

# ACCELERATE TIME-TO-MARKET WITH ONBOARD LOCATION



The Enfora Spider MT family is a certified quad-band integrated platform that provides complete GSM/GPRS functionality for mobile tracking applications. These small, economical devices also include integrated GPS capabilities. To address a variety of applications, onboard GPS data can be transmitted to centralized operations centers, Web pages, localized computers or mobile data terminals.

To accelerate deployment, use Enfora's Services Gateway to quickly build links from your asset-tracking devices to your existing enterprise applications and services. The Services Gateway provides a complete view of your devices, enabling proactive asset management. It also supports popular enterprise software such as MS SQL Server, MySQL and Oracle.

## Key Features

- Enable virtually any telematics application with included software suite
- Flexible customization through built-in programmable rules engine, a network router & control automation capabilities
- Wireless data and voice port available for user email and voice communication
- Auto-registration on power up
- Internal battery back-up on the MT-μL allows for continued operation when main input power is removed
- Utilize Enfora's Services Gateway to tie quickly to existing applications or services

|                                                                                                                               | MT-μL QUAD-BAND                                                                                                                                                                                                                                                                                                                                                                   | MT-Gμ QUAD-BAND                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
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| <b>MODEL NUMBER</b>                                                                                                           | <b>GSM2238</b>                                                                                                                                                                                                                                                                                                                                                                    | <b>GSM2338</b>                                                                |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>CHARACTERISTICS</b><br>Dimensions (L x W x H)<br>Housing                                                                   | 63.5 x 63.5 x 24.4 mm<br>Seamless aluminum extrusion                                                                                                                                                                                                                                                                                                                              | 64.8 x 61 x 25.6 mm<br>Rugged plastic enclosure                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>RADIO PERFORMANCE</b><br>Frequency (MHz)<br>Transmit power                                                                 | 850/900/1800/1900<br>Class 4 (2W@850/900 MHz)<br>Class 1 (1W@1800/1900 MHz)                                                                                                                                                                                                                                                                                                       |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>PACKET DATA</b><br>Mode<br>Protocol<br>Coding schemes<br>Packet channel                                                    | Class B, Multislot 8<br>GSM/GPRS Rel 97 AMR Rel 99<br>CS1-CS4<br>PBCCH/PCCCH                                                                                                                                                                                                                                                                                                      | Class B, Multislot 10<br>GSM/GPRS Rel 97 AMR Rel 99<br>CS1-CS4<br>PBCCH/PCCCH |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>GSM FUNCTIONALITY</b><br>Voice<br>CS data<br>GSM SMS                                                                       | AMR, EFR, FR & HR<br>Asynchronous; Transparent and Non-Transparent up to 14.4 kb<br>Text, PDU, MO/MT, Cell Broadcast                                                                                                                                                                                                                                                              |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>GPS FUNCTIONALITY</b><br>Connector<br>Antenna<br>GPS Protocols<br>Buffered GPS message feature                             | FAKRA<br>3.3 V active<br>NMEA, TAIP, Binary<br>Yes                                                                                                                                                                                                                                                                                                                                |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>OVER-THE-AIR COMMANDS</b>                                                                                                  | I/O control, GPS TX internal, binary reporting, timed reporting, alarm reporting, maximum speed exceeded, status change reports, GPS content, event reporting, distance reporting, geo fencing and virtual odometer                                                                                                                                                               |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>SIM CARD/INTERFACE/I/O</b><br>SIM Access<br>Audio<br>GSM Antenna<br>I/O Connector<br><br>Serial Data I/O<br>Ignition Sense | External<br>2.5 mm headset<br>FAKRA<br>8-pin Molex<br>2 GPIOs: Input 0-40V, Output 0-3V<br>1 Output 0-40V<br><br>Yes<br>Yes                                                                                                                                                                                                                                                       |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>INTERFACE</b><br>Host Protocols<br>Internal Protocols<br>API Control/Status                                                | AT commands, UDP API, CMUX, PPP<br>PPP, UDP API, TCP API, UDP PAD, TCP PAD<br>AT commnads, UDP API, TCP API, AT commands over SMS                                                                                                                                                                                                                                                 |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>ENVIRONMENT</b><br>Operating<br>Storage<br>Humidity<br>Vibration                                                           | -30°C to 85°C<br>-40°C to 85°C<br>Up to 95% non-condensing<br>In accordance with SAE J1211                                                                                                                                                                                                                                                                                        |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>POWER</b><br>DC voltage                                                                                                    | 7 - 40 V<br>Rechargeable Lithium-Ion battery (1-hr use)                                                                                                                                                                                                                                                                                                                           |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| GSM operating power (typical) @ 12 volts                                                                                      | <table><thead><tr><th>Band</th><th>Mode</th><th>Avg (mA)</th><th>Peak A</th></tr></thead><tbody><tr><td rowspan="2">GSM 850/900</td><td>1TX/1RX</td><td>230</td><td>2.1</td></tr><tr><td>Idle</td><td>&lt; 45</td><td></td></tr><tr><td rowspan="2">GSM1800/1900</td><td>1TX/1RX</td><td>175</td><td>1.5</td></tr><tr><td>Idle</td><td>&lt; 45</td><td></td></tr></tbody></table> | Band                                                                          | Mode     | Avg (mA) | Peak A | GSM 850/900 | 1TX/1RX | 230 | 2.1 | Idle | < 45 |  | GSM1800/1900 | 1TX/1RX | 175 | 1.5 | Idle | < 45 |  | <table><thead><tr><th>Band</th><th>Mode</th><th>Avg (mA)</th><th>Peak (A)</th></tr></thead><tbody><tr><td rowspan="2">GSM 850/900</td><td>1TX/1RX</td><td>250</td><td>1.6</td></tr><tr><td>Idle</td><td>&lt; 40</td><td></td></tr><tr><td rowspan="2">GSM1800/1900</td><td>1TX/1RX</td><td>215</td><td>1.3</td></tr><tr><td>Idle</td><td>&lt; 40</td><td></td></tr></tbody></table> | Band | Mode | Avg (mA) | Peak (A) | GSM 850/900 | 1TX/1RX | 250 | 1.6 | Idle | < 40 |  | GSM1800/1900 | 1TX/1RX | 215 | 1.3 | Idle | < 40 |  |
