

# STL-2600 STL LEO GNSS Receiver Module

## Typical Electrical Specifications

### Module Specifications

#### 1 PPS Stability

GPS Locked	<10 ns rms
STL Locked <sup>1</sup>	<65 ns rms
Serial Control	TTL NMEA and Status Output, SCPI serial control and monitoring
NMEA Messages	GGA, RMC, ZDA, GSV, PASHR, GSA
GNSS Receiver	GPS/Glonass/Galileo/BeiDou/QZSS/SBAS
STL Receiver	3.3 V antenna-power built-in, custom-designed receiver

#### GPS Sensitivity

Acquisition	-148 dBm
Tracking	-167 dBm

#### GNSS TTFF

Cold Start	<29 sec
Warm Start	<2 sec
Hot Start	<2 sec

#### STL Sensitivity (25 dB antenna LNA gain assumed)

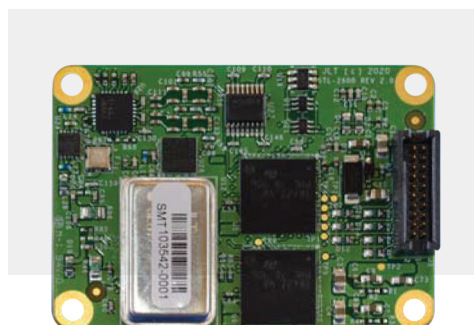
Tracking	-120 dBm
Supply Voltage (Vdd)	+3.3 V: 0.2 V, -0.1 V

#### Power Consumption

Dual CPU Mode	1.49 W
Low Power Mode	<1.1 W

#### Temperature

Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Storage Temperature	-45°C to 95°C (-49°F to 203°F)



## Typical Electrical Specifications continued

Oscillator Specifications	
Frequency Output	10 MHz CMOS 3.3 V
10 MHz Accuracy	$<\pm 0.5E-010$ after 20 minutes with STL or GNSS
Frequency Stability Over Temperature in GNSS/STL Holdover	$\pm 75E-08$ 0°C to +60°C
Output spurs	$<-110$ dBc/Hz
I/O Connectors	
1 PPS, 10 MHz External Reference Input	Supports optional external 1 PPS and/or 10 MHz reference inputs
10 MHz Output	CMOS 3.3 V, low phase noise
1 PPS Outputs	UTC (GPS) and UTC (STL) synchronized, CMOS 3.3 V, 200 ms pulse-width
RF Antenna (one for STL, one for GNSS)	Miniature U.FI coax
+3.3 V Power, 10 MHz out, 1 PPS out, TTL status, TTL serial, ISP/RST	20-pin Samtec, PN: TFM-110-11-H-D, Micro-USB (pwr/control)
Serial Ports (9,600 to 921,600 baud)	NMEA out, SCPI Control/Monitoring
	External CSAC/Rb Oscillator control
In Situ Firmware Updates	Fully field upgradeable through SCPI serial port

<sup>1</sup>STL Lock capability requires active subscription to Iridium based SecureTime LEO services



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