The FlexCom104-GPS is a PC/104 communication board that can support two Multi-Tech® Universal Socket Modems while providing GPS capabilities and I/O through an isolated RS-232 serial port. This multi-function design provides a single board solution for location and communication needs.

As with all Tri-M products, the FlexCom104-GPS, is engineered for rugged environments. A soldered-on GPS receiver and RS-232 port isolation are some of the design elements that make this solution right for harsh environments where exposure to dust, airborne particles, shock, and vibration can take a toll on embedded systems.

For applications where you need location information, as well as wired and wireless communications, the FlexCom104-GPS is a product that will meet your needs.

**Block Diagram**

- **PC/104 Bus**
- **CPLD Logic**
- **Decoding**
- **Quad UART**
- **Multi-Tech Universal Socket 1**
- **Multi-Tech Universal Socket 2**
- **GPS FV-5H**
- **Isolated RS-232 Port**

**Key Specifications**

- 1 GPS Receiver
  - 50 channels
- 2 Universal Socket Ports
  - Wireless communication
- 1 Isolated RS-232 Port
  - 50V protection, 250Kbp/s
- Input Voltage
  - +5VDC
- Extended Temperature
  - -20°C to +60°C (-4°F to +140°F)

**Advantages**

- Integrated Functionality
  - Single board with multiple services
- Soldered-on GPS
  - Ruggedized solution
- Dual Socket Modem Ports
  - Variety of communication options
- Isolated RS-232 Port
  - Protection from transients, spikes and surges
- Configuration
  - GPS module speed 9600 N81 baud

**Our Capabilities**

- Application Engineering
- Rapid Development
- Engineered Systems
- Custom Software
- Industry Standards & Certification
- Exceptional Customer Experience

Tri-M specialises in embedded computing for rugged environments. For over 28 years, we have supplied industry proven solutions for the Aerospace, Defence, Transportation, Undersea, Industrial and Mining industries. To learn more about our products and services, please visit us at [www.tri-m.com](http://www.tri-m.com).
# FlexCom104-GPS Communication Solution

GPS Receiver, Socket Modems & Serial Port

## Specifications

### Module
- **RS-232 Serial Port**: 1
- **RS-232**: RX, TX, CTS, RTS, COM
- **Power**: +5V supplied over PC/104 bus
- **Supplied Oscillator Frequency**: 14.7456MHz

### UART Specifications
- **Model**: STC16C554DIQ64
- **FIFOs**: 16 bytes
- **Ports**: 4

### Communication Modules
- **Universal Sockets**: 2
- **Manufacturer**: Multi-Tech Systems, Inc.
- **Voltage**: 5V
- **Types**: GSM/GPRS, CDMA, EDGE, CELL, Wi-Fi (802.11b), Bluetooth®

### GPS
- **Receiver Module**: FV-5H
- **Channels**: 50 channels
- **Connector**: SMA Female

### Configuration
- **GPS Module Speed**: 9600 N81 baud
- **Configurable in the operating system**: GPS 1 Pulse-Per-Second LED

### Mechanical / Environmental
- **Dimensions**: PC/104 form factor compliant¹
  - 90 × 96 × 15mm (3.55 × 3.75 × 0.60")
- **Weight**: 43.5g / 1.53oz
- **Operating Temperature**: -20°C to +60°C (-4°F to +140°F)
- **Relative Humidity**: 5% to 95% (non-condensing)

### Certifications

### Note
1) The height is measured without the Universal Socket module installed. Some Universal Socket modules may be large enough to violate the PC/104 form factor.
2) Limited by the rechargeable backup battery for GPS.
3) The operating temperature for the Multi-Tech modules may vary.

## Ordering Information

### Models
- **FlexCom104-GPS-PBF**: Flexible communications platform with 50-channel GPS receiver

### Options
- **Conformal Coating**

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**Tri-M Technologies**

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