

UNITY4600

PROFESSIONAL MEDIA RECEIVER



WEGENER®



MPEG 4:2:0 DISTRIBUTION FOR CABLE TELEVISION

The latest in WEGENER's Unity family of DVB receivers, the Unity 4600 is specifically designed to meet the needs of cable television networks. This receiver allows for orderly transition from analog to digital service by working at the low symbol rates required for band edge SCPC service. The Unity 4600 is equipped with two stereo audio pairs, in both MPEG layer 2 and Dolby® Digital formats.

DIGITAL OUTPUTS WHEN YOUR NETWORK NEEDS THEM

The Unity 4600 has both analog and digital outputs built in, enabling you to deploy one common IRD to both analog and digital cable headends. The digital output is DVB ASI — a common interface to digital cable plants. COMPEL Control® lets you enable programs and change the program mapping of the ASI output. Multiple program decrypt enables the Unity 4600 to look at the entire program stream, then decrypt and pass only the programs authorized for that receiver as a digital ASI output. Programs not selected are overwritten with null packets. This advanced digital capability provides maximum flexibility in controlling your program distribution.

THE UNITY ADVANTAGE – CONTROL

Your UNITY network will enjoy the power of COMPEL Network Control. You can control your Unity receivers as individual sites as well as groups. COMPEL provides more than just permissioning a receiver. COMPEL issues commands that are accurately synchronized with video and audio programming. Scheduling commands allow you to regionalize programming and commercials to increase revenues. In addition, you can switch between satellite transponders or even to a different satellite for disaster recovery. Over 150 networks worldwide enjoy the unique power of COMPEL™ Network Control.

FEATURES

- MPEG2/DVB Compliant
- Two Balanced Stereo Pair (MPEG / AC-3)
- Variable Audio Level
- COMPEL Network Control
- COMPEL Conditional Access
- Closed Captioning and XDS (Vchip)
- VBI Support
- DTMF Cueing
- 10/100 BaseT Ethernet Interface
- RS-232 Interface
- 4 Port RF Switch
- ASI Output
- Multiple Program Decrypt
- Optional Front Panel Video and Audio Monitor Ports
- Optional Turbo Demod QPSK / 8PSK / 16QAM

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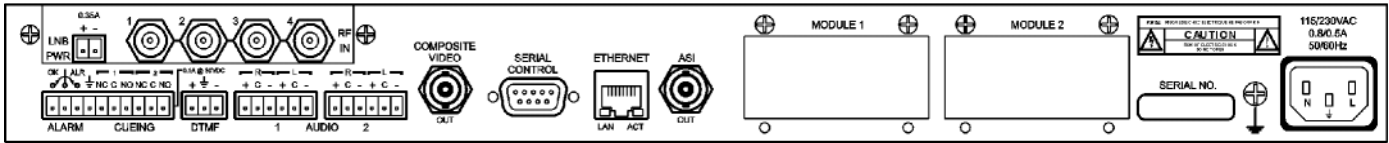
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THE UNITY4600 REAR PANEL



TECHNICAL SPECIFICATIONS

RF CHARACTERISTICS - Standard Demod

Input Frequency	Tuning via Front Panel Control or COMPEL
Input Frequency Range	950 to 2150 MHz
RF Ports	Four F Connector Inputs
Carrier Lock Range	+/-3.0 Mhz
Input Level Range	-25 dBm to -65 dBm
Input Impedance	75 Ohms
LNB Power	18 VDC @350 mA max.
Universal LNB Control	13/18V Polarity Switching plus 22 kHz LO Control
Tuning Resolution	1KHz
Modulation	DVB-QPSK
Symbol Rate Range	2 -30 Msps
FEC Coding (DVB)	1/2,2/3,3/4,5/6,7/8

RF CHARACTERISTICS - ADVANCED Demod (optional)