| Band                                                                                                                          | Mode                                                                                                                                                                                                                                                                                                                                                                              | Avg (mA)                                                                      | Peak A   |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| GSM 850/900                                                                                                                   | 1TX/1RX                                                                                                                                                                                                                                                                                                                                                                           | 230                                                                           | 2.1      |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
|                                                                                                                               | Idle                                                                                                                                                                                                                                                                                                                                                                              | < 45                                                                          |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| GSM1800/1900                                                                                                                  | 1TX/1RX                                                                                                                                                                                                                                                                                                                                                                           | 175                                                                           | 1.5      |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
|                                                                                                                               | Idle                                                                                                                                                                                                                                                                                                                                                                              | < 45                                                                          |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| Band                                                                                                                          | Mode                                                                                                                                                                                                                                                                                                                                                                              | Avg (mA)                                                                      | Peak (A) |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| GSM 850/900                                                                                                                   | 1TX/1RX                                                                                                                                                                                                                                                                                                                                                                           | 250                                                                           | 1.6      |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
|                                                                                                                               | Idle                                                                                                                                                                                                                                                                                                                                                                              | < 40                                                                          |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| GSM1800/1900                                                                                                                  | 1TX/1RX                                                                                                                                                                                                                                                                                                                                                                           | 215                                                                           | 1.3      |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
|                                                                                                                               | Idle                                                                                                                                                                                                                                                                                                                                                                              | < 40                                                                          |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>CERTIFICATIONS</b><br>FCC<br>GCF<br>PTCRB<br>CE Mark<br>RoHS Compliant<br>Emark<br>Industry Canada                         | Parts 15, 22 & 24<br>Version 3.27.0<br>Version 3.12.0<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                 |                                                                               |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |
| <b>PART NUMBERS</b>                                                                                                           | GSM2238-00 (with battery)<br>GSM2238-01 (without battery)                                                                                                                                                                                                                                                                                                                         | GSM2338-00 (with battery)<br>GSM2338-01 (without battery)                     |          |          |        |             |         |     |     |      |      |  |              |         |     |     |      |      |  |                                                                                                                                                                                                                                                                                                                                                                                     |      |      |          |          |             |         |     |     |      |      |  |              |         |     |     |      |      |  |