

# WL-2 GSM Pod

*WatchLink GSM new WL-2 Pod adds powerful GSM monitoring and control technology to your product or assets in less space, for less integration time, and at less cost*

Solutions for  
GSM based  
Telemetry

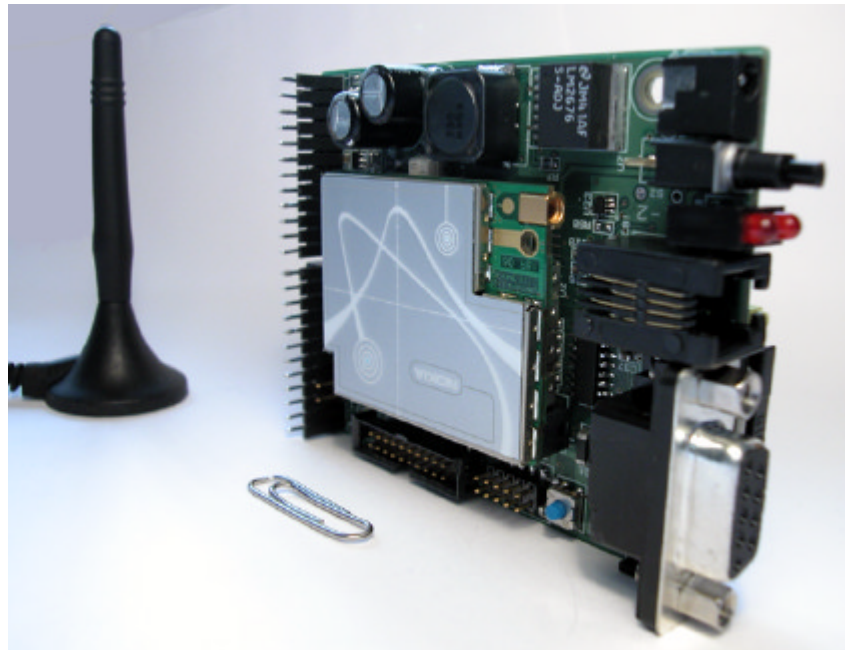
Using the recently launched Java based Nokia 12 GSM engine, the WL-2 GSM Pod incorporates all the parts that are necessary to enable you to have a meaningful conversation with your machines and appliances from a remote distance. With the WL-2 Pod, you are faster to market with less risk and expense.

The WL-2 GSM Pod is designed for quick and easy integration into your products and assets such as security panels, control appliances and plant equipment to allow remote monitoring and control capability over the GSM network. The WL-2 Pod will especially appeal to System Integrators and Original Equipment Manufacturers who want to add wireless connectivity to their systems and products.

## Technical Features

The WL-2 GSM Pod is a highly integrated unit that includes the Nokia 12 GSM engine and all the supporting circuitry such as switched mode power supply, SIM card connector, serial interfaces, industrial strength I/O and interface connectors for external boards such as GPS, audio and connection to AT command based devices. All these features are packed into a small form factor, approximately 65 x 85mm. The Pod is designed for ease of mounting to suit many applications ranging from DIN rail enclosures to flat panel mounting and board to board connection.

The Pod can be programmed easily over a standard serial cable using the Configurator software (available free from Nokia). With this Windows based program, you can set the WL-2 to various operating modes such as AT command and User Control modes. You can also set up the Pod for other M2M applications such as the Nokia M2M platform or even direct data communications to your own Company servers and the Internet. By using the User Control mode in the Configurator software, you can be up



and running very fast with standard I/O applications for remote sensing and control over the GSM network. You can easily program the Pod with the alarm and control messages that need to be sent and received using SMS text messages and your mobile phone. A prepaid SIM card is sufficient for most applications.

## Machine to Machine Applications

The WL-2 GSM Pod integrates the Nokia 12 GSM engine which delivers excellent M2M capability in a small package size. Nokia 12 GSM engine introduces a set of technological advances which give you more scope for developing applications and controlling your remote assets. These include Java with remote IMlet downloading, multiple I/O capability as well as interface for connecting a GPS receiver for locating applications.

Java enables effective application

development with lower costs and faster time to market. The Java Virtual Machine allows the application to be executed on the WL-2 GSM Pod, minimising the need for extra hardware in the remote device. Remote IMlet downloading enables dynamic updating and downloading of the applications.

The wide choice of wireless bearers supported by the WL-2 GSM Pod allows the choice of the most appropriate one for the application. The bearers include EDGE, GPRS, HSCSD, CSD and SMS. EDGE can provide increased data throughput for use in compressed video applications and MMS.

With the WL-2 GSM Pod your application will be ready for evolving needs in the fast growing markets of M2M.

