



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 either MPEG layer 2 or Dolby AC-3 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.

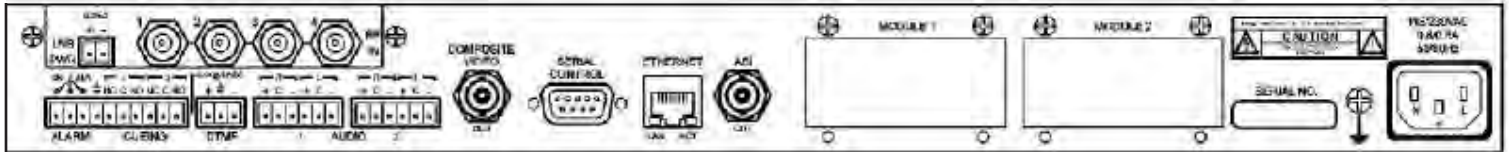
THE UNITY ADVANTAGE – CONTROL Your UNITY network will

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

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 1 kHz
 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 1 kHz
 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

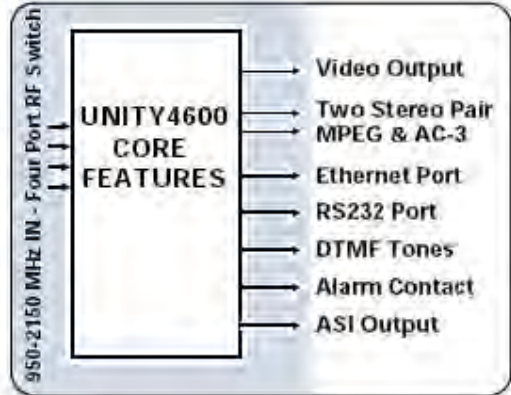
RF CHARACTERISTICS - 4 PORT RF SWITCH
 Isolation 950 - 1450 MHz exceeds 45 db
 1450 - 2150 MHz exceeds 40 db

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 Response (NTSC) 0.5 - 4.2 MHz +/- 0.8dB
 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 2 independent stereo pairs
 Connectors 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 ToNet 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