

# UNITY500IP

ENTERPRISE MEDIA RECEIVER



WEGENER®



## THE UNITY 500IP PROVIDES IP DATA TO 15 Mbps AND MPEG-2 DIGITAL VIDEO IN ONE UNIT

Using standard DVB MPE protocol over the satellite link, the Unity 500IP provides a virtual Ethernet satellite relay. At the uplink, a standard DVB MPE IP concentrator accepts Ethernet data from file servers, LANs or WANs for insertion into a DVB compliant transport stream, and pushes it to receive locations allowing Ethernet relay of IP data VIA satellite.

## PUMP IP DATA AT SPEEDS UP TO 15Mbps

The Unity 500IP is ideal for fat-pipe data transmission to the Internet, satellite service providers, business television users, broadcasting and cable data networking applications.

## DIGITAL MEDIA RECEIVER

The Unity 500IP Digital Media Receiver is a high performance satellite IRD targeted to meet the needs of the private television marketplace. Supporting both PAL and NTSC video standards, the Unity 500IP is uniquely positioned to provide high quality video, audio and data to demanding customers. The Unity 500IP supports DVB world standard teletext and line 21 closed captioning and extended data for enhanced video functionality. Multiple data features are standard to provide additional ways to use spare digital spectrum for revenue and operational control. A 38.4 Kbps asynchronous output provides constant streaming of control and user information. This data port is used for local and remote diagnostics, COMPEL data delivery services and auxiliary data. Using COMPEL, the data output can control external devices such as collection encoding systems and video switching equipment. COMPEL is able to command the serial number to be displayed on-screen for asset protection.

## COMPEL PUTS YOU IN CONTROL

COMPEL gives you the power to manage a network of Unity 500IP and Unity IRDs with unparalleled functionality. With its unique network management features such as grouping, receiver control and scheduling, the operator can command individual or groups of receivers to switch, tune or "output" video or data targeted specifically for that one receiver or group of receivers. In addition, COMPEL is able to switch the Unity 500IP between satellite transponders—even to a different satellite for unequalled disaster recovery.

## FEATURES

- 1.5-15 Mbps Digital Video
- 1.5-48 Mbps Transport Rate
- 1.08-45 Msps Symbol Rate
- Line 21 Closed Captioning and Extended Data
- World Standard Teletext
- 10/100 Base-T Ethernet Output
- Satellite Ethernet IP Data Repeater
- RS-232 ASYNC Data Up To 38.4 Kbps
- SCPC and MCPC Operation
- On-Screen Control
- COMPEL Network Control
- COMPEL CA and WEGENER PIN Scrambling
- Optional Rack Mount
- Optional Four Port RF Switch

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ISO 9001:2000



Certificate No. 1502-005996, 006002

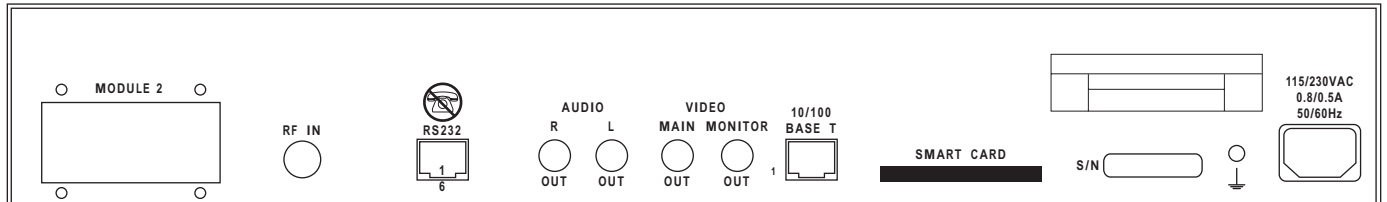
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### THE UNITY500IP REAR PANEL



### TECHNICAL SPECIFICATIONS

#### RF CHARACTERISTICS

Input Frequency Range	950 to 2150 MHz
Carrier Lock Range	+1.0 MHz
Input Level Range	-25 to -65 dBm
Input Impedance	75 ohms
Input Connector	Type-F
LNB Power (Universal)	12/18 VDC@ 350 mA max. 22KHz, Control Tone
Tuning Resolution	1KHz
Modulation	DVB QPSK
Symbol Rate Range	1.08 to 45 Msps
Transport Rate Range	1.5 to 48 Mbps
FEC Coding	1/2, 2/3, 3/4, 5/6, 7/8

#### VIDEO COMPRESSION CHARACTERISTICS

Video Data Rate	1.0 to 15 Mbps
Compression Type	MPEG-2 (4:2:0)
Resolution: Horizontal	720, 704, 640, 544, 480, 352
Resolution: Vertical	480, 240 lines @ 30 Hz (NTSC) 576, 288 lines @ 25 Hz (PAL)

#### VIDEO OUTPUT CHARACTERISTICS

Output Level	1 Vpp +/- 5%
Output Impedance	75 ohms
Output Connectors	RCA, Phono 2 ea.
Differential Gain	3%
Differential Phase	3
Line Time Distortion	2 IRE
Field Time Distortion	2 IRE
Teletext	CCIR ITU-R, System B
Closed Captioning	Line 21 CC and XDS

#### AUDIO COMPRESSION CHARACTERISTICS

Compression Type	MPEG Layer II
Data Rate	64 to 384 Kbps
Output Modes	
Supported	Mono, Duo, Joint Stereo

#### AUDIO OUTPUT CHARACTERISTICS

Frequency Response	20Hz to 20kHz
Output Level @ max PPL	9.0 dBm
Output Impedance	1 Kohm, unbalanced
Output Connectors	RCA, phono
Harmonic Distortion	<0.5%
S/N Ratio	>65 dB

#### AUDIO OUTPUT CHARACTERISTICS

Frequency Response	20Hz to 20kHz
Output Level @ max PPL	9.0 dBm
Output Impedance	1 K Ohm, unbalanced
Output Connectors	RCA, phono
Harmonic Distortion	<0.5%
S/N Ratio	>65 dB

#### ASYNCHRONOUS DATA CHARACTERISTICS

Data Format	RS232
Max Data Rate	38.4 Kbps
Output Connector	RJ11, Female

#### IP DATA CHARACTERISTICS

Encoding Format	DVB MPE
Ethernet	10/100 Base-T
Max Data Rate	10 Mbps, with video 15 Mbps, no video
Output Connector	RJ45, Female

#### POWER AND MECHANICAL CHARACTERISTICS

Power	Universal Switching 115 VAC +/- 10%, 0.8 A max, 50/60 Hz 230 VAC +/- 10%, 0.5 A max, 50/60 Hz
Package	Desk top
Operating Temperature	2.5" H x 17" W x 10" D 10 to 40

#### AGENCY APPROVALS

FCC Class A, UL, CSA, CE

#### OPTIONS: (1 – MODULE)

- 14 contact relay card
- 4 input RF switch

04/04 - U500IP

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