

DTXPRO-100UR DIGITAL TRANSPOSER

DIGITAL MODULATOR,
REPROCESSOR, AND
REMOTE CONTROL



INTRODUCTION

The DTXPRO-100UR transmitter integrates a DIGITAL MODULATOR, 8vsb (ATSC COMPLIANT) all channel RECEIVER, LDMOS HPA DRVPRO100-U AMPLIFIER, and remote control via ETHERNET. The receiver output is an ASI transport stream that can be feed into the modulator for reprocessing or to external equipment to be multiplexed with other ASI streams to build a virtual channel inventory to be transmitted over the air with a single transmitter. The transmitter HPA uses LDMOS device technology for state-of-the-art performance. The Modulator has a built in WEB PAGE GUI which can be accessed via an Ethernet connection. The auto or manual LINEAR AND NON LINEAR ADAPTIVE CORRECTION can be adjusted via Ethernet. With the remote monitoring and alarms features the station service engineer can be notified of selected faults in the system via email. A GPS receiver is included for high stability operation which may be required by the FCC in some applications. To activate this feature a GPS antenna is required.

The transmitter comes packaged in a 13 RU 19 inch rack. This rack includes Modulator, PA section, Mask filter, couplers, circulator + termination, and LP Harmonic filter. The output antenna connection is type N Female.

Pineapple Technology, Inc. warrants the DTXPRO LINE of transmitter products for 2 years from ship date. Extended warranty is available for an additional 5 years. Contact PTI sales for details.



PINEAPPLE TECHNOLOGY, INC.

www.ptibroadcast.com

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TRANSMITTER GENERAL SPECIFICATIONS

FCC COMPLIANT APPLICABLE SERVICE REQUIREMENTS
 STANDARDS ATSC (8vsb), A/53, ASI
 MODULATION 8 LEVEL VSB TRELLIS ATSC COMPLIANT
 ADAPTIVE CORRECTION... LINEAR & NON LINEAR CORRECTION
 TS OPTIONS ASI OR SMPTE-310M
 CLOCK STABILITY <2ppm (GPS LOCK AVAILABLE)
 CONTROL ETHERNET WITH WEB PAGE GUI
 ACCESS PROTECTION.... THREE-LEVEL PASSWORD PROTECTION
 KEY PERFORMANCE TEST.... SHOULDER LEVELS -62 dB TYPICAL
 MER/SNR -35 dB TYPICAL
 FREQUENCY RANGE..... *470-810 MHz
 RF OUTPUT POWER 25-100 WATTS
 MASK FILTER..... 6 POLE STRINGENT FCC MASK
 LOW PASS FILTER ADDITIONAL HARMONIC SUPPRESSION
 FOR GPS BAND
 PRIMARY POWER..... 110 VAC 50/60 CYCLE
 48 VDC (42-50 V RANGE) 20 AMPS
 MINIMUM (NOT SUPPLIED AS PART OF
 THIS PACKAGE.

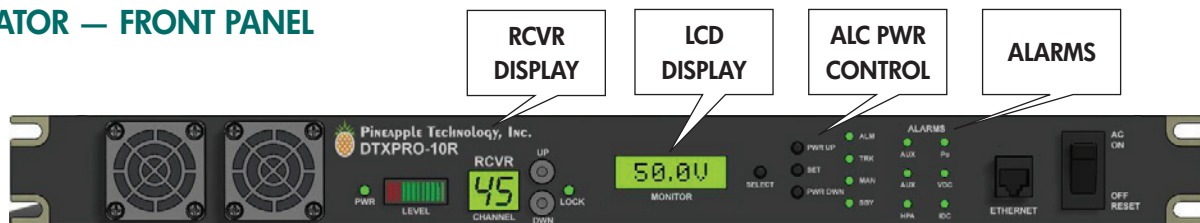
REMOTE CONTROL 12 STATUS AND 12 ALARM OPTIONS
 ASSEMBLED RACK 19 INCH 13 RU RACK
 WIDTH..... 21 INCHES (534 mm)
 HEIGHT..... 25 INCHES (635 mm)
 DEPTH..... 24.5 INCHES (623 mm)
 WEIGHT..... < 100 LBS (45.4 Kg)

