

# AU200-D

Product Name

# GR00293

Part Number

## Technical Specification Summary

Frequency Range	470 – 862MHz	Typ. Gain	56 dB
P1dB	1400 W	Typ. Efficiency	>40 % @ 1dBcp
Analogue TV	2400 Wps	Temperature Range	0 to +45C
DVB	290 Wrms	Max VSWR	3:1
DTV	500 Wrms	Working Class	AB
Dual tone	1400 Wpep	Supply Voltage	30 V

Devices: MRF377 (Freescale Semic.) or equivalent

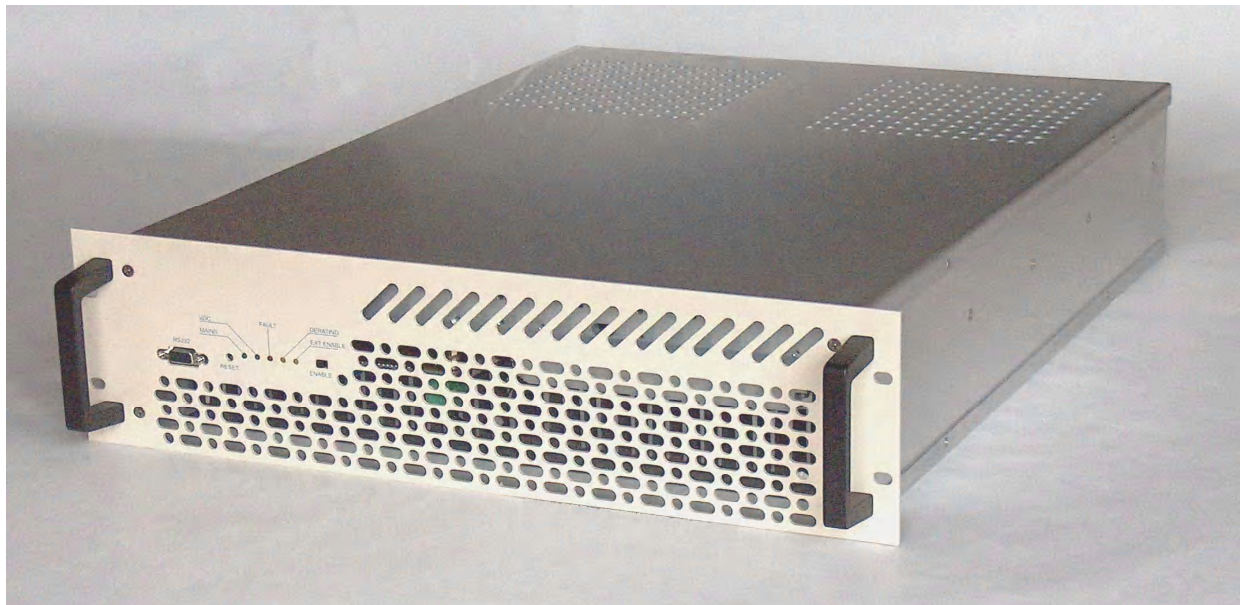
## Key Features and functions

- BroadBand (470-862 MHz)**
- Internal cabling free**
- Easy maintenance without special tools**
- RS232-RS485 interface**
- Control software included**
- Extremely strong mechanical structure**

## General Description

AU200-D 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.

## Actual Power Amplifier Picture



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## Electrical Specifications

Parameter	Min.	Typ.	Max	Units	Notes
Frequency	470		862	MHz	Full coverage without tuning
P1dB		1400		W	In CW Mode
Power	1200	1400		W <sub>pep</sub>	2 tones, 100kHz spacing (-27dBc)
IMD3	-30			dBc	2 tones, 100kHz spacing (1000W <sub>pep</sub> )
Power Input		4		dBm	Max value in CW mode @ 1dBcp
Gain		56		dB	
V Supply		30		Vdc	By External Power Supply
Drain Current		90		A	Analog TV @ black field
Input return loss	-16	-20		dB	
Phase Variation		+/-5		°	Unit to unit
Gain Variation			+/-0,5 <sup>[1]</sup>	dB	
F2 Second Harmonic		-35		dBc	
F3 Third Harmonic		-45		dBc	
Baseplate Temp.	-10		+75	°C	

