Technical Specifications

RF and electrical specifications

Table 1: Radio frequency & electrical specifications

Approvals	FCC Industry Canada
Compliance	Compliant with: IS-95A, IS-98D, IS-707A, IS707A-1, CDMA Developers Group
Voltage Range	9 - 36 VDC
Current	*Max transmit (23 dBm output)*[a] *Cellular*: 400 mA *PCS:* 450 mA *Typical transmit* 300 mA average *Receive:* 240 mA *Idle (Ignition Sense off):* 2 mA
Maximum Output Power	23 dBm (200 mW)
Transmit	*PCS:* 1850 to 1910 MHz *Cellular:* 824 to 849 MHz
Receive	*PCS:* 1930 to 1990 MHz *Cellular:* 869 to 894 MHz
Channel spacing	1.25 MHz
Frequency stability	±150 Hz

a. This applies to a typical installation with a well-matched antenna. All current values are measured with an input voltage of 12 V.

Environmental specifications

Table 2: Environmental specifications

Operating temperature	-40 to +70 °C (-40 to +158 °F)
Storage temperature	-40 to +85 °C (-40 to +185 °F)
Humidity	95% RH non-condensing SAE J1455 4.2 MIL 202G 103B and 106G MIL 810F 507.4
Vibration	SAE J1455 4.9 MIL 202G 214 MIL 810F 514.5
Shock	SAE J1455 4.10.3.2 and 4.10.3.4 MIL 202G 213B MIL 810F 516.5
ESD	+/- 15 kV air discharge as per IEC 61000-4-2
Drop	SAE J1455 4.10.3.1 and 4.10.3.2 MIL 810F 516.5
Splash	SAE J1455 4.4

Weight and dimensions

Table 3: Weight and dimensions

Weight	0.9 kg (2 lbs)
Height	49 mm (1.93 in)
Width	138 mm (5.43 in)
Length	176 mm (6.93 in)

GPS performance

Table 4: GPS performance

Accuracy	Horizontal: < 6 m (50%), < 9 m (90%) Altitude: < 11 m (50%), < 18 m (90%) Velocity: 0.06 m/sec
Acquisition times	Re-acquisition < 2 sec (90%) Hot start: < 14 sec (50%), < 18 sec (90%) Warm start: < 38 sec (50%), < 45 sec (90%) Cold start: < 90 sec (50%), < 170 sec (90%)
Operational limits	Altitude: < 18,000 m or velocity < 515 m/sec (either limit may be exceeded but not both)

I/O port characteristics

Table 5: I/O port characteristics

Absolute max voltage	-0.3 VDC to 36 VDC
Digital inputs	Open-collector, max current 500 mA Vih, min 2 VDC Vil, max 0.8 VDC Vih, max 36 VDC
Digital outputs	Open-collector
Analog input	Zero-scale: 0 VDC Full-scale: 3.3 VDC Leakage current: 66 µA