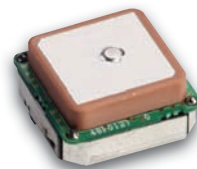


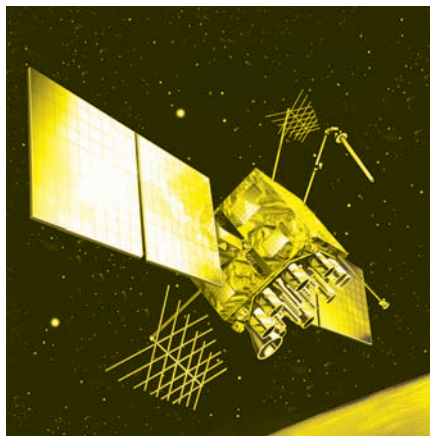
The new Furuno Model GH-81 is a 16 channel parallel GPS receiver that incorporates technologies that offer incredibly low power consumption and set new standards for miniaturization. The GH-81 has high-speed search engines in each of its 16 channels, enabling even faster TTFF (Time to First Fix) when compared with its predecessor, the Model GH-80. Thanks to our newly developed digital chip and power management algorithm, this faster TTFF is implemented without an increase in power requirements or circuitry size - power consumption is actually reduced by 35%.

In full operation, the receiver obtains the position fix, then sleeps in order to save power, shutting down as many circuits as possible. When in this full operation status and with the sleeping status cyclically repeated autonomously, we call it Intermittent Operation Mode. This enables a much lower power consumption. The Intermittent Operation Mode can be initiated simply by sending commands to the receiver.

GH-81 Series GPS Receiver



shown actual size



SPECIFICATIONS OF FURUNO GH-81 SERIES GPS RECEIVER:

GENERAL	
Dimensions	21mm x 21mm x 9.6mm
Number of Channels	16 Parallel Channels
Search Engine	256 Co-relators per channel
Method	Parallel Reception
Frequency	L1, 1575.42 MHz
Tracking Code	C/A Code only
Tracking Capability	Code + Carrier tracking
Max. Number Satellites Tracked	12 Satellites simultaneously (8 channels in sleep mode)
Sensitivity	Tracking: -139 dBm (typ) Acquiring: -133dBm (typ)
Accuracy	Horizontal (2drms): 15m (24 horu average at fixed position)
	Vertical (2drms): +-0.1.km/h (1 sigma) @ better than -130 dBm and over 40 km/h
	Azimuth: +- 0.2 degree (1 sigma) @ better than -130dBm and 45 +- 0.1 degree
Supply Voltage	2.9 to 3.6 VDC
Supply Current at 3.3 VDC	Continuous Op = 22mA (Searching) 17mA (Tracking)
	Short term Sleep (5 second) = 6.7mA (typical)
	Low Power Mode = 2.8mA (typical)
Backup Power Supply	Voltage: 2.1 to 3.6 VDC to Operation Voltage
	Current: 10uA @ vcc=0v;220uA @ Vcc=3.3v
Interface	3.3 VDC C-Mos
Baud Rate	9.6 kpbs
Protocol	Furuno Binary
Data Output Rate	C ontinuous Operation = 1 second
	Short Term Sleep = selectable 1 to 10 seconds in units of 1 second
	Long Term Sleep = selectable 10 to 60 seconds in units of 1 second
Dynamics	Speed = 300 km/h
	Acceleration = 1.2g
Datum	WGS-84 (default) and 254 other datums
Operation Temperature	-30 to +80 °C
Storage Temperature	-40 to +85 °C
TTFF AVERAGE	
Initial acquisition Time (hot start)	9 sec.
Initial acquisition Time (warm start)	37.0 sec.
Initial acquisition Time (cold start)	52 sec.
Re-acquisition Time	3 sec. average

All specification subject to change without notice

Features:

- Designed specifically for the handheld device market
- Fast search engine offers incredibly rapid TTFF without increase in power requirement or circuitry size
- Same small size as GH-80 GPS Receiver - 21mm X 21mm
- Software compatible with the GH-80
- Intermittent Operation Mode enables a much lower power consumption:
- <2 mA in Low Power Intermittent Mode
- 17 mA in Full Satellite Tracking Mode
- 22 mA in Satellite Searching Mode

(All values given at @ 3.3VDC Main Power)

- Available as GH-81D (Direct Mount) or GH-81C (Cable with Connector)

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