Linx strives to *make every engineer a hero in record time™* by minimizing the risk, delays and technical challenges for design engineers to implement wireless functionality and connectivity to the Internet. Unlike other module producers, every aspect of our product and design experience is specifically crafted to achieve Wireless Made Simple®.
## Linx GPS and GNSS Module Parameters

### Series
- R4
- RM
- F4
- FM
- QA
- TM

### Product Positioning
- **Linx GPS Series R4**
  - Low-cost ROM GPS receiver
- **Linx GPS Series RM**
  - Full featured GPS receiver
- **Linx GPS Series F4**
  - Full featured GNSS receiver
- **Linx GPS Series FM**
  - Small size GNSS receiver

### Features
- **SiRFStarIV**
  - MediaTek
- **MediaTek**
  - Low power
  - 5 user definable GPICs
  - 3 day ephemeris prediction
  - 3 day ephemeris prediction
  - Uses all current global navigation satellite systems
  - Small size
  - Better sensitivity with on-board LNA

### Size
<table>
<thead>
<tr>
<th>Series</th>
<th>Inches</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>R4</td>
<td>0.51 x 0.58</td>
<td>15.0 x 13.0</td>
</tr>
<tr>
<td>RM</td>
<td>0.51 x 0.58</td>
<td>15.0 x 13.0</td>
</tr>
<tr>
<td>F4</td>
<td>0.51 x 0.59</td>
<td>15.0 x 13.0</td>
</tr>
<tr>
<td>FM</td>
<td>0.51 x 0.59</td>
<td>15.0 x 13.0</td>
</tr>
<tr>
<td>QA</td>
<td>0.51 x 0.59</td>
<td>15.0 x 13.0</td>
</tr>
<tr>
<td>TM</td>
<td>0.40 x 0.38</td>
<td>10.1 x 9.7</td>
</tr>
</tbody>
</table>

### Frequency
- **SiRFStarIV**
  - 1575.42MHz
- **MediaTek**
  - 1575.42MHz
  - 1598.0625-1605.375MHz

### Chipset
- **SiRF Star IV, GSD4e**
  - SARA-ME9411
- **MediaTek MT3337**
  - SARA-ME9411
  - GSD4e-9411
- **MediaTek MT3339**
  - SARA-ME9411
- **MediaTek MT3333**
  - SARA-ME9411
  - GSD4e-9411

### Current Consumption
<table>
<thead>
<tr>
<th>Feature</th>
<th>Series R4</th>
<th>Series RM</th>
<th>Series F4</th>
<th>Series FM</th>
<th>Series QA</th>
<th>Series TM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak (mA)</td>
<td>122</td>
<td>66</td>
<td>66</td>
<td>150</td>
<td>156</td>
<td></td>
</tr>
<tr>
<td>Acquisition (mA)</td>
<td>56</td>
<td>14</td>
<td>46</td>
<td>24</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Tracking (mA)</td>
<td>33</td>
<td>12</td>
<td>27.5</td>
<td>12</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Sleep (μA)</td>
<td>430</td>
<td>135</td>
<td>20</td>
<td>365</td>
<td>365</td>
<td></td>
</tr>
<tr>
<td>Min</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>3.6</td>
<td>4.3</td>
<td>1.69</td>
<td>4.3</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>RX Sensitivity (dBm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot Start</td>
<td>−145</td>
<td>−143</td>
<td>−145</td>
<td>−143</td>
<td>−147</td>
<td></td>
</tr>
<tr>
<td>Tracking</td>
<td>−160</td>
<td>−161</td>
<td>−160</td>
<td>−161</td>
<td>−164</td>
<td></td>
</tr>
<tr>
<td>Channels</td>
<td>48</td>
<td>66</td>
<td>48</td>
<td>92</td>
<td>92</td>
<td></td>
</tr>
</tbody>
</table>

### Operating Temp Range
- **−40 to +85°C**
  - Series R4
  - Series RM
  - Series F4
  - Series FM
  - Series QA
  - Series TM

### Acquisition Time (Seconds)
<table>
<thead>
<tr>
<th>Hot Start</th>
<th>Series R4</th>
<th>Series RM</th>
<th>Series F4</th>
<th>Series FM</th>
<th>Series QA</th>
<th>Series TM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Sky</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Indoors</td>
<td>&lt;15</td>
<td>&lt;30</td>
<td>&lt;15</td>
<td>&lt;30</td>
<td>&lt;30</td>
<td>&lt;30</td>
</tr>
<tr>
<td>Cold Start</td>
<td>&lt;32</td>
<td>&lt;32</td>
<td>&lt;32</td>
<td>&lt;32</td>
<td>&lt;32</td>
<td>&lt;32</td>
</tr>
</tbody>
</table>

### Altitude (m)
- **18,000**
- **50,000**

### Velocity (m/s)
- **<515**

### Position Accuracy (m)
- **<11ms**

### 1PPS Accuracy
- **N/A**

### Systems
- **GPS, QZSS**

### Interface
- **UART**

### Protocol Support
- **NMEA 0183 ver 3.0, SiRF Binary**

NEW! NEW! NEW! NEW! NEW! NEW! NEW!
Master Development System

The development systems are not an afterthought to us at Linx. They are key to how we make Wireless Made Simple®. We do not consider a designer who purchases our kit to be a customer yet; they are potential customers who must be won over by our development experience and the support we provide. Linx kits are different in that they are:

1. **Intuitive** – We took inspiration from modern consumer products and usability best practices to design our kits to be extremely intuitive. Open the box and begin preliminary testing without reading the manual.
2. **Everything you need** – Contains everything a designer needs to make their product wireless including printed documentation, Antenna Factor™ antennas, spare modules and PC software to customize the module and troubleshoot the development.
3. **Ergonomic to develop** – Linx is unique in providing a hardware development area with easy to access lines and clips tied directly to the module’s output. An integrated OLED display shows the module’s output making it suitable for stand-alone testing.
4. **Affordable** – The goal of Linx is to make it as easy as possible to try out our products, not to make a profit on the kit. We price our master development systems at $149 to $199.

GPS and GNSS Module Part Numbering System

Our part numbers are structured as follows: product type, system and series.

**TTT - FFF - SSS**

- **Series**
- **System**
- **Product type**

EVM (Module on carrier board.)

<table>
<thead>
<tr>
<th>RF Module Part Numbering System Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Type Options</strong></td>
</tr>
<tr>
<td>RXM (Receiver module)</td>
</tr>
<tr>
<td>EVM (Module on carrier board)</td>
</tr>
</tbody>
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