Video Parameter	Min.	Typ.	Max	Units	Notes
Digital Power (DTV)			500	Wrms	
Digital Power (DVB-T)		250	280	W	
M.E.R. (DVB-T)		30		dB	
Shoulders (DVB-T)		-32		dBc	At ± 4.2 MHz / 250 W rms
Shoulders (DVB-T)		-30		dBc	At ± 4.2 MHz / 280 W rms

<sup>[1]</sup> WARM UP: To achieve the stability vs temperature correct value when the equipment is cold, please wait 30 minutes at least after switching on.

Physical Dimensions 482,6mm x 132,5m x 600mm / 19"x5,217"x23,622 "

Weight 25 kg. / 55 lbs

All Specifications are valid for load impedance 50 Ohm, V=xxVdc, I=xxA

## ABSOLUTE Maximum Ratings

Parameter	Value	Units	Notes
Output Power	1400	W	in CW mode
Input Power	5	dBm	in CW mode
Operating Voltage	32	Vdc	
Stable operations	30	Vdc	
Bias Current	10	A	Quiescent current for four LDU400C pallets
Drain Current	100	A	
VSWR	3:1		
Storage Temp.	-20 +80	°C	
Base Plate temp.	75	°C	Heatsink Temperature

## Electrical Interfaces

RF input	N female on Rear Panel
RF output	7/16 DIN female on Rear Panel
RF Monitor	SMA connector on Rear Panel
RS232	Dsub 9 Pin on front and rear panel
RS485	Dsub 9 Pin on rear panel

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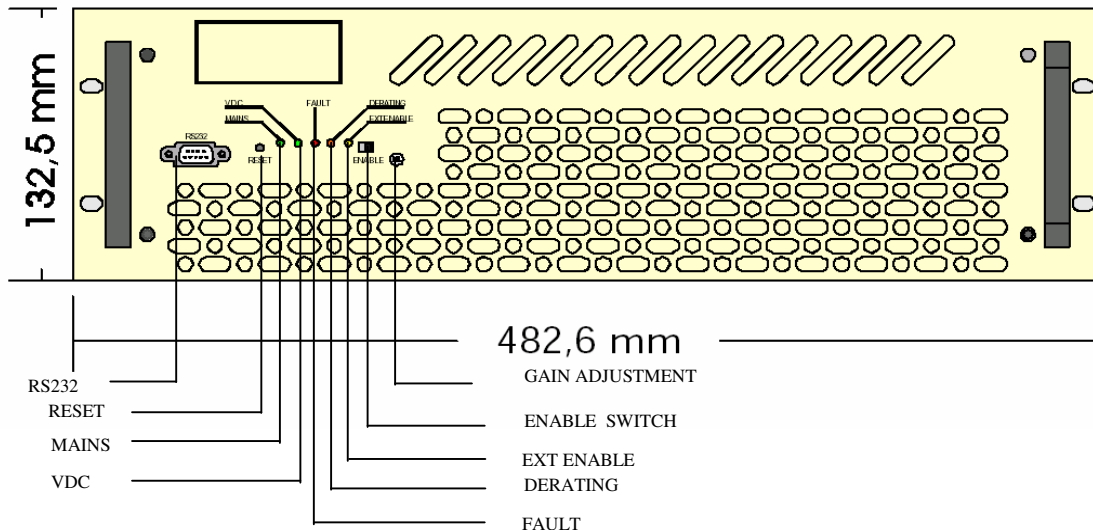
Part Number

