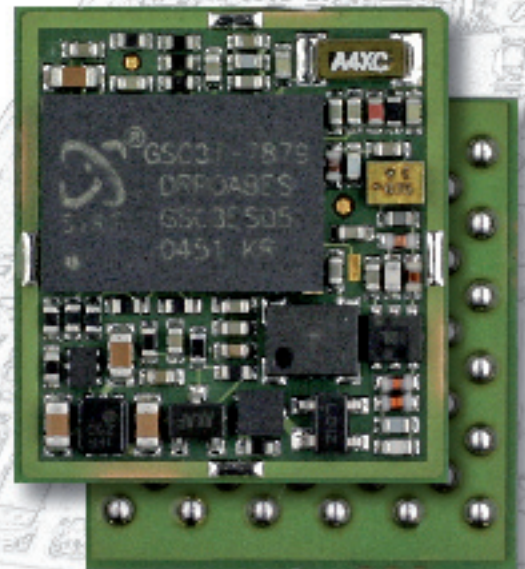


JP14

High sensitivity 20 channel GPS receiver

- GPS module based on SiRFstar III - GSC3f chip
- High sensitivity for indoor fixes
- Extremely fast TTFF at low signal levels
- 200.000+ effective correlators
- Integrated TCXO
- On chip 4Mb FLASH + 1 MB SRAM
- ARM 7 baseband CPU
- GSW3 software support
- SiRFloc multi-mode GPS support
- 2 variants: JP14-R / JP14-Q
- Starter-kit included evaluation and configuration tool



The FALCOM JP14

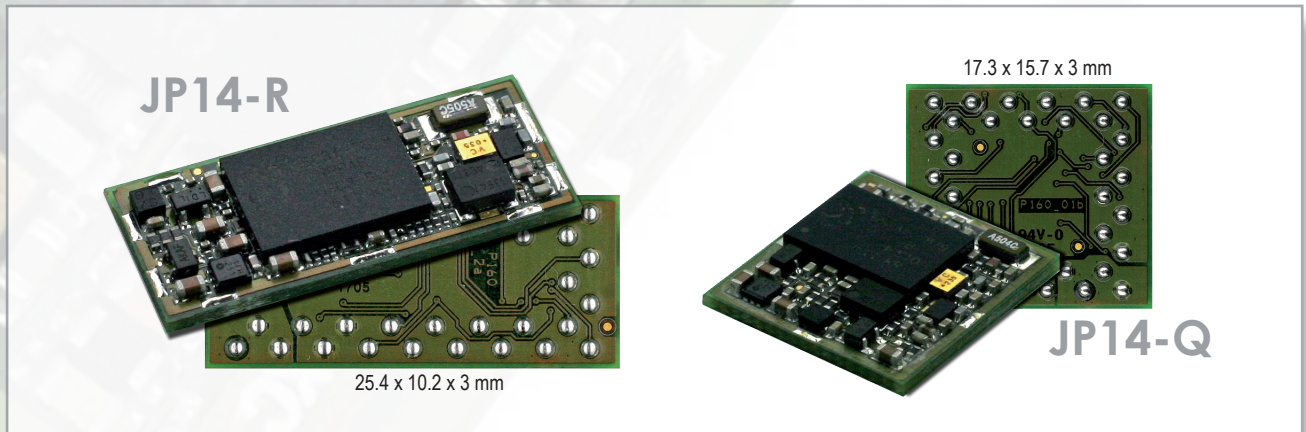
is a new of highly integrated, low-power GPS product – based on a 0.13 micron CMOS process of the SiRFstarIII - GSC3f – architecture are single-board solutions with increased to 20 parallel channel receiver.

The JP14 unit for the first time combine a complete A-GPS digital baseband processor, RF front end and 4 megabits of flash memory in a small size. This features providing manufacturers of cell phones, PDAs and other portable and wireless devices with a drop-in AGPS solution they can use to deliver real-time location and navigation capabilities in a simpler, smaller design with extended

battery life. FALCOM offers the JP14 in two form factors: a smaller JP14-R and the JP14-Q - see above. Each unit in a single package will deliver exceptional sensitivity, low power consumption and extremely fast time to first fix (TTFF) in a compact, 40-pin and 36-pin BGA packages. The digital section of both GPS receivers includes a powerful SiRFstarIII core GPS signal processor that handles all the time critical and low latency acquisition, tracking and reacquisition tasks autonomously, and a 50-MHz ARM7TDMI processor designed to run many OEM user applications.

Available in two variants:

JP14-R / JP14-Q



Applications

Compared to the JP13-S, the JP14-R is more optimized for location applications requiring high performance in a very smaller form factor – 25.4 x 10.2 mm, ideal for devices with limited onboard processing power. While the JP14-Q comes more smaller than JP14-R, just 17.3 x 15.7 mm package. The JP14-R/Q concept builds perfect basis for the design of high-sensitive, low-power, compact and cost efficient state-of-the-art GPS enabled system solutions for target platforms such as mobile phones, automotive systems, portable computing devices, and embedded consumer devices. The FALCOM JP14-R and JP14-Q are also designed to be entire products such as AVL tracking unit, handheld GPS.

Technical specification

| | |
|--------------------------------------|--|
| Time to first position (TTFF) | JP14-R / JP14-Q |
| Hot start | <4 sec average (23 dBHz sensitivity) |
| Warm start | <35 sec average (28 dBHz sensitivity) |
| Cold start | <45 sec average (16 dBHz sensitivity) |
| Acquisition rate | |
| Snap start | <3 sec average |
| Hot start | <8 sec average |
| Warm start | <38 sec average |
| Cold start | <45 sec average |
| Position accuracy | |
| Autonomous | <10 m |
| SBAS | <5 m |
| Receiver | |
| Tracking | L1, CA code |
| Channel | 20 |
| Max. update rate | 1 Hz |
| max. altitude / velocity | <60.000 ft / < 1.000 knots |
| Protocol support | NMEA, SiRF binary |
| GPS-Datum | |
| WGS-84 | |
| Processing core | |
| Processor type | ARM7/TDMI |
| Processor speeds | 6 MHz, 12.5 MHz, 25 MHz, 49 MHz |
| data bus | 16 Bit |
| Ports | >10 GPIO |
| FLASH | 4 Mb |
| Integrated SRAM | 1 Mb |
| Electrical characteristics | |
| Power supply | 3.0 V -3.3 V |
| Power consumption | 180 mW (3.3 V) Full power 80 mW (3.3 V) Trickle power (1 sec) |

Evaluation

