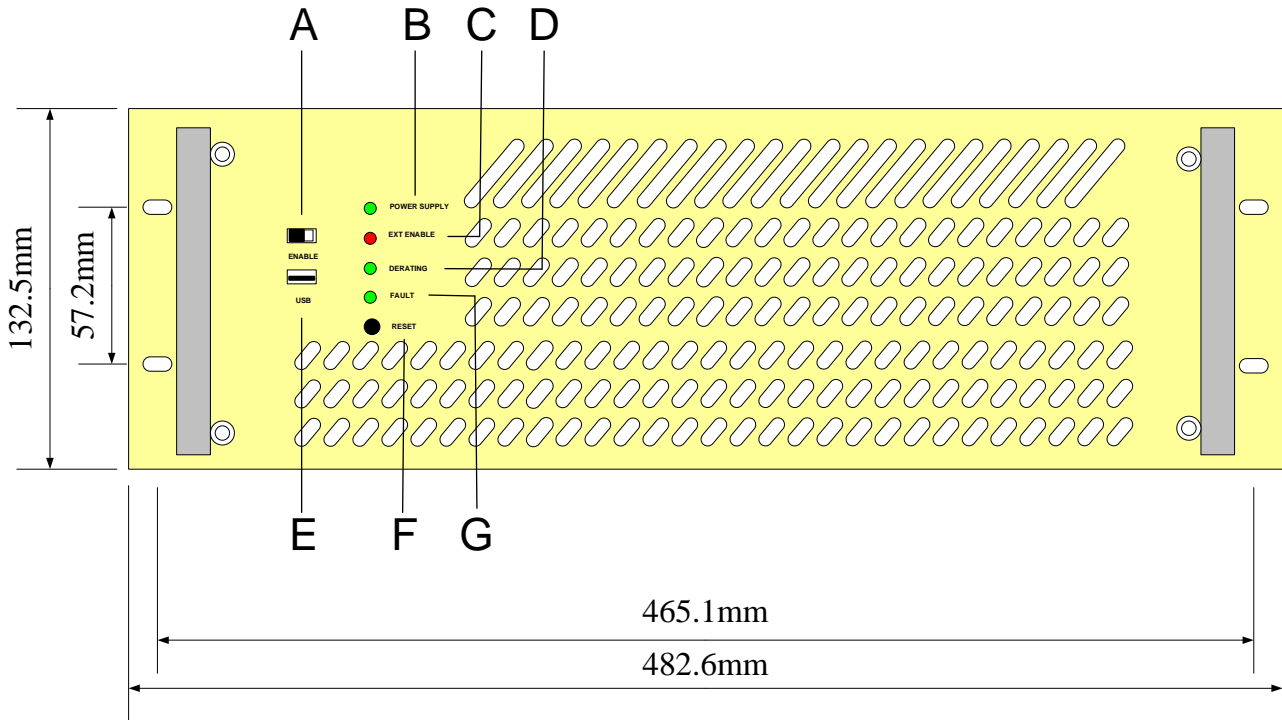
## Block Diagram



Top View

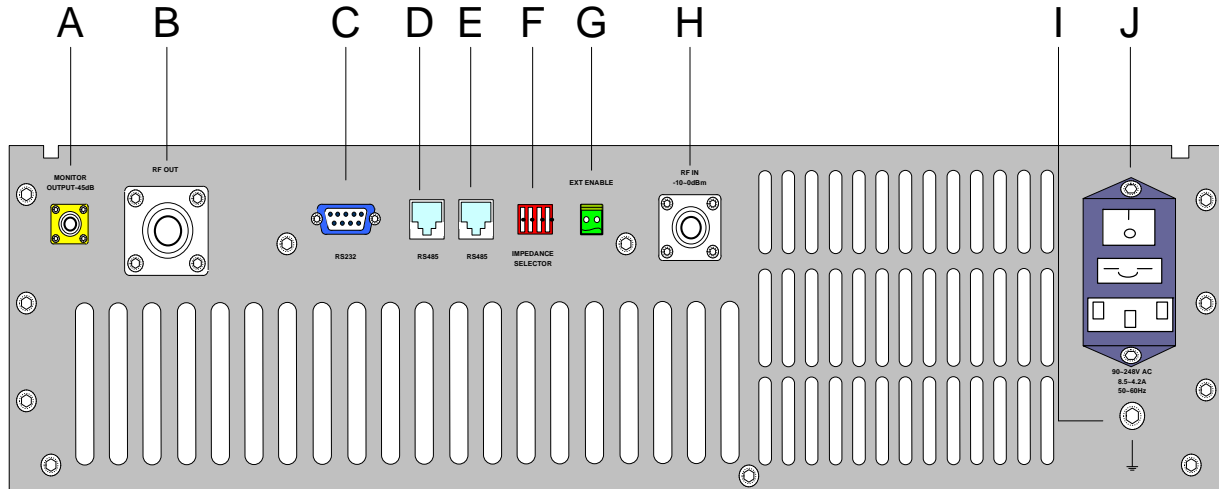


