# Mobile Broadband USB Modem

**MD300 HSDPA/UMTS/EDGE**

# User Guide

**Sony Ericsson**

# Contents

**Sony Ericsson MD300 Mobile Broadband USB Modem**

First edition (January 2008)

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# Regulatory information

## Declaration of conformity

We, **Sony Ericsson Mobile Communications AB** of

Nya Vattentornet

S-221 88 Lund, Sweden

declare under our sole responsibility that our product

**Sony Ericsson type FAD-3232021-BV**

and in combination with our accessories, to which this declaration relates is in conformity with the appropriate standards 3GPP TS 51.010-1, EN 301908-1, EN 301908-2, EN 301489-7, EN 301489-24 and EN 60950, following the provisions of Radio Equipment and Telecommunication Terminal Equipment directive 99/5/EC with requirements covering EMC directive 89/336/EEC, and Low Voltage directive 73/23/EEC.

$C\epsilon$ 0682

Research Triangle Park, North Carolina. March 2008

*Place and date of issue*

Najmi Jarwala

President - US & Canada

Sony Ericsson Mobile Communications (USA) Inc.

We fulfil the requirements of the R&TTE Directive (99/5/EC).

## FCC statement

FC

**FCC ID:** PY7F3232021

**IC:** 4170B-F3232021

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

**WARNING**: Changes or modifications made to this equipment not expressly approved by Sony Ericsson Mobile Communications AB may void the FCC authorization to operate this equipment.

**CAUTION**: The Sony Ericsson USB device has been tested for compliance with FCC/IC RF exposure limits in the laptop computer(s) configurations with a USB port and can be used in laptop computers with substantially similar physical dimensions, construction, and electrical and RF characteristics.

Note: If this Sony Ericsson USB device is intended for use in any other portable device, you are responsible for separate approval to satisfy the SAR requirements of Part 2.1093 of FCC rules.

## Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

# About this guide

Congratulations and thank you for purchasing a Sony Ericsson MD300 Mobile Broadband USB Modem.

This guide includes an overview of the supported features, detailed technical specifications, system requirements, and safety guidelines for your MD300.

**Note:**
Be sure to read all safety guidelines in this document before using your MD300.

## How this guide is organised

*Chapter 1: Overview* on page 1, contains an overview of your MD300 and the features that it supports. It also provides a list of the requirements and tools needed to use your new MD300.

*Chapter 2: Additional information* on page 11, provides safety guidelines, warranty information, and regulations that are relevant to your MD300.

*Chapter 3: Technical specifications* on page 16, provides detailed technical specifications for your MD300.

## Additional resources

### Sony Ericsson support Website

Additional resources can be found on the Internet at the Sony Ericsson support Website You can use the Sony Ericsson Website to find the most up-to-date product information and support wherever you are. It gives you access to online customer services, user manuals, the latest software downloads, and other useful information. For more information, go to:

**www.sonyericsson.com/support**

### Publications

Sony Ericsson provides the following documents to help you use your MD300:

- A printed *Quick Start Guide* aimed at getting you operational as quickly as possible.

- A PDF *MD300 User Guide* (this document) that contains a detailed description of your MD300 and the features that it supports. This document is copied to your hard drive when Wireless Manager is installed and can be accessed by selecting **Start** ➡ **All Programs** ➡ **Sony Ericsson** ➡ **Wireless Manager 5** ➡ **MD300 User Guide**

- *Online Help* built into Wireless Manager which describes in detail how to use each feature and how to install and uninstall the software. Select Help or press F1 to access online help.

- A PDF *Wireless Manager User Guide* which contains the same detailed information as the online help in a conventional printable format. This document is available from the support website only.

**Note:**
PDF documents are in Adobe® Portable Document Format. If your PC cannot open these documents, download and install the Adobe® Reader® from www.adobe.com.

**Note:**
Your mobile operator may provide alternative application software and documentation.

# Overview

## Checklist

The following items should be in the box when you unpack it:

- Sony Ericsson MD300 Mobile Broadband USB Modem

- USB extension cable

- Quick Start Guide (QSG)

- Mounting clip

## MD300 Communications Summary

Your MD300 keeps you in touch, enabling you to use the best available mobile service wherever you are. It supports tri-band UMTS and quad-band GSM:

| **GSM**<br>GPRS<br>EDGE | 850MHz<br>900MHz<br>1800MHz<br>1900MHZ | **UMTS**<br>HSDPA | 850MHz<br>1900MHz<br>2100MHz |
|---|---|---|---|

Your MD300 supports SMS text messaging and the following communications services:

| Service | Maximum Download Speed | Maximum Upload Speed |
|---|---|---|
| **HSDPA** | 3.6Mbps | 384kbps |
| **UMTS** | 384kbps | 384kbps |
| **EDGE** | 247.4kbps | 123.7kbps |
| **GPRS** | 53.6kbps (CS-2)<br>85.6kbps (CS-4) | 26.8kbps (CS-2)<br>42.8kbps (CS-4) |

Where UMTS service with HSDPA is available, your MD300 can connect at speeds up to 3.6Mbps. Your MD300 provides automatic fallback to UMTS where HSDPA is not available and to EDGE or GPRS service where UMTS is not available (network support required). This section describes the services that the MD300 supports:

- **High Speed Downlink Packet Access (HSDPA)**

  HSDPA is an enhancement to UMTS networks which enables the downlink speed to be dramatically increased; up to 3.6Mbps using the MD300. File downloads will be faster, whilst applications such as video streaming may operate at higher quality and greater reliability. The maximum speed available depends on the configuration of the mobile network and local conditions such as distance to the base station.