**Frequency range limited by external equipment i.e. filters and isolators. This can be modified and or returned if it becomes necessary to change channels.*

RECEIVER SPECIFICATIONS

TUNABLE RANGE CHANNEL 2 THRU 69
 OUTPUT ASI TRANSPORT STREAM
 STANDARD RECEIVER WITH EQUALIZER AS USED IN
 PROFESSIONAL 8vsb RECEIVERS
 CONTROL VIA FRONT PANEL ... CHANNEL SELECTION
 WITH LCD DISPLAY
 SIGNAL STRENGTH METER WITH
 LCD DISPLAY
 SIGNAL LOCK LED

MODULATOR — FRONT PANEL



LCD DISPLAY: The LCD DISPLAY provides selected transmitter test data by depressing the SELECT switch located on the right side. Some of the options include the following;

1. RF POWER OUTPUT LEVEL
2. REFLECTED POWER LEVEL
3. DC SUPPLY VOLTAGE
4. DC CURRENT

ALC CONTROL PANEL: The ALC section serves two important functions.

1. Provides a means for raising or lowering transmitter power level.
2. Once the desired power level is reached, the set switch places the ALC circuit in the TRACK MODE. In the TRACK MODE THE OUTPUT LEVEL IS CONSTANT.

ALARM PANEL: The alarm LEDs indicates status of key alarms. Key alarms include the following;

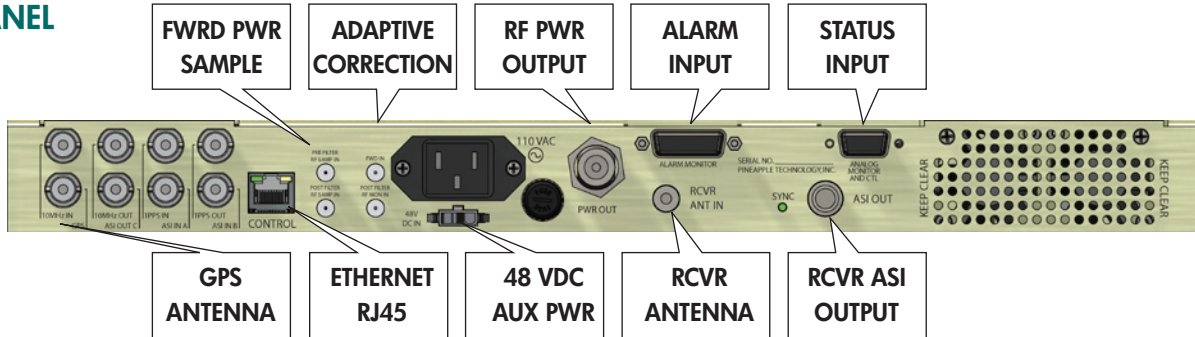
1. LOW OUTPUT POWERNORMAL (GREEN) FAULT (RED)
2. HIGH REFLECTED POWER.....NORMAL (GREEN) FAULT (RED)
3. 48 VDC SUPPLY NORMAL (GREEN) FAULT (RED)
4. AC MAIN POWER *NORMAL (GREEN) FAULT (RED)