## Front Panel

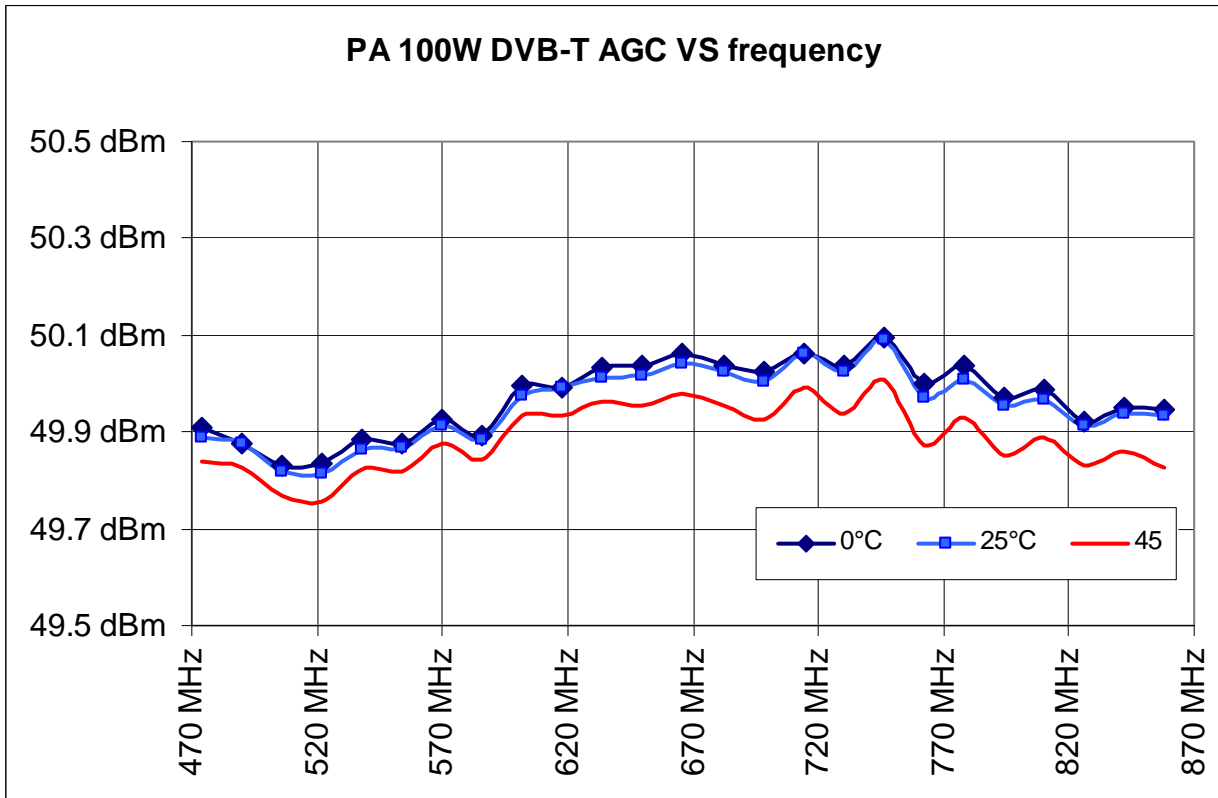
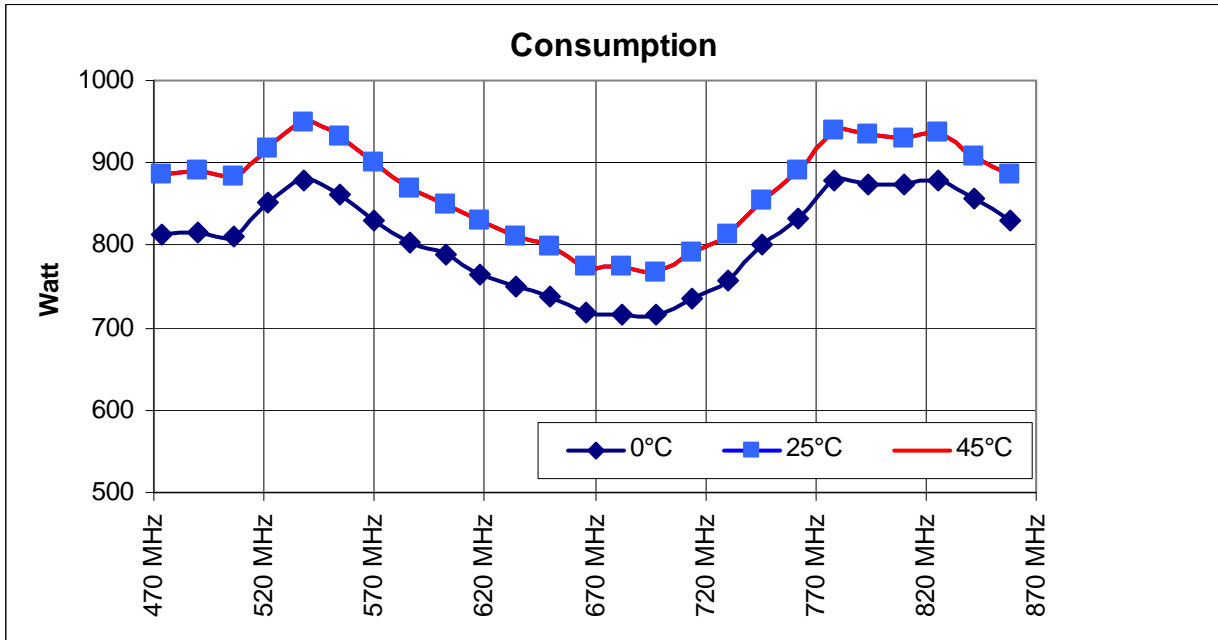