- **Universal Mobile Telecommunications System (UMTS)**

  UMTS is a 3G technology standard for wide-area wireless data communication that is based on the GSM standard. The UMTS standard uses advanced network operator mobile Internet

services to achieve data transfer rates up to 384 kbps, which are ideal for media streaming, video MMS, internet shopping, and banking.

- **Enhanced Data Rates for Global Evolution (EDGE)**

  EDGE enhances GPRS by increasing data throughput over GPRS by as much as three times, depending upon the network radio signal strength and quality. GPRS networks that are enhanced with EDGE are often referred to as Enhanced GPRS (E-GPRS) networks. EDGE provides the "always on" capability of GPRS but at faster speeds. EDGE technology is transparent — simply make a GPRS connection as usual and benefit from the increase in speed where EDGE is available in a network. When EDGE is available you can expect increased speeds of up to 200 kbps, dependent on network coverage.

- **General Packet Radio Service (GPRS)**

  GPRS is a type of network connection that provides "always on" mobility. The connection set up is fast. After you are connected, applications can send and receive data whenever required. In today's GPRS networks, the MD300 receives data at speeds up to 53.6 kbps and transmits at speeds up to 26.8 kbps.

- **Short Message Service (SMS)**

  You can send and receive SMS text messages using the Text Messages window in Wireless Manager or other application software.

## MD300 Flash Drive

The MD300 may be used as a flash memory drive. Once the MD300 is installed and functioning as a modem, you may use the memory space on the drive to store and transport your own files and media.

## Hardware overview

Your Sony Ericsson MD300 uses the 5 volt power supply provided by the USB port. USB devices which draw more than 100mA from the port are known as *High Power* USB devices; the MD300 is a High Power device.
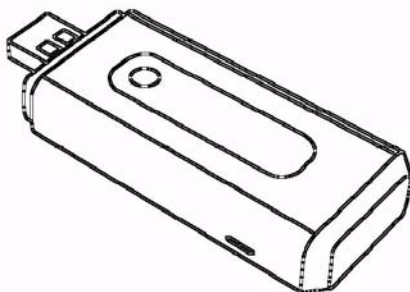


The amount of power that your MD300 draws from the PC (laptop battery when mobile) depends on several factors, including status, frequency band, and distance to the base station that is used.

The MD300 can be turned off under software control from the Wireless Manager application or the signal strength icon in the status tray. It is recommended that the user remove the modem from the laptop when flying to prevent any accidental transmission.

## Status LEDs

The MD300 contains multi-colored LEDs that indicate the status of the device.

| LED color | Flash rate | Description |
|-----------|-----------|-------------|
| Red | Fast | Searching for a mobile network |
| Green | Medium | Registered to GPRS or EDGE service, not connected |
| Green | Slow | Connected - GPRS or EDGE service |
| Blue | Medium | Registered to UMTS or HSDPA service, not connected |
| Blue | Slow | Connected - UMTS or HSDPA service |

The LEDs illuminate around the Sony Ericsson logo, as shown below.
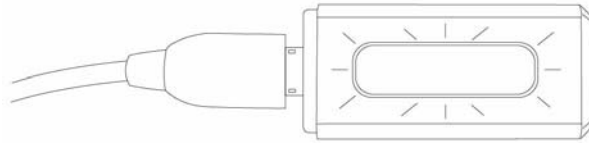
## SIM Card
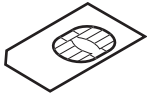
When you subscribe to a mobile network, you are issued a Subscriber Identity Module (SIM) card. Your SIM card contains your personal subscriber data. To connect to a mobile network you must first insert your SIM card that includes the appropriate network subscription into your MD300.

### To insert the SIM card

The SIM card slot is spring loaded and the SIM card will click into place when properly inserted. Insert the SIM card into the slot next to the USB connector of the MD300. Make sure the gold contacts on the SIM card are facing towards the USB connector and the angled corner of the SIM card is placed into the MD300 as shown. Push the SIM card into the MD300 until it clicks.
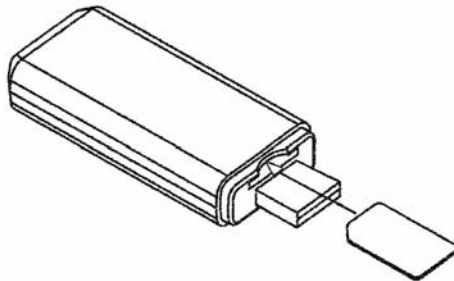
**Note:**
The SIM card will not click in place if it is inserted incorrectly.

### To remove the SIM card

Push on the SIM card until it clicks and release.

**Note:**
Using a pen or jewelers screwdriver may help to push on the SIM card.

The internal spring will push the SIM card out far enough for you to grasp the SIM card and pull the it out of the MD300.

## Network and subscription requirements

The network subscription you use in conjunction with your MD300 depends on the functions and features that are available from your network operator. Contact your network operator or service provider to make sure the options that you require are available (UMTS/HSPDA, GPRS/EDGE and SMS).

