

Specifications

Dimensions and Mechanical

- Dimensions (W x D x H): 4.14" x 5.00" x 3.46"
- Weight: 4.2 lbs.

Environmental

- Operating temperature: -40° to +85°C
- Storage temperature: -55° to +100°C
- Random vibration: 15 Grms, 20 to 2,000 Hz, 10 minutes
- Acceleration: 25g, indefinite duration, any axis
- Shock: 15g, half-sine, 11 mS, 6 shocks, any axis
- Humidity: 5 to 95% RH, non-condensing
- Altitude: 0 to +70,000 ft
- EMI/EMC: Per MIL-STD-461/462

Electrical

- Voltage: 22 to 36 VDC
- Power consumption: 31W (max)

Voice Input

- Type: Differential, AC-coupled
- Input impedance: 1 mega-ohm minimum
- Over-voltage range: ± 50 VDC maximum
- Input voltage ranges: Four software programmable settings: $5 V_{p-p}$, $10 V_{p-p}$, $20 V_{p-p}$, $40 V_{p-p}$
- Voice filter characteristics: Band-pass, -3 dB at 280 Hz and 3200 Hz

Ethernet

- Interface: 100/1000BASE-T
- Protocols: IP, TCP, UDP, SNMP
- Routing: Dynamic discovery, static routing
- Communication: Unicast, broadcast, multicast
- Time reference: IEEE 1588 slave

Serial Data Output

- Data rate: Programmable, up to 20.0 Mbps. Over 2,000 steps (Note: When directing the serial data to the iEUP-500 slice, the maximum rate is 8.0 Mbps)
- Word format: Fixed length of 16 bits per word
- Words per minor frame: Up to 512 words per minor frame
- Minor frames per major frame: From 1 to 256 minor frames per major frame

- Note: The total number of words in all defined formats (number of words per minor frame multiplied by the number of minor frames per major) must be less than or equal to 128K
- Serial output codes: Two user programmable codes of NRZ-L or RNRZ-L (Modulo 15)

Serial Data and Clock Output

- Type: Differential RS-422 buffers
- Output voltage/current: RS-422 compatible
- Protection: RS-422 compatible
- Total load per output: RS-422 compatible

iEUP-500 Engineering Unit Processor Slice

- Processor: ARM based embedded processor for data processing
- Ethernet: Interface 10/100BASE-T
- Protocols: IP, TCP
- Communication: multicast
- I/O: Provides interfaces for a VGA/SVGA/XGA/SXGA video monitor, console COM, Ethernet, PCM input and general purpose inputs and outputs
- Display resolutions:
 - + VGA – 4:3 640 x 480 (60 Hz, 70 Hz, 72 Hz)
 - + SVGA – 4:3 800 x 600 (60/72 Hz)
 - + XVGA – 4:3 1024 x 768 (60/70/75 Hz)
 - + SXVGA – 4:3 1280 x 1024 (50 Hz)
 - + HD-720P – 16:9 1280 x 720 (50 Hz)
- Display widgets: Configurable from a built-in library of graphical widget types. Up to 20 x 20 widget matrix per selectable page. Up to 20 different selectable pages
- Controllable functions: Page Change, Min/Max Hold with Reset, Alarm Type, Constant Count, Secondary Scale
- Data processing: Based on mathematical equations (arithmetic, bit manipulation, relational, ternary, associativity operations and functions).
 - + Math Functions: sin, cos, tan, asin, acos, atan, sinh, cosh, tanh, exp, log, log10, sqrt, pow, etc.
 - + EU functions: Bitweight, Polynomial, Max, Min, Average, Mean, Std Dev, Moving Average, Bucket Min/Max, Rolling sum, Concatenation, Bit-Masking, etc.
 - + Data Type Conversion: convert data type between binary, 1's complement, 2's complement, BCD, floating point (single & double), IRIG BCD time, IRIG Binary time.

General Purpose Inputs/Outputs

- Transceivers: 2 x RS-422 differential with 120 ohm termination Enable / Disable

General Purpose Outputs

- Driver: 3 x optically isolated outputs, type TLP172A (or equivalent) with 120 ohm termination Enable / Disable
- Reference: All outputs share a common reference (GPO_ISO_RTN)
- Output impedance: 6.0 ohms maximum (in the “ON” condition)
- Maximum current: Up to 40 mA continuous on each output
- Peak off-state voltage: 60 VDC maximum with respect to GPO_ISO_RTN
- Isolation: 1000 Mohms minimum with respect to Digital Ground
- Logic: The outputs provide a “switch” closure to GPO_ISO_RTN when activated

General Purpose Inputs

- Non-Isolated:
 - + Receiver: 2 x TTL compatible inputs, type NC7WZ14PX (or equivalent)
 - + Input characteristics: Each input is internally pulled up to +3.3 VDC through 10 Kohms
 - + Logic: Activated when connected to Ground
- Isolated:
 - + Receiver: 2 x photo-transistor inputs, type FOD121CR1 (or equivalent)
 - + Series resistor: 20K ohms
 - + Trip range: +17 VDC to +35 VDC
 - + Pulse width: 100 msec minimum
 - + Guaranteed no trip range: Open to +12 VDC

RS-232 Console Serial Port

- Interface: 3-pin interface - Rx, Tx and return
- Word length: 8-bit data
- Parity: No parity generation
- Baud rate: 115.2 Kbaud
- Flow control: None

User Input Controlled Features

- Graphical page change: GP Input controlled
- User constants: Web input controlled
- Min/Max hold: GP Input controlled (on selected widget types)
- Widget scaling: GP Input controlled
- Pre-flight/flight limit display: GP Input controlled

PCM Inputs

- Types: RS-422 Differential, Ethernet
- Data rate: RS-422 - minimum 1 Kbps; maximum 8 Mbps
Ethernet - minimum 1 Kbps; maximum 5 Mbps
- Signal characteristics: RS-422 - terminated by 120 Ohm. Buffered by RS-422 compatible receiver with open, shorted or terminated input failsafe. Normal or Inverted data. 0 or 180 degree clock. Ethernet - 10BASE-T or 100BASE-T

PCM Decommutator

- Input codes: NRZ-L or RNRZ-L. Note: RNRZ-L uses the IRIG-106 compliant Derandomizer (Modulo 15) in the Forward direction
- Bits per word: 8 to 16 bits (fixed word size). Note: Chapter 8, 24 bits per word support by programming to 12 bpw and concatenating 2 words in the Host
- Bits per minor frame: 8 words to 64K bits
- Minor frames per major frame: 1 to 256 frames
- Minor frame sync bits: 16 to 32 bits
- Minor frame sync mask: 16 to 32 bits
- Major frame sync modes: SFID - Subframe ID Count; Any word in the minor frame

Ordering Information

Contact [Curtiss-Wright](http://Curtiss-Wright.com) for ordering information.