Input Frequency	Tuning via Front Panel Control or COMPEL
Input Frequency Range	950 to 2150 MHz
RF Ports	Four F Connector Inputs
Carrier Lock Range	+/-3.0 Mhz
Input Level Range	-20 dBm to -70 dBm
Input Impedance	75 Ohms
LNB Power	18 VDC @350 mA max.
Universal LNB Control	13/18V Polarity Switching plus 22 kHz LO Control
Tuning Resolution	1KHz
Modulation Supports	DVB-QPSK or advanced "Turbo" QPSK/8PSK/16QAM
FEC Ratios	DVB-QPSK R=1/2, 2/3, 3/4, 5/6, 7/8 Turbo QPSK R= 1/4, 1/2, 3/4 Turbo 8PSK R= 2/3, 3/4, 5/6, 8/9 Turbo 16QAM R= 3/4
Symbol Rate Range	2 -30 Msps

RF CHARACTERISTICS - 4 PORT RF SWITCH

Isolation	950 - 1450 MHz exceeds 45 db 1450 - 2150 MHz exceeds 40 db
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VIDEO OUTPUT CHARACTERISTICS

Video Format	NTSC/PAL
Output Level	1.0 Volts P-P +/- 5%
Output Impedance	75 Ohms
Output Connector	BNC (2 - includes front monitor port)
Video Frequency	0.5 - 4.2 MHz +/- 0.8dB
Response (NTSC)	
Signal to Noise Ratio	>56 dB
Differential Gain	<4%
Differential Phase	<1.5°
Line Time Distortion	<1 IRE
Field Time Distortion	<3 IRE

VIDEO COMPRESSION CHARACTERISTICS

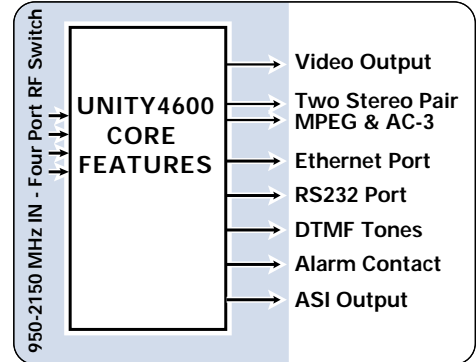
Video Data Rate	15 Mbps Max
Compression Type	MPEG ML @ MP (4:2:0)
Resolutions	All MPEG/DVB Resolutions Supported

AUDIO OUTPUT CHARACTERISTICS

Compression Type	MPEG-2 Layer II, Dolby Digital
Output Modes Supported	Mono, Dual Mono, Joint Stereo
Data Rate	Up to 384 Kbps ES rate MPEG, Up to 640 Kbps AC-3 (optional)
Frequency Response	20Hz to 20KHz +0.5 / - 1.5 dB
Output Level @ max PPL	+18 dBm, variable
Load Impedance	600 Ohms
Harmonic Distortion	<0.1%
S/N Ratio	>80 dB unweighted
Audio Ports Connectors	2 independent stereo pairs Quick Disconnect Screw Terminals
Audio Monitor	Front Panel 1/4" headphone jack (optional)

DTMF TONE OUTPUTS

Output Level	-2 to +8 DBM, variable
Output Impedance	600 Ohms, Balanced
Connector	Quick Disconnect Screw Terminals



DATA

Interface	RS-232C
Maximum Data Rate	38.4 KBPS
Connector	DB9

RELAY CHARACTERISTICS

Alarm Relay	Form C
CUE Relays (2)	Form C COMPEL Controlled

UNIT CONTROL

Front-panel	LCD and keypad
Ethernet	Telnet over TCP/IP Email reporting to COMPEL

CONDITIONAL ACCESS OPTIONS

- WCI Compel CA with internal sim card
- PIN Scrambling

MECHANICAL

Power	Universal Switching Power Supply 1.75"H x 19"W x 13.5"D (Rack mount)
Operating Temperature	10° to 50° C

AGENCY APPROVALS

FCC Class A, UL, CE