**Note:**
Network operators often provide a number of connectivity options such as WAP and Internet. These are accessed via different APNs (Access Point Names). Verify the services that you require, such as Internet, e-mail or corporate VPN (Virtual Private Network) service are available through your mobile operator and enabled on your subscription.

## Configurations

This section contains information on the different configurations that can be utilized with your MD300. These configurations include:

- Direct connection

- Extension cable (provided)

- Accessory desk stand CDS-300

- Self powered hub (not provided)

**Note:**
Your MD300 must be plugged into a USB port that is capable of supporting high power USB devices. The MD300 is a USB 2.0 product, however it should work in the majority of USB 1.1 ports. Refer to *USB 1.1 and 2.0* on page 8 for more information.

### Power Considerations

In almost all cases, the MD300 works correctly when connected to one USB port, either directly or using the supplied extension cable or optional accessory desk stand CDS-300. If you experience the problems listed below, your PC or USB hub may be failing to provide sufficient power to the MD300. In this case, use the supplied extension cable or optional accessory desk stand and ensure that both USB plugs are connected to the same PC or hub.

- The MD300 fails to start

- The MD300 is shown as Disabled in Device Manager

- Windows presents a message to say that the device is not operating

- The MD300 malfunctions when a connection is made

- Data transfers frequently stall

### Direct connection

The MD300 can be plugged directly into a USB port as shown below. This configuration offers the best portability.
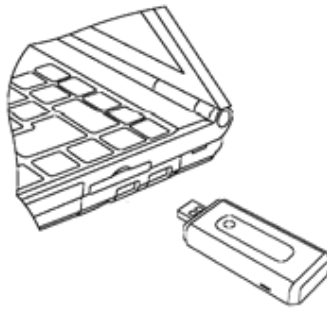


**Note:**

To avoid damage to the MD300 or your laptop's USB port, remove the MD300 before placing your laptop into a carrying case.

**Caution!**

Different laptops have different USB port configurations that may conflict with operation. Use the included extension cable if:

- The USB ports are close together and the modem covers an adjacent port that is needed.
- The modem can not be plugged in directly, e.g., the USB port is recessed and the USB connector on the modem can not reach.
- The USB port is in a position where physical pressure is put on the connector as shown below.
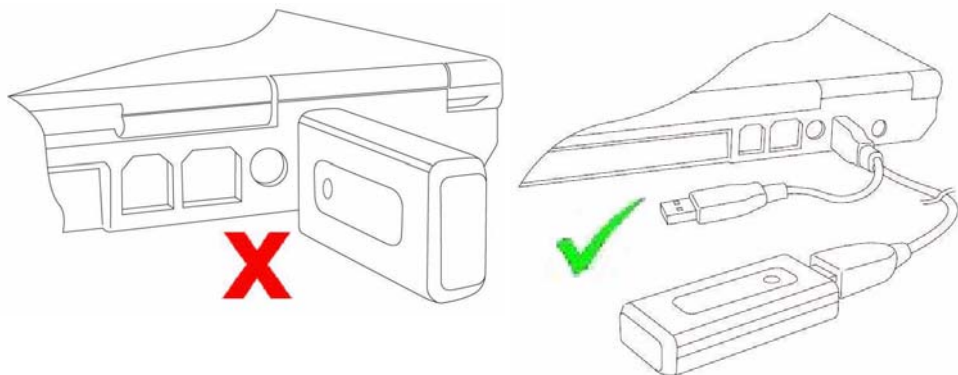


### Extension Cable

The extension cable provided is specially designed to work with your MD300. This is a high quality USB cable that is capable of delivering high current to the MD300 when necessary.

**Note:**

Do not use standard USB cables between your MD300 and a USB port.

The extension cable has two USB plugs. Plug A carries both data and power and plug B carries power only.

### Using one plug

When using the one plug configuration, plug A must be used.
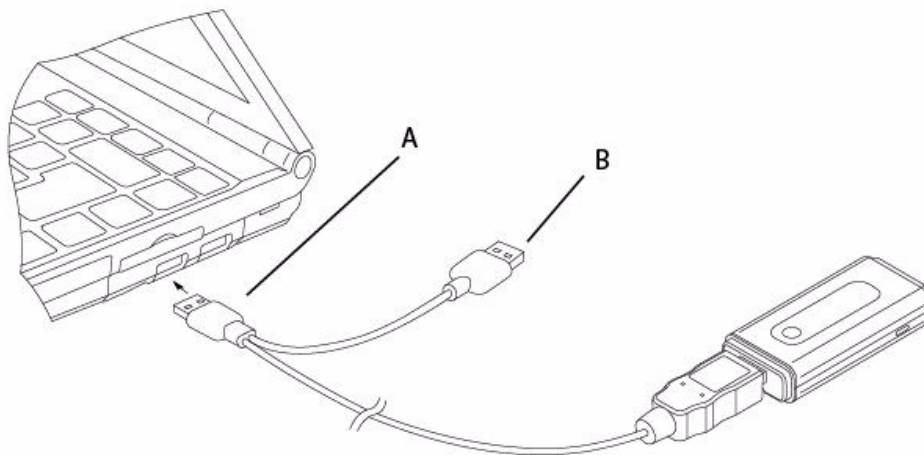
### Using two plugs

The extension cable provided with the MD300 has two USB plugs. When both plugs are used, current can be drawn from two USB ports. For more information on power considerations, refer to *Power Considerations* on page 4.

