

## Standalone UHF-Band Medium Power Amplifier

Model: DMPA 120UX

### Product Features

- 470 MHz - 860 MHz Broadband Amplifier
- Digital ready LDMOS PA provides 120 Watt output for broadcast of digital waveforms
- ALC or AGC mode of operation
- Touch screen display for real time user interface
- Remote control and self monitoring via Ethernet and RS485 interfaces
- Built in web server accessible through RJ45 connector with Internet Explorer
- Integrated AC/DC power supply



### Product Description

The DMPA 120UX is designed to operate as a final amplification stage for a terrestrial UHF transmitter or repeater system. It amplifies an UHF-Band input signal to a digital average output power level of 120 Watts, while maintaining its linear characteristics.

The DMPA 120UX architecture is based on a solid state design operating in Class A/AB linear mode over a frequency range of 470 MHz to 860 MHz. The amplifier is protected against input overdrive and overheating. The protection circuits are all self correcting, allowing the amplifier to be restored to its normal operating state upon removal of the fault condition.

The DMPA 120UX incorporates an internal automatic self leveling loop to maintain constant gain over the life of the equipment. The automatic gain control circuit will compensate for gain variations caused by changes in temperature and device aging. Depending on the application, the DMPA 120UX can be configured to operate in ALC mode, maintaining a constant output power level.

The amplifier's operational parameters are monitored and controlled by an embedded system controller that can be accessed from the touch screen LCD, Ethernet or RS 485 interfaces.

The DMPA 120UX is a field replaceable system component that includes an integrated AC/DC power supply and is designed for indoor installation.

All of the amplifier's components are enclosed in a standard 19" rack mount chassis, occupying only "2RU" of cabinet space.

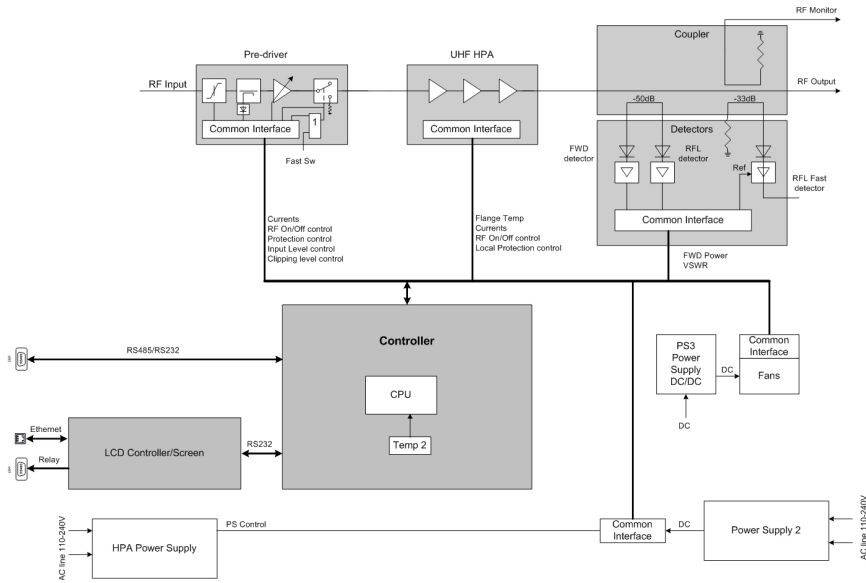
The amplifier is forced air cooled using four high performance fans, which are installed on the amplifier enclosure front panel.

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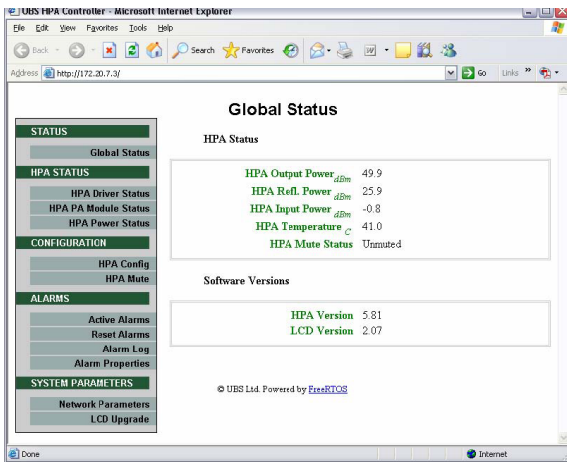
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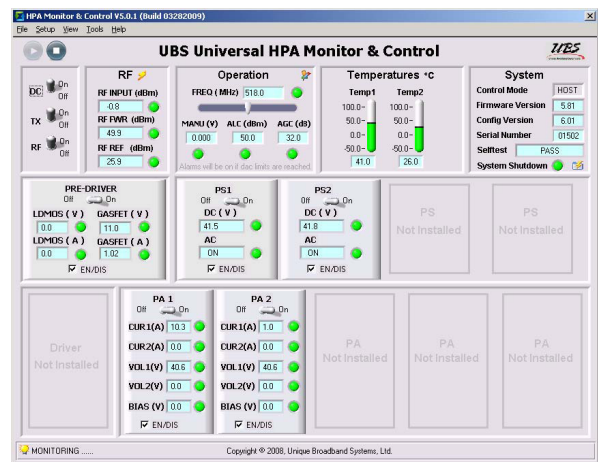
### Block Diagram (subject to change without notice)



