



# UNIVERSAL INTERFACE MODULE

## FEATURES

- Microprocessor Controlled
- RS-232 and RS-422/485 Outputs
- Universal Serial Bus (USB) Interface
- Accepts a variety of sensor inputs
- Wide Operating Temperature Range
- Low Power Consumption
- Optional Analog Outputs (4, 8, or 12 channels)
- Optional Spread Spectrum Transceiver Module

CLIMATRONICS' new Universal Interface Module (P/N 102489), with simultaneous analog, RS-232, and RS-422/485 outputs, provides an accurate and inexpensive way to connect your PC or data logger to several of Climatronics' (or other) meteorological sensors. When used with Climatronics' "WeatherView" software it provides a cost effective way to archive and display your meteorological data over a Local Area Network. The universal interface module features excellent input/output flexibility, low power consumption and a wide operating temperature range.

A 12-bit analog-to-digital converter, controlled by a microprocessor, converts the electrical signals of up to 11 single-ended sensor inputs. Eight of the 12-bit single-ended inputs can also be configured to provide four differential sensor inputs. There are also eight digital inputs, four of which can be configured as 8-bit, single-ended 0-5VDC analog inputs. The standard output is RS-232C serial, printable ASCII data with options of 4, 8 or 12 analog outputs configurable to 0-1, 0-5, 0-2.5 or 1-5 VDC. An auxiliary RS-232C serial port is also available on the UIM. An RS-422/485 converter is included and may be configured for operation on either of the two serial ports. On-board Zero/Span test control, processor reset, precipitation counter reset and provisions for adding a plug-in 900 MHz or 2.4 GHz spread spectrum radio are now also standard features of the UIM. The microprocessor scans all inputs and refreshes all outputs at the rate of once per second. The serial output data format is: no parity; 8 data bits; 1 stop bit, at a standard output rate of 19.2K baud. All inputs are protected against surges.

The UIM may be programmed to calculate either 1, 5, 15, or 60 minute averages. When in the 15 minute average mode, a standard deviation of wind direction (Sigma Theta) calculation is available based on the EPA approved Yamartino method. The engineering units, range of measure and the digital data output rate are all fully configurable. Special input/output options are available. Please consult with a sales engineer at one of our offices for details.



## SPECIFICATIONS

### PERFORMANCE SPECIFICATIONS

Output accuracy: +/- 0.05% of input range  
Resolution: 12 bit A/D

### ELECTRICAL SPECIFICATIONS

Inputs & type: 11 single ended or 4 differential & 3 single ended analog, 0-5 Vdc, 12-bit  
4 single ended, 8-bit analog and 4 digital or 8 digital I/O  
Outputs & type: 1-RS-232C, 300-19200 BPS, ASCII, N,8,1 format  
(USB operates in parallel with Main RS232C port)  
1-Auxillary RS-232C, 300-19200 BPS, ASCII, N,8,1 format  
(RS-422/485 can be configured on the Main or Aux output port)  
4, 8 or 12 analog @ 0-1, 0-2.5, 0-5 or 1-5 Vdc (OPTIONAL)  
Power: 9.5 to 16 Vdc, 50 mA @ 12 Vdc

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range: -25° to 50°C (-13° to 122°F)\*  
Humidity: 0-100%, non condensing

### PHYSICAL SPECIFICATIONS

P/N 102489, PC BOARD:

Size: 114.3H x 304.0W mm (4.5"H x 11.875"W)  
Weight: 0.22 Kg (0.5 lbs)

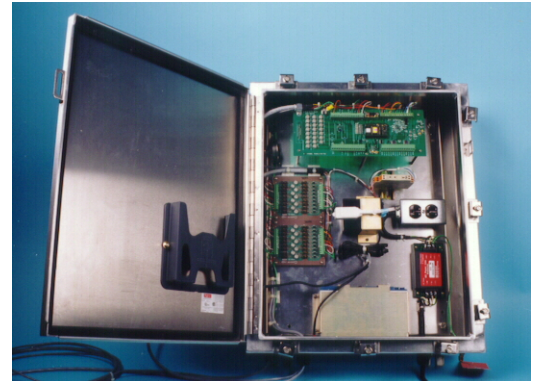
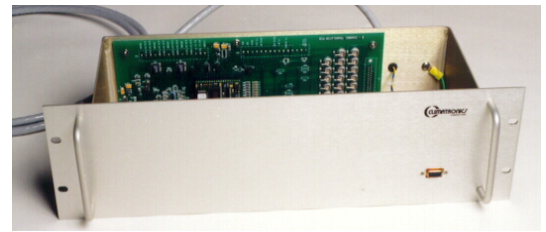
P/N 102665, RACK MOUNT VERSION:

Size: 133H x 483W x 102D, mm  
5.25"H x 19"W X 4"D)  
Weight: 2.7 Kg ( 6 lbs)  
Mounting: Standard 19" rack mount

### STANDARD MEASUREMENT RANGES\*

Wind Speed: 0-50 m/s, 0-50 mph, 0-100 mph or 0-100 kph  
Vertical Wind speed: +/- 6 m/s or +/- 10 mph  
Wind direction: 0-360° or 0-540°  
Air temperature: -25° to 50°C, 0° to 50°C, -25° to 125°F or 0° to 120°F  
Relative humidity: 0 - 100%  
Dew Point or Wet Bulb: Calculated based on air temperature and humidity values  
Solar radiation: 0 - 1400 Wm<sup>2</sup> or 0 - 2 Langley  
Barometric pressure: 800 - 1100 mb, 600 - 1100 mb or 28 - 32 In. Hg  
Precipitation: 0 - 10 mm, 0 - 1 inch or 0 -10 inch

\* Consult the factory regarding optional extended operating temperature range, sensor compatibility and special measurement range options. A nominal engineering/configuration charge may be required for your particular application



**Climatronics Corporation**  
140 Wilbur Place  
Bohemia, NY 11716-2404

TEL: 631-567-7300  
FAX: 631-567-7585  
E-Mail: sales @climatronics.com

Rev. 08 Sept 2005