This configuration provides maximum power for all environments.
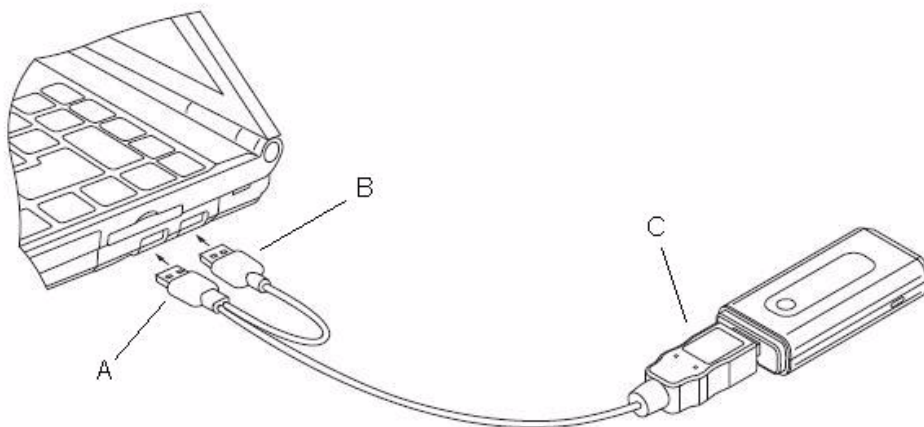
### Important!

Both USB plugs must be inserted into the same PC or hub. Do not insert the two USB plugs into two separate devices.

### Note:

If the Windows USB Device Not Configured error message displays, fully disconnect your MD300 and then reconnect it.

**Mounting Clip**

The MD300 comes with a mounting clip that can be installed on the MD300, as shown below.
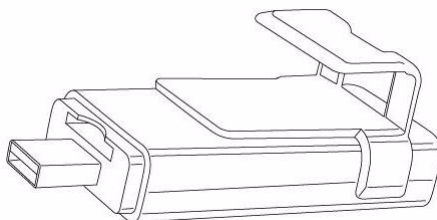


With the extension cable and mounting clip installed, MD300 can then be hooked on the laptop screen.

**Desk Stand**

An accessory desk stand (CDS-300) is available for use with your MD300. The desk stand is ideal for use with a desktop PC, making it easy to unplug and take the MD300 away for use with a laptop. The desk stand also allows you to reposition the MD300 around your work area and it orients the MD300 into the optimal position for reception. The desk stand has a high quality cable with two USB plugs (A and B). One or both USB plugs can be used, refer to *Extension Cable* on page 5 for more information.

> **Important!**
> Both USB plugs must be inserted into the same PC or hub. Do not insert the two USB plugs into two separate devices.

The cap of the MD300 can be clipped to the desk stand for safe storage.
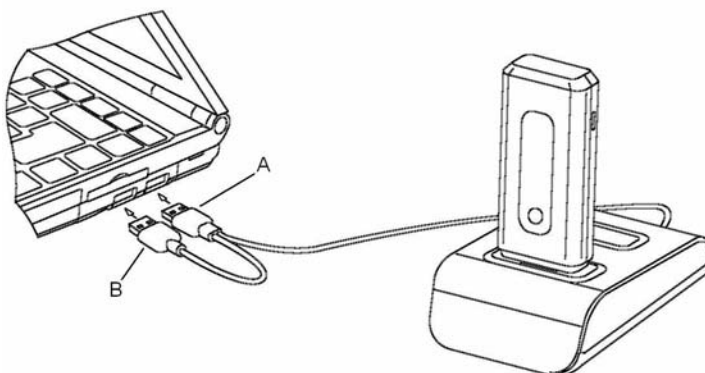


**Powered Hub**

A self powered hub (not provided) may be used in conjunction with the extension cable or desk stand and your MD300. In some cases, especially when used with desktop PCs, it may be necessary to plug the MD300 into a USB hub rather than directly into the PC. This is possible, provided that the hub is self powered via its own AC adaptor. One or both USB plugs can be used, refer to *Extension Cable* on page 5 for more information.

> **Note:**
> It is not advisable to use a bus-powered hub with your MD300. These are hubs that have no power supply of their own. Many portable hubs for laptops are of this type.

The MD300 is plugged in using the supplied extension cable or directly in to a socket on the hub. The hub configuration allows extended cable length so you can locate the MD300 for optimal reception.
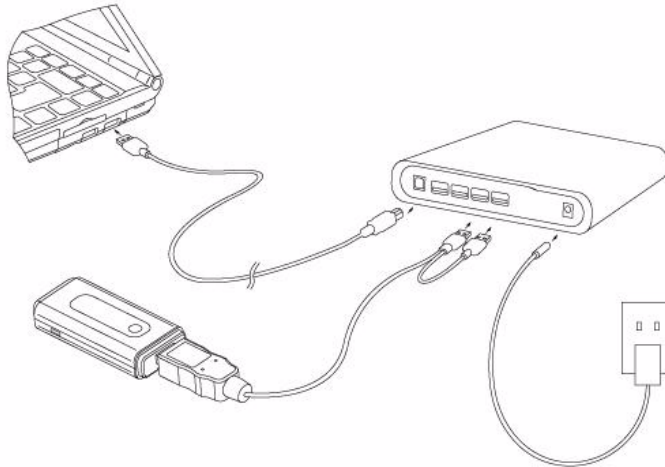
**Note:**
Some powered hubs may not provide adequate power. Your hub must be capable of supporting high power USB devices and must not be overloaded by the connection of too many such devices. Other high power devices include USB-powered disk drives, scanners and rechargeable music players. If you are experiencing problems, unplug these other devices to test if your hub is overloaded.