**Mechanical specifications**

AU200-D  
 Physical Dimensions 19 Inch x 3 Units x 600mm (23,62") depth  
 Weight 25 kg. / 55 lbs



**Front Panel**



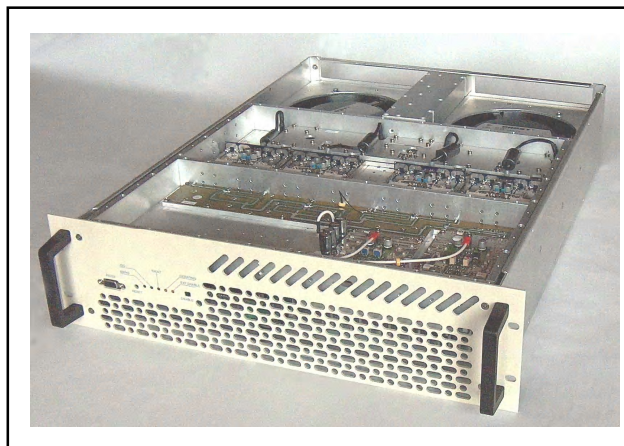
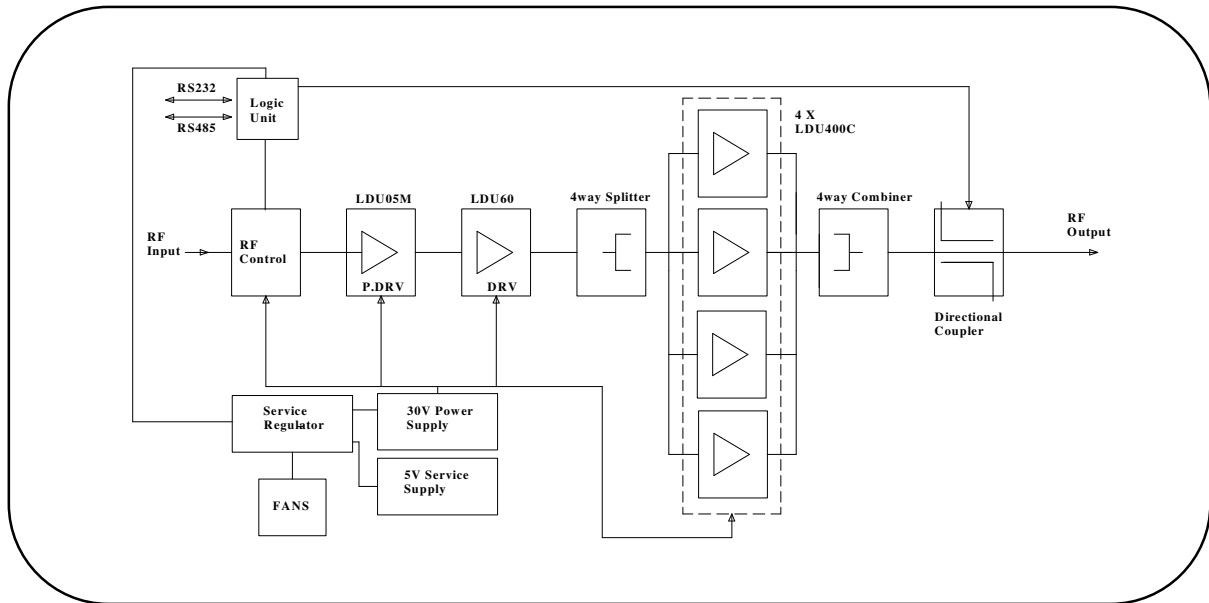
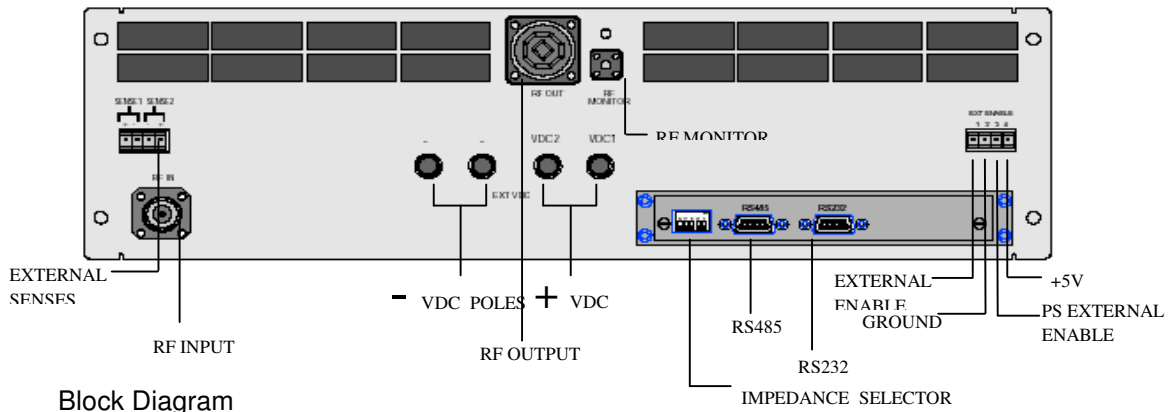
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# Rear Panel





