

# iSR3500

Single-Module platform optimized for ultra low cost GSM / GPRS mobile and industrial applications.

## Introduction

iSR3500 series is a product line of highly integrated single-module platform optimized for ultra low cost GSM / GPRS mobile and industrial applications. It integrates all the functions necessary for a dual-band GSM / GPRS mobile handset or wireless communication, including baseband, mixed signal, power amplifier, power management, RF transceiver, front-end switch and memory in a single monolithic module with board-to-board connector.

The iSR3500 series module is ideal for application requiring GSM, and is capable of working on 2-layer motherboard with no further RF calibration required. It comes handy with 34-pin, 60-pin or 80-pin board-to-board connector options. The highly integrated module provides full RS232 or 3-wire UART (CMOS level) for AT commands, and various peripheral interfaces such as SSC / SPI, 12C, GPIO ports and ADC etc.

The iSR3500 series is able to function as the main / only processor or any customer systems that connect the module as a slave modem with a master processor via AT command interface, for example, Supervisory Control and Data Acquisition (SCADA), automated meter reading (AMR), POS terminals, and vehicle tracking system, or even a smart phone implemented by the separate Access Point (AP). They may be powered either by battery or by DC power supply.



GPRS (class 10)



GSM



TCP / IP Connectivity



Fax Functionality

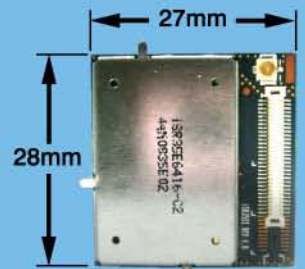


Compact In Size



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Actual Size  
(27mm x 28mm x 3mm)

## General Features

- GSM or GPRS Dual Band  
900/1800 MHz or 850/1900 MHz
- GPRS Rel 4.0 Class 10
- GSM Rel 97. STK Rel. 99
- Compliant to GSM Phase 2/2+
- Supply Voltage: 3.4V ~ 4.2V
- Output Power:
  - Class 4 (2W) at 850/900 MHz
  - Class 1 (1W) at 1800/1900 MHz
- Control via AT Commands
- Debug:
  - JTAG Support
- Power Consumption
  - Power off < 400uA
  - Call (ave.) < 300mA
  - Idle mode < 4mA
  - Transient max. < 1.6A
- GSM Sensitivity
  - -110 dBm (typ) at 850/900 MHz
  - -109 dBm (typ) at 1800/1900 MHz
- Temperature Range
  - Operating: -20°C to +55°C
  - Storage: -55°C to +150°C
- Dimensions: 27 x 28 x 3 mm
- Weight: 2.4 gram

## Clock:

- 26MHz reference clock
- 26MHz for MCU sub-system
- 78MHz for DSP

## Security:

- Hardware Support for IMEI, SIM-lock, Flash Software Protection and Secure Boot

## Specification for GPRS data transmission:

- GPRS class 10; max. 86 kbps (DL)
- Mobile station class B
- Embedded TCP/IP and UDP/IP

## Specification for CSD data transmission:

- Up to 14.4 kbps

## Specification for SMS:

- Class 0-3 MT/MO SMS & EMS
- SMS concatenated
- EMS Smart Messaging (GPRS)

## Specification for fax:

- Group 3, class 1

## Specification for voice:

- Triple rate codec for HR, FR and EFR
- Adaptive multi-rate AMR

## Vibrator:

- Support Vibrator control output

## Audio:

- Analog Audio for ring tone (balanced and unbalanced)
- Analog audio for receiver (balanced and unbalanced)
- Balanced analog microphone interface
- Unbalanced external microphone interface for headset

## Keypad Support:

- 6 x 4 key inputs

## Interfaces:

- 8 bit parallel interface
- SSC / SPI interface
- I<sup>2</sup>C Bus
- UART
- SIM interface 1.8V, 3V
- ADC
- GPIO
- Battery Charger:
  - Pulse charging support for both Ni-MH and Li-ion Battery

## GSM Supplementary Services:

- Call Barring
- Call Forwarding
- Calling Line Identification Presentation (CLIP)
- Calling Line Identification Restriction (CLIR)
- Call Waiting, other party Call Waiting indication
- Call Hold, other party Hold / Retrieved indication
- Closed User Group Supplementary Service (CUG)
- Advice of Charge
- Unstructured SS Data Mobile Originated (MO USSD)

## Approvals:

- CE
- FCC
- PTCRB
- GCF

All information are subject to changes without prior notice.

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