	Interface	Description
<b>A</b>	<b>Enable Switch</b>	Switch at the left side, it means Disable; Switch at the right side, it means Enable. The default status is Disable.
<b>B</b>	<b>LED Power Supply</b>	If LED is green, it means power supply is OK; If LED is off, there is power supply failure.
<b>C</b>	<b>LED Ext Enable</b>	If LED is on, it means Enable; If off, it means disable.
<b>D</b>	<b>LED derating</b>	Output power is too low, though PA still works
<b>E</b>	<b>USB</b>	Serial interface USB
<b>F</b>	<b>Reset</b>	To reset PA
<b>G</b>	<b>LED Fault</b>	Serious problems with PA

## Rear Panel



	Interface	Description									
A	<b>RF Monitor</b>	The calculation is as follows: $P_{out} - 45dB = \text{RF Monitor } P_{out}$									
B	<b>RF Out</b>	RF Output									
C	<b>RS232</b>	Serial interface RS232									
D	<b>RS485</b>	Serial interface RS485									
E	<b>RS485</b>	Serial interface RS485									
F	<b>Impedance selector</b>	This interface is used to select the proper impedance. There are altogether 4 switches each marked with a number. If the switch is put up, it means ON; if down, it means OFF. PA offers 3 options in impedance selection:									
		<table border="1"> <tr> <td>1</td> <td>OFF OFF OFF OFF</td> <td>Default</td> </tr> <tr> <td>2</td> <td>ON OFF ON OFF</td> <td>470 R</td> </tr> <tr> <td>3</td> <td>OFF ON OFF ON</td> <td>120 R</td> </tr> </table>	1	OFF OFF OFF OFF	Default	2	ON OFF ON OFF	470 R	3	OFF ON OFF ON	120 R
1	OFF OFF OFF OFF	Default									
2	ON OFF ON OFF	470 R									
3	OFF ON OFF ON	120 R									
G	<b>EXT Enable</b>	If Enable Switch (in the front panel) is off: EXT Enable does not work; If Enable Switch is on: PA works with EXT Enable connected; PA automatically power off if EXT Enable is disconnected.									
H	<b>RF In</b>	RF input									
I	<b>Ground</b>	Ground connection									
J	<b>AC Input</b>	AC									





# 100W DIGITAL TV UHF RF POWER AMPLIFIER

12/08/2008 V1.3

www.pacificwave-wireless.com