## USB 1.1 and 2.0

Your MD300 is a USB 2.0 product, however it should work in the majority of USB 1.1 ports. In both cases, communication with the MD300 is USB High Speed, up to 12Mbps, which is more than sufficient to handle the 3.6Mbps HSDPA throughput.

As a guide, USB 1.1 ports are likely to be found in these cases:

• All PCs manufactured before 2002

• All PCs originally sold with Windows 2000 installed

• Current PCs where the USB port is provided only for use with keyboard and mouse.

USB 2.0 ports can be identified in the Device Manager. Select **Start ➡ Control Panel ➡ System**, **Hardware** Tab, **Device Manager**.

The presence of an *Enhanced* Host Controller indicates USB 2.0 support:
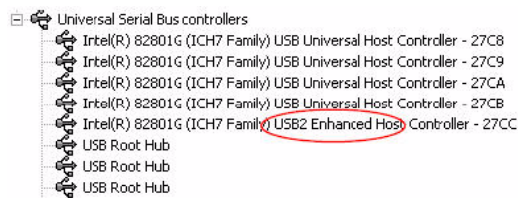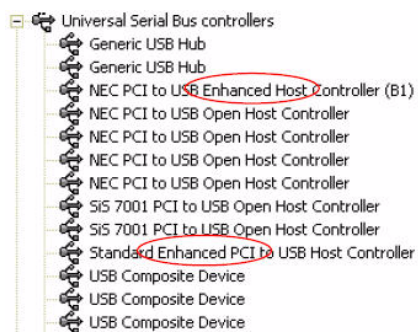
# Software overview

## Sony Ericsson Wireless Manager

Sony Ericsson provides Wireless Manager, an application that provides the ability to configure and manage your wireless connections on your PC. For more information about software requirements, refer to the *Wireless Manager User Guide*.

You can use Wireless Manager to:

- Connect to the Internet or your corporate network

- Display mobile network status information

- Create or modify connection settings

- Manage your MD300 settings and preferences

- Send and receive SMS messages

- Manage phonebooks saved to your SIM card and hard drive

## launch2net - Sony Ericsson Edition

To use your MD300 with your Mac OS X system, you will need **launch2net – Sony Ericsson Edition**. This application enables you to set up and use UMTS/HSDPA and GPRS/EDGE connections (subject to network coverage and availability). The software is available for download without charge from this Website:

**www.novamedia.de/sonyericsson**

Please follow the instructions on the Website to install, configure, and use your MD300 with your Apple PowerBook, MacBook iMac and MacPro. Do not use the Quick Start Guide that is included with the Sony Ericsson Mobile Broadband USB Modem. For more information, refer to documentation that comes with the launch2net – Sony Ericsson Edition application.

## Third-party applications

Your network operator or your network administrator may provide an application that works with your MD300. Please refer to the instructions supplied with that application. Functions and features available may be different compared with the Sony Ericsson Wireless Manager application.

**Virtual Private Network (VPN)**

Your MD300 is tested for compatibility with popular VPN solutions used by corporations to enable remote workers to access the corporate network.

**Note:**
Sony Ericsson does not provide any VPN software with your MD300.

# System requirements

This section lists the hardware and software requirements for using your MD300.

## General

You will need the following hardware:

- Available USB port capable of supporting high power USB devices
- MD300
- SIM card

## Windows (Wireless Manager)

Wireless Manager works with the following versions of the Windows® operating system:

- Windows 2000 Service Pack 4 (SP4)
- Windows XP Service Pack 2 (SP2); 32-bit (x86) and 64-bit (x64) processors
- Windows Vista™; 32-bit (x86) and 64-bit (x64) processors

Your laptop PC must meet or exceed the minimum system requirements for the installed version of the Windows operating system and have the following:

- 110MB of available disk space
  or
  300MB of available disk space if install package is downloaded to your PC

**Note:**
Sony Ericsson periodically releases new versions of Wireless Manager with new features and bugfixes. The exact support for the Windows Operating System may change over time. The readme.txt file included in the download, always identifies which versions and service packs of the Windows operating system are supported. For more information and downloads, please visit *www.sonyericsson.com/support*

## Apple Macintosh

Please refer to the instructions suppled with launch2net or other application software.

# Additional information

## Guidelines for safe and efficient use

Please read this information before using your MD300.

### Recommendations

- Always treat your product with care and keep it in a clean and dust-free place.
- Do not expose your product to liquid, moisture or humidity.
- Do not expose your product to extreme high or low temperatures.
- Do not expose your product to open flames or lit tobacco products.
- Do not drop, throw or try to bend your product.
- Do not paint your product.
- Do not use your product near medical equipment without requesting permission from your treating physician or authorised medical staff.
- Do not use your product when in, or around aircraft, or areas showing the sign "turn off two-way radio".
- Do not use your product in an area where a potentially explosive atmosphere exists.
- Do not place your product or install wireless equipment in the area above your car's air bag.
- Do not attempt to disassemble your product. Only Sony Ericsson authorised personnel should perform service.