### Control Interfaces (subject to change without notice)



Web GUI



HPA Monitor GUI



Touch Screen LCD



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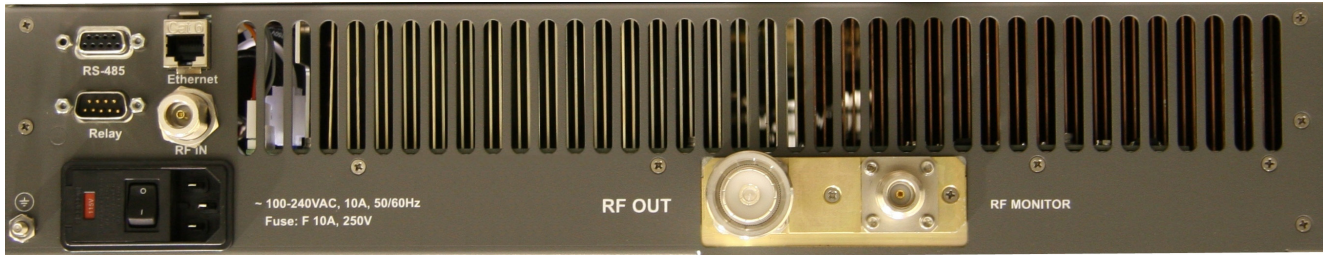


Fig.1 - Rear Panel

## Product Specifications (specifications are subject to change without notice)

### Parameters

<b>Operating Frequency Range</b>	470 MHz - 860 MHz
<b>Digital Average Output Power</b>	120 Watts
<b>Output Power Level Accuracy</b>	±0.25 dB
<b>Input Power Level</b>	-5 dBm to 1 dBm; 0 dBm typical
<b>Gain</b>	50 dB to 56 dB
<b>Gain Variation over 8 MHz BW</b>	≤ ±0.2 dB
<b>Gain Variation over entire BW</b>	≤ ±2 dB
<b>In-band IMD</b>	≤ -27 dBc
<b>Spectral Regrowth (uncorrected)</b>	≤ -30 dBc (at rated output power)
<b>Output Harmonics</b>	≤ -60 dBc (with output filter)
<b>Input Return Loss</b>	≤ -15 dB

### Interfaces

<b>RF Input Connector</b>	N-type (F), 50 Ω
<b>RF Output Connector</b>	7/16 DIN-type (F), 50 Ω
<b>RF Monitor Connector</b>	N-type (F), 50 Ω
<b>Touch screen LCD</b>	Local control
<b>Ethernet Interface</b>	Connector: RJ45 Protocol: Web GUI
<b>RS485 Interface</b>	DB9 (F) - HPA Monitor GUI or remote control
<b>Relay</b>	DB9 (M)

### Power Supply

<b>Voltage</b>	100 - 240 VAC
<b>Frequency</b>	50/60 Hz
<b>Power Consumption</b>	max. 900 Watts

### Mechanical

<b>Size</b>	2 U of 19" wide cabinet
<b>Dimensions (W x H x D)</b>	483mm x 89mm x 546mm (19.0" x 3.5" x 21.5")
<b>Weight</b>	20 kg (44 lbs.)

### Environmental

<b>Operating Temperature</b>	-10°C to +50°C (+14°F to +122°F)
<b>Storage Temperature</b>	-30°C to +75°C (-22°F to +167°F)
<b>Relative Humidity</b>	max. 95%, non condensing
<b>Cooling</b>	Forced air