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## READABLE DATA BY REMOTE COMPUTER OR CONTROL LOGIC UNIT (via RS232 / RS485)

### ALARMS/STATUS

Enable	ON / STAND BY
RF Faults	ACTIVE if Gain < 6dB referred to nominal
Temp Max °C	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

### NOTES

### MEASUREMENTS

RF Power Input	Input level expressed in [micro Watt]
RF Power Output	Output level expressed in [Watt]
RF Power Driver	Driver level expressed in [Watt]
RF Temperature	RF Heatsink Temperature expressed in °C (half section)
RF Temperature 2	RF Heatsink Temperature expressed in °C (half section)
VDC	Main Power Supply / Input Voltage
IDC Final 1	Supply Current of half section (two LDUxxx) expressed in Ampere
IDC Final 2	Supply Current of half section (two LDUxxx) expressed in Ampere
IDC Driver	Supply Current of Predriver and Driver expressed in Ampere

### Self Protection

Thermal Protection	High Temperature protection
Overdrive	Pin max must be set on the working channel with the used DVB-T signal
High Output Mismatch	VSWR max must be set on the working channel with the used DVB-T signal

## External High Power Supply Technical Specifications

### Output Power Characteristics <sup>3</sup>

Vout	30Vdc
Iout	2 x 50A or 1 x 100A in analog application
Max operative current	3 x 30A or 1 x 60A in digital application
Current Limit	2 x 55A or 1 x 110A in analog application 3 x 35A or 1 x 70A in digital application
Load Regulation	+/- 0,5% from 10% up to 100% dynamic load change
Output Ripple	400mV max
Sense	External Sense for both sections (if double). Sense Impedance 6,8KΩ each positive/GND wire.
Enable	<b>AU200-D</b> provides a signal 0/5V (0 = disable; 5 = enable). Open collector with internal pull-up. This signal must be used to enable the power supply.

## External Service Power Supply Technical Specifications

### Output Power Characteristics <sup>4</sup>

Vout	5Vdc
Iout	0,5A
Load Regulation	+/- 0,5% from 10% up to 100% dynamic load change
Output Ripple	50mV max
Enable	<b>This tension must be always enabled and connected</b>

<sup>3</sup> Only Power Supply output characteristics are indicated. Input characteristics must be in accordance with available networks. A high input isolation, well protected from possible spikes at input, is suggested.