### Efficient use

Do not cover the MD300 when in use, as this affects call quality.

### Radio Frequency (RF) exposure and SAR

Your Sony Ericsson MD300 is a low-power radio transmitter and receiver (transceiver). When it is turned on, it emits low levels of radio frequency energy (also known as radio waves or radio frequency fields).

Governments around the world have adopted comprehensive international safety guidelines, developed by scientific organizations, e.g. ICNIRP (International Commission on Non-Ionising Radiation Protection) and IEEE (The Institute of Electrical and Electronics Engineers Inc.), through periodic and thorough evaluation of scientific studies. These guidelines establish permitted levels of radio wave exposure for the general population. The levels include a safety margin designed to assure the safety of all persons, regardless of age and health, and to account for any variations in measurements.

Specific Absorption Rate (SAR) is the unit of measurement for the amount of radio frequency energy absorbed by the body when using a transceiver. The SAR value is determined at the highest certified power level in laboratory conditions, but the actual SAR level of the transceiver while operating can be well below this value. This is because the transceiver is designed to use the minimum power required to reach the network.

Variations in SAR below the radio frequency exposure guidelines do not mean that there are variations in safety. While there may be differences in SAR levels among mobile phones, all Sony Ericsson modems are designed to meet radio frequency exposure guidelines.

More information on radio frequency exposure and SAR can be found on:

www.sonyericsson.com.

### Personal medical devices

Modems may affect the operation of cardiac pacemakers and other implanted equipment. If a minimum distance of 15 cm (6 inches) is kept between the MD300 and the pacemaker, the risk of interference is limited. If you have any reason to suspect that interference is taking place, immediately turn off your MD300. Contact your cardiologist for more information.

For other medical devices, please consult your physician and the manufacturer of the device.

### Children

DO NOT ALLOW CHILDREN TO PLAY WITH YOUR MD300. THEY COULD HURT THEMSELVES OR OTHERS, OR COULD ACCIDENTALLY DAMAGE THE MODEM. YOUR MODEM MAY CONTAIN SMALL PARTS THAT COULD BE DETACHED AND CREATE A CHOKING HAZARD.

### Disposal of old electrical & electronic equipment

This symbol indicates that all electrical and electronic equipment included shall not be treated as household waste. Instead it shall be left at the appropriate collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased your MD300.

### Emergency calls

Mobile Broadband Modems manufactured by Sony Ericsson do not support voice calls and should not be relied upon for essential communications.

### Inserting and removing the SIM card – precautions against electrostatic discharge (ESD)

Do not touch the SIM card connectors. As a precaution, always make sure that the MD300 is already in your hand before you insert or remove the SIM card.

# Generic SEMC Limited warranty

## Limited Warranty

Sony Ericsson Mobile Communications AB, Nya Vattentornet, SE-221 88 Lund, Sweden, (Sony Ericsson) or its local affiliated company, provides this Limited Warranty for your mobile phone, original accessory delivered with your mobile phone, and/or your mobile computing product (hereinafter referred to as "Product").

Should your Product need warranty service, please return it to the dealer from whom it was purchased, or contact your local Sony Ericsson Call Center (national rates may apply) or visit www.sonyericsson.com to get further information.

Warranty requirements may differ by country or region. Please visit www.sonyericsson.com/support to review the Sony Ericsson warranty applicable to the country or region where you purchased your product, which may differ from the default generic warranty included with your user materials.

OUR WARRANTY

Subject to the conditions of this Limited Warranty, Sony Ericsson warrants this Product to be free from defects in design, material and workmanship at the time of its original purchase by a consumer. This Limited Warranty will last for a period of one (1) year as from the original date of purchase of the Product.

WHAT WE WILL DO

If, during the warranty period, this Product fails to operate under normal use and service, due to defects in design, materials or workmanship, Sony Ericsson authorized distributors or service partners, in the country* where you purchased the Product, will, at their option, either repair or replace the Product in accordance with the terms and conditions stipulated herein.

Sony Ericsson and its service partners reserve the right to charge a handling fee if a returned Product is found not to be under warranty according to the conditions below.

Please note that some of your personal settings, downloads and other information may be lost when your Sony Ericsson Product is repaired or replaced. At present Sony Ericsson may be prevented by applicable law, other regulation or technical restrictions from making a backup copy of certain downloads. Sony Ericsson does not take any responsibility for any lost information of any kind and will not reimburse you for any such loss. You should always make backup copies of all the information stored on your Sony Ericsson Product such as downloads, calendar and contacts before handing in your Sony Ericsson Product for repair or replacement.

CONDITIONS

1.  This Limited Warranty is valid only if the original proof of purchase for this Product issued by a Sony Ericsson authorized dealer specifying the date of purchase and serial number**, is presented with the Product to be repaired or replaced. Sony Ericsson reserves the right to refuse warranty service if this information has been removed or changed after the original purchase of the Product from the dealer.

2.  If Sony Ericsson repairs or replaces the Product, the repair for the defect concerned, or the replaced Product shall be warranted for the remaining time of the original warranty period or for ninety (90) days from the date of repair, whichever is longer. Repair or replacement may involve the use of functionally equivalent reconditioned units. Replaced parts or components will become the property of Sony Ericsson.

