

# ERI/IRTE UHF Panel Antenna Systems

## Integrated Broadband UHF Panel Antennas

Electronics Research, Inc. and IRTE-ITECH have a long history of collaboration in the sale of UHF panel antenna systems in North America. As the FCC completes its first Incentive Auction to reclaim spectrum for Wireless Services and many US television stations are about to begin the process of relocating to newly assigned operating channels ERI and IRTE have reinvigorated their partnership.



IRTE will supply ERI with its high quality I230EH, I230H-HP, and I230EC UHF panel elements and power dividers that ERI will integrate into complete panel antenna systems at its US facility. This arrangement allows for the panel elements and power dividers to be shipped in bulk from the IRTE factory in Italy and provides customers with antenna systems that are assembled and tested by ERI, with a long history as a supplier of broadcast RF and structural systems. The customer will be provided with support spines and mounting structures fabricated in the US by ERI, an AISC certified fabricator while reducing shipping costs. ERI will maintain a stock of IRTE manufactured panel elements and power dividers for use in completed assemblies as well as for any replacement components that may be required for after-sale support, with quick shipment of repair parts for any critical or off-the-air emergencies.

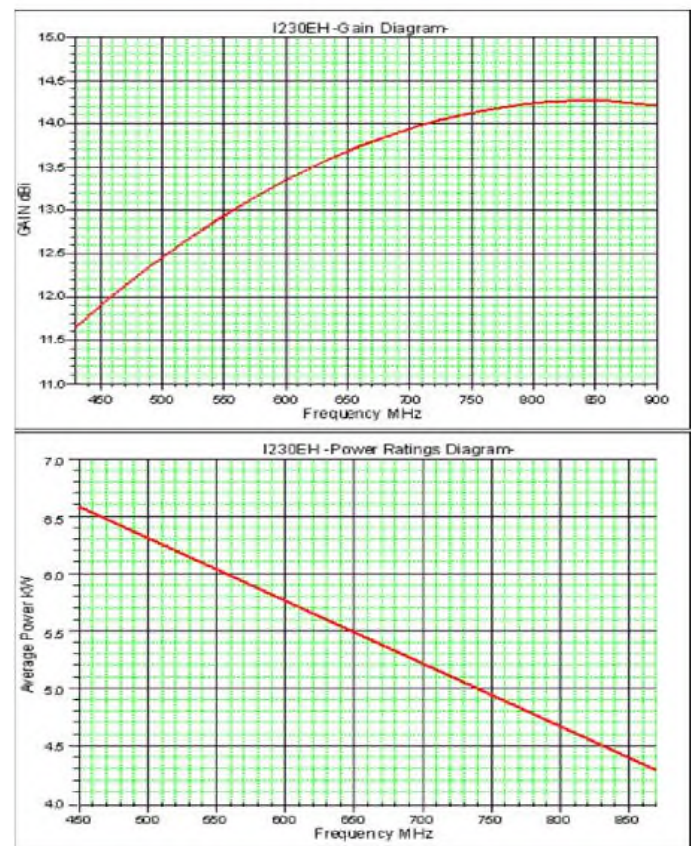
## IRTE I230EH and I230EH-HP Horizontally Polarized UHF Panel

### Features

- Covers the entire UHF television band
- Frequency 470 to 860 MHz
- Single or Multiple Channels
- Standard & High Power Versions Available

The UHF panels offered by ERI are based on two well established designs manufactured by IRTE. For normal power requirements, the standard panel is available to provide up to 2.5 kW average power handling per panel. For increased power requirements, the high power version of the panel is available to provide a capability of up to 5 kW, average power, per panel.

The design of these UHF panels have evolved over the past decade to meet the needs of the demanding U.S. television market. From increasing the power handling capability to extending the operating temperature range, IRTE has considered every design detail in order to provide broadcasters the most reliable panel antenna system available on the market today.



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**ERI/IRTE UHF Panel Antenna Systems**  
**Integrated Broadband UHF Panel Antennas**

**Specifications**

Frequency Range:	470 to 860 MHz	
Input impedance:	50 ohm	
Polarization:	Horizontal	
Gain @650 MHz:	11.6 dBd	
Voltage Breakdown:	10 KV	
VSWR:	1.1 (1.08 Typical)	
Maximum Average Power:	I230EH	2.5 kW @650 MHz
	I230EH-HP	5.0 kW @650 MHz
Connector type:	I230EH	7/8-inch EIA flange, male
	I230EH-HP	1-5/8-inch EIA flange, male
Height:	41.34 in	1050 mm
Width:	17.72 in	450 mm
Depth:	7.48 in	190 mm
Weight:	35. lbm	16 kg
Inner Lines and Dipoles:	silver-plated brass/copper	
Radome :	fiberglass gray(standard), red, white, green on request	



**IRTE I230EH  
UHF Panel**

**IRTE I230EC Circularly or Elliptically Polarized UHF Panel**

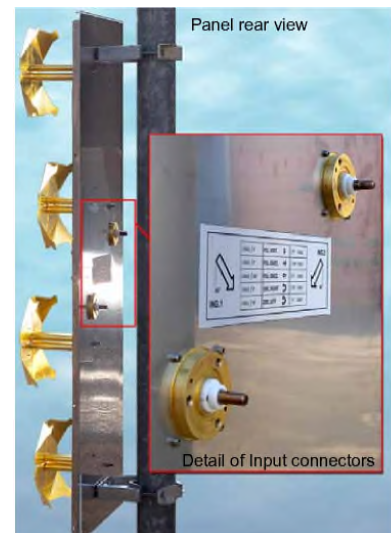
**Features**

- Covers the entire UHF television band
- Frequency 470 to 860 MHz
- Single or Multiple Channels
- Can be configured for variable elliptical polarization or full circular operation

The IRTE I230EC elliptically polarized UHF panel is a rugged, radome enclosed, broadband panel element that provides variable polarization from linear to elliptical to full circular. Systems can be configured to allow individual tenants of a master UHF antenna system to customize their radiated signal individually. If desired the system can be configured to allow these changes to be made at will. Each I230EC element is constructed of copper and silver plated brass on a stainless steel back plane with a full fiberglass radome. Each element has two inputs and varying the phase of the signals being fed to each input the polarization ratio of signal can modified. Alternatively hybrids can be installed at each element to provide a fixed polarization ratio and to simplify the feed system.

**Specifications**

Frequency Range:	470 to 860 MHz	
Input impedance:	50 ohm	
Polarization:	Elliptical, $\pm 45$ degrees	
Gain @650 MHz:	12 dBd	
VSWR:	1.10 Circular Polarization 1.15 Linear Polarization	
F/B ratio (dB):	15 dB	
Voltage Breakdown:	7 KV	
Maximum Average Power:	5.0 kW @650 MHz (2.5 kW each input)	
Connector type:	(2) 7/8-inch EIA flange, male	
Height:	45.28 in	1150 mm
Width:	17.72 in	450 mm
Depth:	8.27 in	210 mm
Weight:	40. lbm	18 kg
Inner Lines and Dipoles:	silver-plated brass/copper	
Radome :	fiberglass gray(standard), red, white, green on request	



Specifications are subject to change without prior notice.

