

PI MODULE

GPS Positioning, Telemetry and Telecommand through IRIDIUM



- The PI module enables communication with an Iridium Mobile Phone or any Public Switch Telecom Network.dial-up line at 2400 bauds Full Duplex.
- It integrates management of the functioning modes, a GPS for the positioning and an Iridium mobile phone for the communication.
- Iridium Satellites have inclined orbits which give 100% coverage of the earth.
- ELTA's communications software running on Windows NT/XP/2000 enables the call of the module, the display and the storage of the GPS positioning parameters. Communications Windows can be set up for data transfers. When passing in DATA mode, the PI module handles the direct connection with the Iridium mobile phone by means of a serial link at 2400 bauds.

Key features

Low Weight – Low Size

Low Consumption

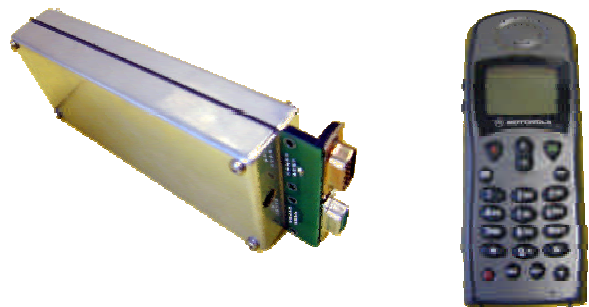
Fully Automatic

Flight Proven

Worldwide Coverage

No Need for Ground Station

Extended Operating Temperature



GPS and Management Boards – Iridium Mobile Phone



Characteristics of the system	
Operational Telemetry	Date and UT Time, GPS Mode, Position, Cap, Vector speed, Equipment Temperature, 5 listening windows, Digital Input Status
Operational Telecommand	Communication Stop, Listening windows Programming, Passage in DATA mode, Action on output relay
Data Mode	<p>1 Serial asynchronous Data Channel RS232 at 2400 bauds full duplex.</p>
GPS	12 parallel channels, 1575.42 MHz, Max. Speed 515 m/s Dating WGS84
Iridium Phone	Frequency : 1616 - 1626,5 MHz, L band, Link Margin : 15,5 dB (average), Fax/Data/Mail Transmission, Multiplexing Method : TDMA/FDMA

Electrical characteristics							
Voltage	7.5 - 14 VCC						
Consumed Power @ 9 V : except listening window, mode power down	2.5 mW						
Consumed Power @ 9 V : during a listening window	<table border="0"> <tr> <td>Iridium Sleep Mode, GPS on (auto-test)</td> <td>2.34W max</td> </tr> <tr> <td>Iridium Sleep Mode, GPS off</td> <td>1.35W max</td> </tr> <tr> <td>When connected</td> <td>7.5W Aver.</td> </tr> </table>	Iridium Sleep Mode, GPS on (auto-test)	2.34W max	Iridium Sleep Mode, GPS off	1.35W max	When connected	7.5W Aver.
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When connected	7.5W Aver.						

Physical characteristics							
Size	213 x 115 x 90 mm without connectors						
Weight	1.760Kg						
Operating temperature	-40°C / +60°C						
Interfaces	<table border="0"> <tr> <td>Out</td> <td>1 Digital Relay 5A</td> </tr> <tr> <td>In</td> <td>1 optocoupler</td> </tr> <tr> <td>serial</td> <td>8,n,1 - 2400 Baud</td> </tr> </table>	Out	1 Digital Relay 5A	In	1 optocoupler	serial	8,n,1 - 2400 Baud
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 ELTA reserves the right at any time without notice to change specifications

Electronics for Harsh Environments