3. This warranty does not cover any failure of the Product due to normal tear and wear, or due to misuse, including but not limited to use in other than the normal and customary manner, in accordance with the Sony Ericsson instructions for use and maintenance of the Product. Nor does this warranty cover any failure of the Product due to accident, software or hardware modification or adjustment, acts of God or damage resulting from liquid.

A rechargeable battery can be charged and discharged more than a hundred times. However, it will eventually wear out - this is not a defect and corresponds to normal wear and tear. When the talk-time or standby time is noticeably shorter, it is time to replace your battery. Sony Ericsson recommends that you use only batteries and chargers approved by Sony Ericsson.

Minor variations in display brightness and colour may occur between the phones. There may be tiny bright or dark dots on the display. These are called defective pixels and occur when individual dots have malfunctioned and can not be adjusted. Two defective pixels are deemed acceptable.

Minor variations in camera image appearance may occur between phones. This is nothing uncommon and is not regarded as a defective camera module.

4. Since the cellular system on which the Product is to operate is provided by a carrier independent from Sony Ericsson, Sony Ericsson will not be responsible for the operation, availability, coverage, services or range of that system.

5. This warranty does not cover Product failures caused by installations, modifications, or repair or opening of the Product performed by a non-Sony Ericsson authorised person.

6. The warranty does not cover Product failures which have been caused by use of accessories or other peripheral devices which are not Sony Ericsson branded original accessories intended for use with the Product.

7. Tampering with any of the seals on the Product will void the warranty.

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*GEOGRAPHICAL SCOPE OF THE WARRANTY

If you have purchased your Product in a country member of the European Economic Area (EEA) or in Switzerland or the Republic of Turkey, and such Product was intended for sale in the EEA or in Switzerland or in Turkey, you can have your Product serviced in any EEA country or in Switzerland or in Turkey, under the warranty conditions prevailing in the country in which you require servicing, provided that an identical Product is sold in such country by an authorised Sony Ericsson distributor.

To find out if your Product is sold in the country you are in, please call the local Sony Ericsson Call Center. Please observe that certain services may not be possible elsewhere than in the country of original purchase, for example due to the fact that your Product may have an interior or exterior which is different from equivalent models sold in other countries. Please note in addition that it may sometimes not be possible to repair SIM-locked Products.

** In some countries/regions additional information (such as a valid warranty card) may be requested.

# Technical specifications

## General

| Product name | **MD300** |
| --- | --- |
| **System** | GSM 850<br>E-GSM 900<br>GSM 1800<br>GSM 1900<br>UMTS 850<br>UMTS 1900<br>UMTS 2100 |
| **USB Device Type** | USB 2.0 High Power, Full Speed |
| **Services supported** | GSM: GPRS/EDGE, SMS, USSD<br>UMTS: Packet-Switched, HSDPA, Circuit-Switched, SMS, USSD<br>Speech services are not supported |
| **SIM Card** | Small plug-in card, 3V and 1.8V type<br>Regular (non-GPRS-aware) and GPRS-aware SIMs supported<br>USIM |
| **Type Number** | **FAD-3232021-BV** |

## Exterior description

| Size | **Length**: 70mm not including USB connector<br>**Width**: 33mm<br>**Height**: 14.5mm |
| --- | --- |
| **Weight** | 30g, excluding cap and SIM card |
| **Battery** | Powered via the USB port. |
| **Antenna** | GSM/UMTS antenna integrated in to the device |

## Ambient temperatures

| **Operating** | -10 to 55 degrees C |
| --- | --- |
| **Storage** | -20 to 65 degrees C |

## Environmental Compliance

| **Directives** | WEEE (Waste Electrical and Electronic Equipment Directive)<br>RoHS (Restriction of use of certain Hazardous Substances) |
| --- | --- |

## Application support

| | |
|---|---|
| **Windows** | Sony Ericsson Wireless Manager<br>Third-party software that might be provided by your mobile operator |
| **Apple Macintosh** | launch2net - Sony Ericsson Edition (via download)<br>Third-party software that might be provided by your mobile operator |

## Electrical characteristics

| | |
|---|---|
| **Nominal operating voltage** | 5V |
| **Average Idle Power (GPRS attached)** | < 250mW |
| **Data Transfer Power (Worst case)** | < 2.9W |

**Note:**

All power consumptions are at nominal voltage.

## GSM performance and technical characteristics

| Dimension | GSM 850 | GSM 900<br>E-GSM 900 | GSM 1800 | GSM 1900 |
|---|---|---|---|---|
| **Modulation** | GMSK/8-PSK | GMSK/8-PSK | GMSK/8-PSK | GMSK/8-PSK |
| **Power classes** | Class 4 (2W) for GSM/GPRS and EGPRS/MCS 1-4 (GMSK);<br><br>Class E2 (0.5W) for EGPRS/MCS 5-9 (8-PSK) | Class 4 (2W) for GSM/GPRS and EGPRS/MCS 1-4 (GMSK);<br><br>Class E2 (0.5W) for EGPRS/MCS 5-9 (8-PSK) | Class 1 (1W) for GSM/GPRS and EGPRS/MCS 1-4 (GMSK);<br><br>Class E2 (0.4W) for EGPRS/MCS 5-9 (8-PSK) | Class 1 (1W) for GSM/GPRS and EGPRS/MCS 1-4 (GMSK);<br><br>Class E2 (0.4W) for EGPRS/MCS 5-9 (8-PSK) |

