

Ultima

**GSM module
with
telemetry
and serial I/O**

**Flexible I/O
options**

**Digital I/O and
Analogue In**

RS232 TXD/RXD

**Programmable via
SMS/GPRS**

**Sleep mode for
long battery life**

**Regular status
reports and/or
alert transmission**

**Rugged IP67
Enclosure**

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The Wood & Douglas Ultima unit is a flexible module for use in a wide variety of applications requiring monitoring and control where no local communications infrastructure is available. The quad-band GSM/GPRS module is used to communicate with the unit wherever network coverage is available.

The flexible I/O and over-air status monitoring and control make it suitable for these typical applications :

- A battery-powered alarm system for buildings, caravans and boats and other remote locations.
- Remote monitoring of water infrastructure for flood detection and overflow alarms.

- Remote water and electricity metering.
- Remote control of irrigation and other remote agricultural or industrial systems

The GPRS option allows setup and monitoring of the system via a web page.

Simple SMS messages can be used to request the status of the system and to control the outputs.

Incoming text messages from the network are forwarded allowing network information such as low credit to be notified.

Connection to unit via single 7-way rugged Cannon connector (a mating connector with flying leads is supplied with the unit).

Inputs may be digital closure, pulse counting or analogue (5 or

10V DC with an accuracy of 1%). Digital outputs can switch up to 20W.

Alarms may be set on digital and analogue (minimum and maximum) and pulse counting with configurable messages. Low battery can be reported, and where a mains supply is used, it can also be monitored.

Up to 10 numbers can be stored for alert SMS messages to ensure that urgent information gets through.

A Sleep mode extends battery life of an unattended unit up to 12 months (with attached battery pack), yet allows waking for regular automatic transmissions or in response to inputs.

A serial port allows connection to the Orion modem for wireless data collection from remote sites.

making
waves

WOOD & DOUGLAS

Ultima Specification

| In/Out | |
|-----------------|--|
| Digital Inputs | Closure to 0V with internal pull-up |
| Digital Outputs | Open Collector with maximum switching current of 1A and maximum voltage of 20V DC |
| Analogue Inputs | Switchable 5 or 10V DC input range 10 bit ADC with better than 1% accuracy 20mA current loop option |
| RS232 port | 1200 to 38,400 baud, 8 bit, 1 start and 1 stop bit, bidirectional. Allows connection to Orion modem for wireless connection to remote I/O. |
| Pulse Count | 1 Digital Input can be programmed as a Pulse Count Input with configurable messages on value of Count input. |
| Expansion | Optional system expansion using an external I/O module |

| Supply | |
|---------------------|--|
| Power requirements | External 12 VDC nominal input (6 – 15 VDC capable) at 0.5A peak External mains supply or battery pack options |
| Battery Life | >12 month battery life for an external 2Ah battery with 1 alarm or status message transmitted every 5 days |
| Power Failure alert | 1 Digital Input can be programmed as a Mains Failure Input Low battery level can be reported |

| Functions | |
|--------------------------|---|
| Status messages | Status messages can be programmed to be transmitted at set times Option to display system status on a Web Page or obtained via SMS |
| Alarm messages | Sent for the following status changes: Digital Input change of state Analogue Input level > Maximum Alarm level or < Minimum Alarm Level Low Battery level Mains Supply (when configured) |
| Alert messages | Up to 10 numbers can be stored for alert messages. Option to ring all or camp on defined route. |
| RS232 data | Sent on input |
| Telemetry output control | Controlled by SMS or through Web Page |
| Power Control | Automatic control of module transmit power |
| Sleep Mode | Real Time Clock system allowing sleep modes if running from battery Programmable wake-up times for transmitting status messages Wake-up on digital input to send alert message |

| Configuration Options | | | |
|-------------------------|--|--------------------------------------|--|
| Programming | Totally programmable via SMS or GPRS interface. Serial Port option when used with Orion. | | |
| I/O capability | Five I/O pins can be configured for these options: | | |
| Option 1 | 3 Digital inputs | 2 Digital outputs | |
| Option 2 | 2 Analogue inputs 2 Digital inputs | 1 Digital outputs | |
| Option 3 | 4 Digital inputs | 1 Digital output | |
| Option 4 | 2 Digital inputs RXD RS232 Input | 1 Digital output TXD RS232 output | |
| Low Battery alarm level | Definable for different battery voltages and types | | |

| Physical | |
|-----------------------|--|
| Antenna | Supplied |
| Connections | All connections (except antenna) via a single rugged 7-way Cannon connector (mating connector supplied with flying leads). |
| Environmental Rating | Enclosure and connector rated to IP67 |
| Operating Temperature | -20°C to + 55°C |
| Approvals | Module conforms to EMC, LVD and R&TTE EU Directives |
| Dimensions | 140mm x 65mm x 50mm excluding antenna and connectors |
| Weight | Approximately 330g |

Wood & Douglas maintain a policy of continuous improvement and enhancement. As a consequence, the above specification may change without notice.



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