## KEY FEATURES

- Small highly integrated GSM Pod (65x85mm)
- Ready-to-Go for simple SMS controlled I/O applications
- Java with remote IMlet downloading for fast, easy application development
- Direct interfacing to industrial equipment using robust I/O interfaces
- External interfaces for GPS, Serial, Audio and AT controlled devices
- Uses Nokia 12 GSM engine which supports GSM/GPRS communications
- Easy setup of I/O and M2M parameters with GUI Configurator software

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## TECHNICAL SPECIFICATIONS

### MAIN FEATURES

#### GSM ENGINE

- Dual band EGSM900/GSM1800 MHz
- Dual band GSM850/GSM1900 MHz
- EDGE/GPRS/HSCSD/CSD/SMS Wireless bearers
- Integrated Java and Remote IMlet downloading
- Integrated TCP/IP stack, 1Mb java application memory
- GSM security features such as password and AutoPin
- Location service (NMEA-0183 support for external GPS)

#### PERIPHERALS

- 8 digital inputs and 4 digital outputs
- Dual buffered analogue inputs
- Dual RS232/TTL Serial ports
- Expansion connector for GPS devices and AT control
- Analogue audio interface
- Status Indications and Test function
- SIM Card Connector

## SOFTWARE INTERFACES & DEVELOPMENT

**Java APIs :** Serial, ORB, I/O, HTTP, Socket, RMS, Wireless Messaging

- Configurator Software (Windows)
- IMP 1.0 Concept Simulator
- AT Commands and IDL
- Nokia M2M Platform SDK
- Java tools

#### SOFTWARE OPERATING MODES :

- M2M System Mode
- User Control Mode
- AT Command Mode

## ELECTRICAL CHARACTERISTICS

<i>Input Power Consumption</i>	9-18V DC Input supply, 12V Nominal Standby average 30mA, GPRS max RMS 630mA, Peak 2A
<i>Expansion</i>	3.3V/5.0V TTL, ESD protected
<i>RF Power</i>	2W(max) in 900MHz, 1W in 1800MHz

## PHYSICAL CHARACTERISTICS

<i>Size</i>	65 x 85mm and 18mm height
<i>Weight</i>	90g

#### Mechanical mounting options :

- 4 x 3mm diameter mounting holes
- DIN Type4 enclosure
- Flat base plate
- Board to board connection
- Cable to equipment connection

## ENVIRONMENTAL SPECIFICATIONS

<i>Recommended Operating Temp</i>	0 ... +55 deg C
<i>Storage Temperature</i>	-10 ... +70 deg C
<i>Relative Humidity range</i>	5 ... 95% noncondensing
<i>Approvals</i>	CE

## INTERFACE CHARACTERISTICS

<i>Digital In</i>	8 x opto-isolated inputs for volt free contact or voltage threshold > 4.8V ... 18V
<i>Digital Out</i>	2 x high side mosfet drivers @ 20V/100mA 2 x low side mosfet drivers @ 40V/100mA
<i>Analogue In</i>	2 x buffered and protected inputs (10bit resolution) 0 – 5V, 0 – 10V, 4 – 20mA options 1 x Thermistor or external resistive sensor input
<i>Serial</i>	1 x 9pin D type serial RS232 socket (used for programming) 1 x RJ type 4 pin serial RS232/RS485 socket (java serial port) 2 x TTL(3.3V or 5V) serial ports available on Expansion connector
<i>Audio</i>	1 x Analogue Audio connector for microphone input and earpiece output
<i>External Power</i>	1.3mm DC socket (also via I/O Interface and Expansion connectors)
<i>SIM Card</i>	Drawer style SIM card connector with card presence detector
<i>Test function</i>	Side operated push switch to activate one input
<i>Status</i>	1 x side mounted red LED activated from one output 12 x miniature board mounted LEDS for I/O status
<i>Antenna</i>	MMCX connector on Pod
<i>Expansion</i>	20 way IDC cable header or board to board connector

## ORDERING INFORMATION & ACCESSORIES

#### Basic Pod

8 inputs, 4 outputs, 1 Serial RS232 9pin D, Analogue audio, Serial Port 3 TTL, test switch, status LED, base plate or DIN enclosure

[Order Code: WL-2S]

#### Other Options

Analogue Inputs, extra serial port (RS232/RS485), Expansion AT connector, I/O status LEDS

#### Accessories

MMCX to FME/M adaptor, external antennae, base plate, DIN enclosure, 12V Power Supply, interface cables.

\* Please visit our website [www.watchlinkgsm.com](http://www.watchlinkgsm.com) for more information on products, accessories & applications

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