## GSM features supported

| | |
|---|---|
| **ME SIM Lock** | Network<br>Network Subset<br>Service Provider<br>Corporate |
| **Online services (SIM-AT)** | Supported (R99) |
| **USIM Application Toolkit** | Supported via AT Commands No MMI is provided |
| **USSD** | Phase 2+<br>Support is provided via AT commands; No MMI is provided |

## GPRS technical data

| | |
|---|---|
| **Data Rates** | Multislot class 10 supported (see table below). Coding schemes: CS-1, CS-2, CS-3 and CS-4 |
| **Mode of Operation** | Class B (attaches to both GSM and GPRS at the same time). |
| **IP Connectivity** | PDP type IP is supported IPv4 |
| **SMS over GPRS** | Mobile Originated and Mobile Terminated |
| **Compression** | TCP/IP Header Compression (RFC1144 and RFC 2507) V42bis |
| **GPRS Encryption** | GEA1 and GEA2 |
| **GPRS IP allocation** | Dynamic Static |

## GPRS maximum data rates

| | | CS-1 9.05 kbps | CS-2 13.4 kbps | CS-3 15.6 kbps | CS-4 21.4 kbps |
|---|---|---|---|---|---|
| **4 + 1** | **RX** | 36.2 | 53.6 | 62.4 | 85.6 |
| | **TX** | 9.05 | 13.4 | 15.6 | 21.4 |
| **3 + 2** | **RX** | 27.15 | 40.2 | 46.8 | 64.2 |
| | **TX** | 18.1 | 26.8 | 31.2 | 42.8 |

Speed achieved depends on the Coding Scheme supported by the GSM network. The speeds given are maxima. Sony Ericsson cannot guarantee the speed at which your network will operate.

Data rate is the payload per slot: header plus data.

## EDGE technical data

| | |
|---|---|
| **Device class** | EDGE Class 10 |
| **Modulation Coding Schemes** | MCS-1 to MCS-9 |
| **EDGE features** | Link Adaptation Incremental Redundancy Extended Uplink Temporary Block Flow (TBF) Network Assisted Cell Change (NACC) |

**EDGE maximum data rates**

| Coding scheme | Data rate per slot | 4 + 1 | | 3 + 2 | |
|---|---|---|---|---|---|
| | | Rx | Tx | Rx | Tx |
| MCS-1 | 10.60 | 42.40 | 10.60 | 31.80 | 21.20 |
| MCS-2 | 13.00 | 52.00 | 13.00 | 39.00 | 26.00 |
| MCS-3 | 16.60 | 66.40 | 16.60 | 49.80 | 33.20 |
| MCS-4 | 19.40 | 77.60 | 19.40 | 58.20 | 38.80 |
| MCS-5 | 24.05 | 96.20 | 24.05 | 72.15 | 48.10 |
| MCS-6 | 31.25 | 125.00 | 31.25 | 93.75 | 62.50 |
| MCS-7 | 47.45 | 189.80 | 47.45 | 142.35 | 94.90 |
| MCS-8 | 57.05 | 228.20 | 57.05 | 171.15 | 114.10 |
| MCS-9 | 61.85 | 247.40 | 61.85 | 185.55 | 123.70 |

Speed achieved depends on the Coding scheme supported by the GSM Network. The speeds given are maxima, Sony Ericsson cannot guarantee the speed at which your network will operate.

Data rate is the payload per slot: header plus data.

**UMTS technical data**

| | |
|---|---|
| **Power class** | Class 3 (0.25W, 24dBm) |
| **Maximum Downlink speed** | 384kbps |
| **Maximum Uplink speed** | 384kbps |
| **UMTS features** | Inter-Mode Handover (UMTS/EDGE/GPRS) |
| | Inter-Mode Reselection (UMTS/EDGE/GPRS) |
| **Quality Of Service** | UMTS classes supported via AT Command |
| **Modes** | PDP type IP is supported |
| | IPv4 |
| **IP Allocation** | Static, Dynamic |
| **R4 Enhancements** | Extended TBF Uplink |
| | Network Assisted Cell Change (NACC) |

**HSDPA technical data**

| | |
|---|---|
| **Maximum Downlink speed** | 3.6Mbps |
| **HSDPA Categories** | 1-6, 11, 12 |

**SMS Technical Data**

| | |
|---|---|
| **Concatenated SMS** | Supported in Wireless Manager or via third party software |
| **SMS Cell Broadcast** | Supported via AT Commands. |
| **SMS interface** | Wireless Manager. |
| | AT Command. |

**Firmware upgrade**

| | |
|---|---|
| **MD300 firmware upgrade** | Via secure Internet download using the Sony Ericsson Update Service, www.sonyericsson.com/support or at Sony Ericsson Service Points |

**Software upgrade**

| | |
|---|---|
| **Wireless Manager Upgrade** | Internet download |

**Flash memory drive**

| | |
|---|---|
| **Flash Memory Drive (USB Mass Storage)** [1] | Drive capacity >= 128 MB |

1. Exact capacity depends upon the firmware and software installer. In Wireless Manager, go to Settings > Flash Memory where you can free up space by saving the software installer files to you hard drive. You can also copy the installer back to your MD300, for example, to allow another user to easily install and use your MD300.

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