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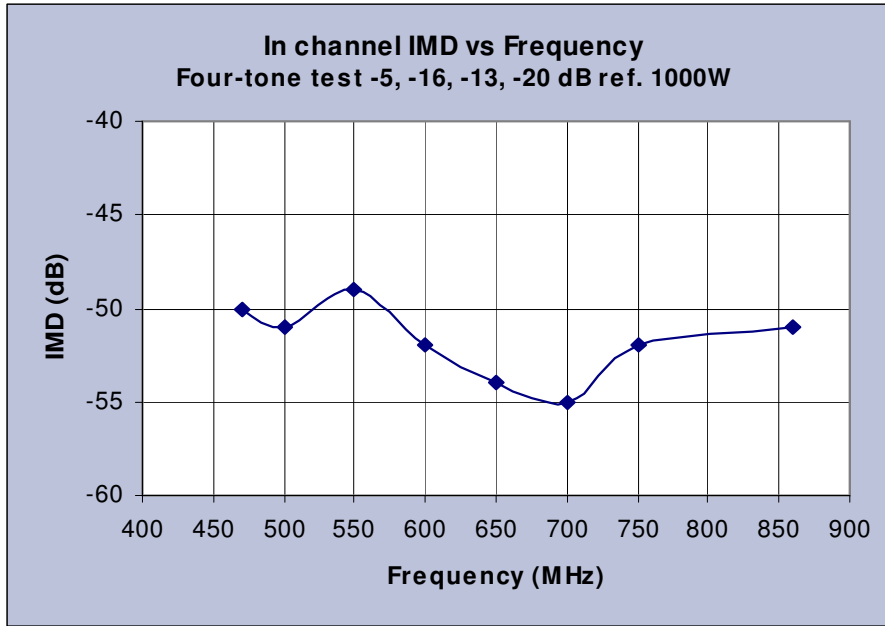
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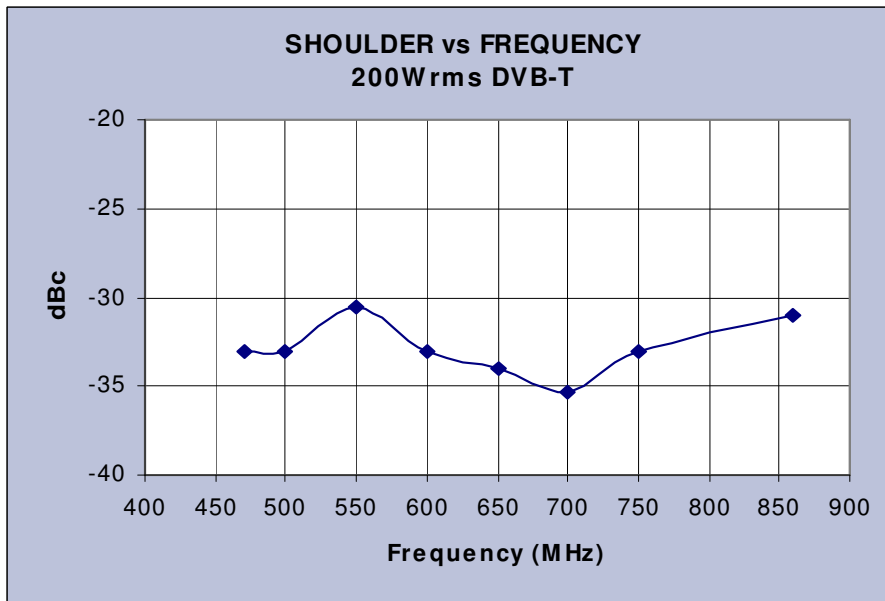
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<sup>4</sup> Only Power Supply output characteristics are indicated. Input characteristics must be in accordance with available networks. A high input isolation, well protected from possible spikes at input, is suggested.

## Graphs and Charts



Without precorrection



Without precorrection

**Note:** By the use of UBS DVB-T Modulator Mod. PT8750 + PT8731 option, and the proper

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precorrection, the AU200-D is able to deliver 280Wrms at better than  $-36\text{dBc}$  shoulders on all the band.

### Ordering informations

Product Name	Manufacturer's Part n.	Feature Description
AU200-D	GR00293	Standard version

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