**48 VDC backup power required*

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REAR PANEL



Mating Connectors

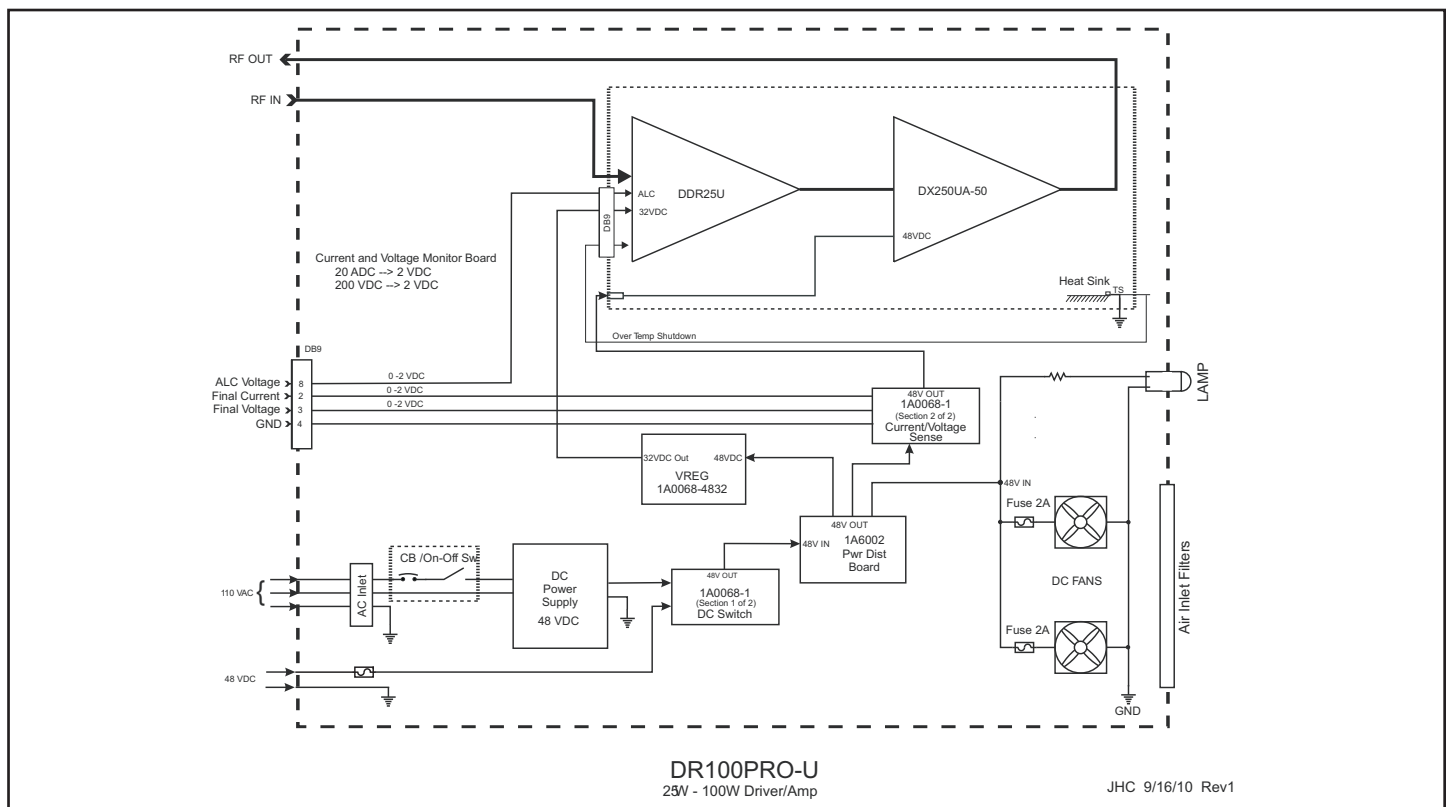
BNC JACK 75 OHMS GPS, ASI IN, SMPTE-310
 ETHERNET RJ-45
 RF MONITORING SMA JACK
 ADAPTIVE SIGNAL SMA JACK
 RF OUTPUT TYPE N JACK

RECEIVER ANTENNA TYPE F JACK
 ALARM INPUTS DB 15 JACK
 ANALOG STATUS DB 9 JACK
 48 VDC INPUT MOLEX 3P

DR100PRO-U FINAL AMPLIFIER

The final amplifier Mainframe includes the following items:

1. UDD25 HIGH GAIN DRIVER WITH ALC CONTROL
2. DX250 LDMOS FINAL AMPLIFIER STAGE
3. 50 VDC POWER SUPPLY



DR100PRO-U
25W - 100W Driver/Amp

JHC 9/16/10 Rev1

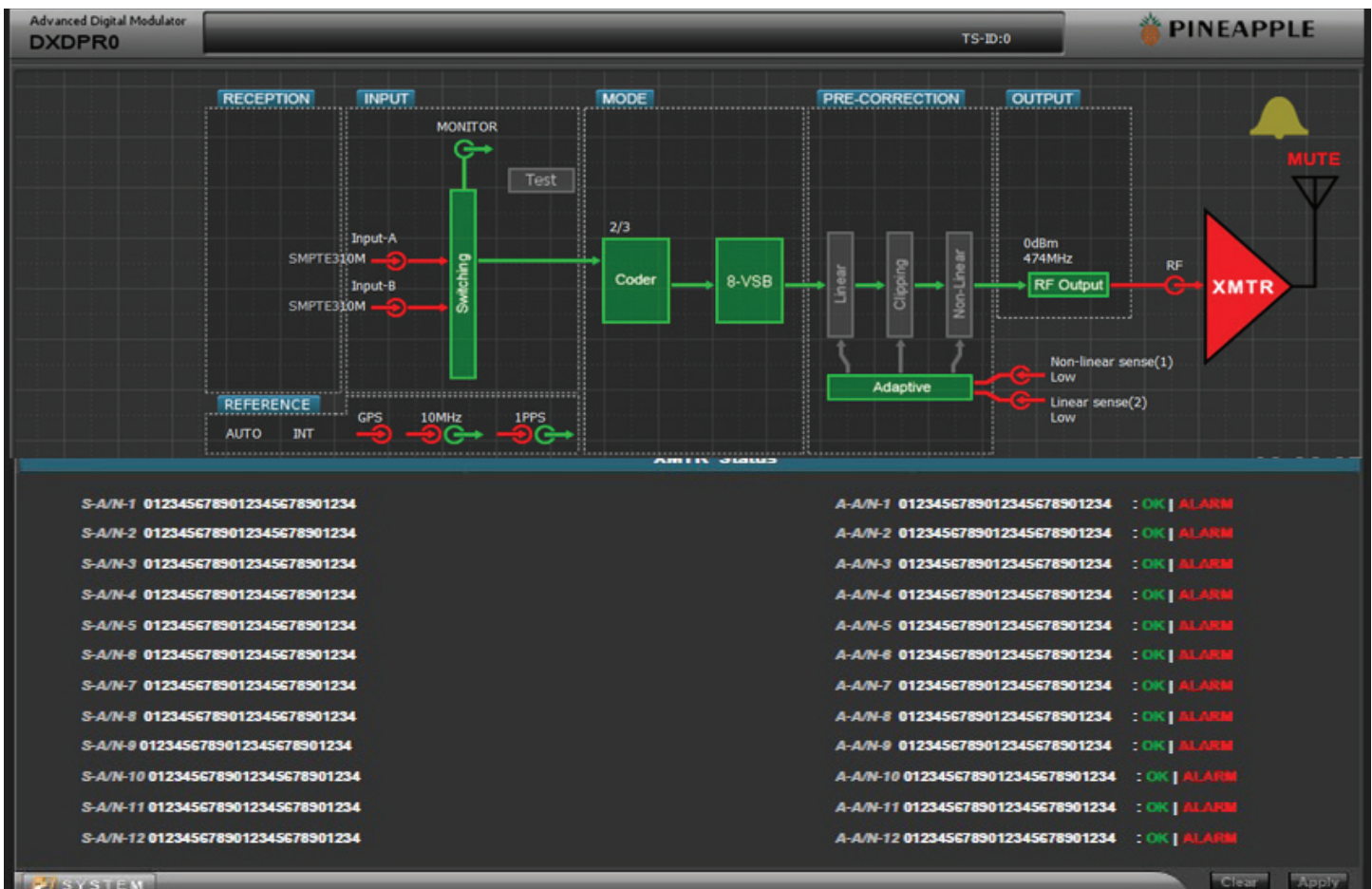
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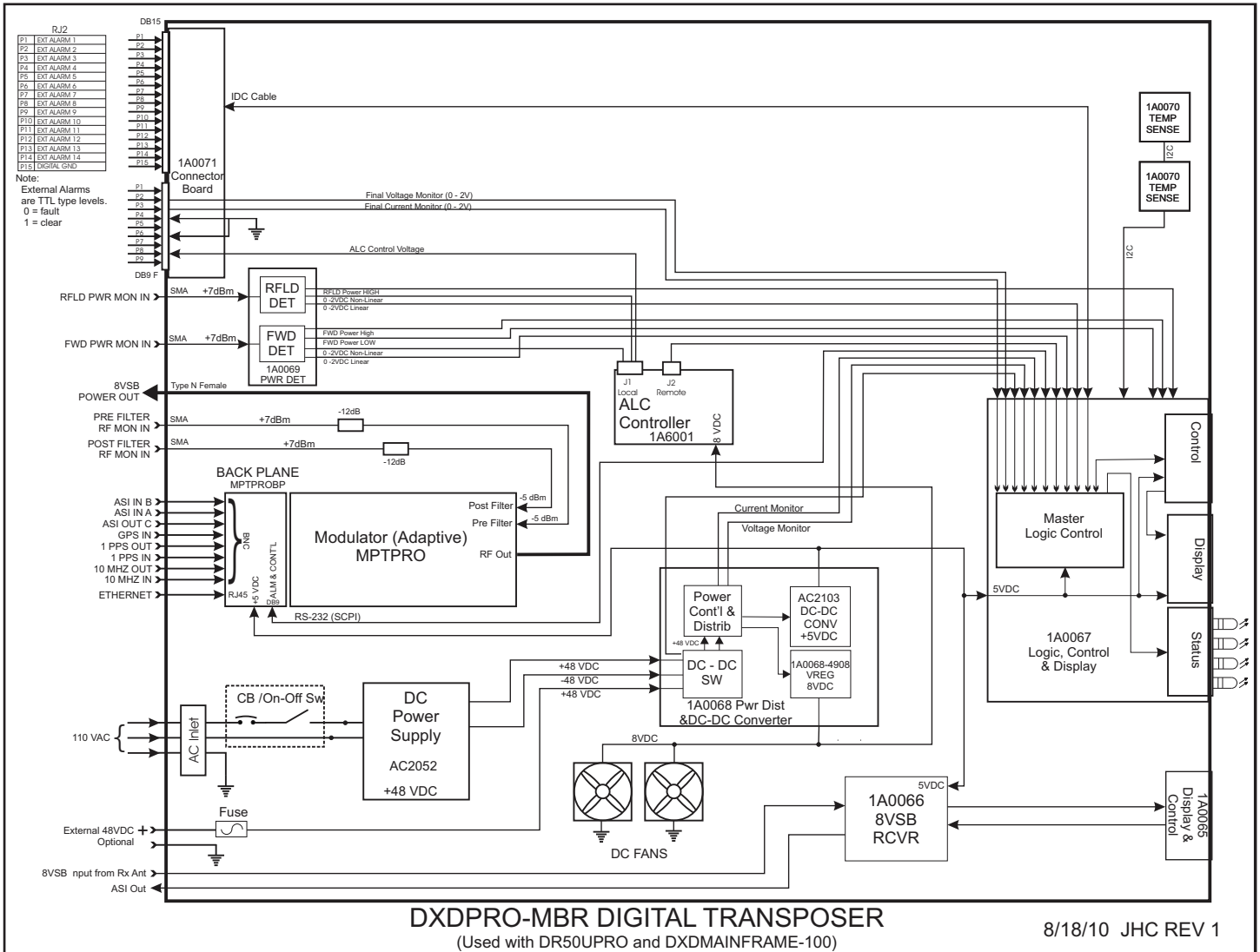
WEB PAGE GUI

Web Page Commands

- Click and drag (XMTR ICON) to lower 1/2 page to see status and alarms
- Click and drag (LINEAR ICON) to lower 1/2 page to control linear correction
- Click and drag (NONLINEAR ICON) to lower 1/2 page to control nonlinear functions
- Click and drag (MUTE ICON) to lower 1/2 of page to mute and un mute xmtr
- Click and drag (RF OUTPUT) to change the output level from modulator
- Click and drag (BELL ICON) to view modulator alarms
- Click and drag (GPS ICON) to setup GPS receiver
- Click and drag (SWITCHING ICON) to select input port for ASI or SMPTE-310



BLOCK DIAGRAM DR100PRO-U



PINEAPPLE TECHNOLOGY, INC.

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ASSEMBLED IN U.S.A. Some products include foreign components.
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