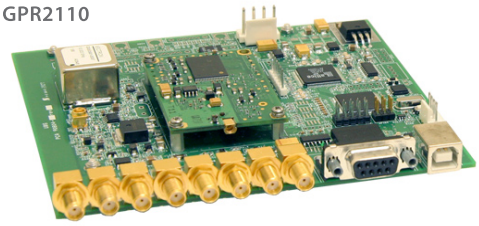
Unique Broadband Systems Ltd.

GPS Receiver

Models: GPR2100, GPR2110, GPR2120 , GPR1100

GPR2110



GPR1100

Available Models

GPR2100 - OEM board with BNC connectors

GPR2110 - OEM board with SMA connectors

GPR2120 - Enclosed OEM board

GPR1100 - 1RU unit with display and keypad, Ethernet and SNMP

GPR2120

Product Features

- *Up to eight 10 MHz Outputs*
- *Up to eight 1pps Outputs*
- *Optional RS232 TOD output for CMMB applications*
- *High performance design, utilizing an ovenized quartz oscillator*
- *Antenna cable length compensation*
- *Serial port for local console interface*
- *PC GUI control software available for GPR2100, GPR2110 and GPR2120*
- *WEB GUI and SNMP control over Ethernet for GPR1100*

Description and Application

Based on a M12MT receiver module, the UBS GPS receiver is a compact, cost effective, GPS locked timing reference.

Designed for applications where 10MHz/1pps clock sources are required to synchronize multiple transmission devices, this module provides an accurate high quality signal set. Multiple outputs enable all base station/site equipment to share a single accurate and stable reference source.

Optionally, UBS GPS receivers provide TOD information via a serial RS232 port, compliant with CMMB standard requirements.

UBS GPS receivers are available in three basic models: OEM board (GPR2100 and 2110), enclosed OEM board (GPR2120) and 1U unit (GPR1100), equipped with LCD display, keypad and Ethernet connection.

The GPS receiver unit includes a GPS receiver, as well as a 10 MHz and 1pps distribution system.

GPR1100 also includes a controller module, supporting WEB GUI and SNMP interfaces over an Ethernet connection.

Head Office - 400 Spinnaker Way - Vaughan - Ontario - Canada - L4K 5Y9 - Tel: **905 669 8533** - North America Toll Free: **1 877 669 8533** - **www.uniquesys.com** - Email: **sales@uniquesys.com**

GPS Receiver

Models: GPR2100, GPR2110, GPR2120 , GPR1100

Unique Broadband Systems Ltd.

Product Specifications

General Characteristics	**Receiver Architecture** **12 parallel channels**	L1 1575.42 MHz C/A code (1.023 MHz chip rate) Code plus carrier tracking (carrier aided tracking)
	Tracking Capability	12 simultaneous satellite vehicles
Performance Characteristics	**Acquisition Time** **(Time To First Fix, TTFF)** **(Tested at –40°C to +85°C)**	< 15 s typical TTFF-hot (with current almanac, position, time and ephemeris) < 40 s typical TTFF-warm (with current almanac, position, time) < 150 s typical TTFF-cold (No stored information)
	Positioning Accuracy	< 5 m, 1-sigma < 10 m, 2-sigma
	Timing Accuracy **1 PPS + 10 MHz**	< 2 ns, 1-sigma < 6 ns, 6-sigma
	Holdover Time	±1 µsec during 2 hours
Antenna	**Antenna Requirements**	Active antenna module powered by receiver module (80mA max) 10 dB to 50 dB external antenna gain measured at receiver input 5 Vdc antenna power provided via header connector (3 Vdc can be provided on demand) Recommended 5 Vdc antenna: Bullet III GPS antenna - Trimble model no. 57860-10 or equivalent
	Connector	SMA (F), 50 Ω (F-type optional) - models GPR2120, GPR1100 MMCX RF – models GPR2100, 2110
Serial Communication	**Output Messages**	Motorola Binary Protocol UBS Proprietary Protocol - Binary protocol 9600, 8,N,1
Electrical Characteristics	**Output Signal: 10MHz**	10 dBm +/-2.5 dBm, Sinewave Harmonic Level: -40 dBc max Phase Noise: 1 Hz: < -75 dBc/Hz 10 Hz: < -110 dBc/Hz 100 Hz: < -125 dBc/Hz 1 kHz: < -135 dBc/Hz 10 kHz: < -155 dBc/Hz 100 kHz: < -155 dBc/Hz Connector: BNC (F), 50 Ω (SMA optional), up to 8 outputs
	Output Signal: 1PPS	1PPS, TTL Connector: BNC (F), 50 Ω (SMA optional)
	Serial TOD (optional):	TOD information on RS232 port - for CMMB applications Connector: DB9 (F)
	Control Interfaces	1 x RS232 - all models, 1 x RS485 - all models, 1 x USB1.1 - GPR2100, GPR2110, GPR2120 only Ethernet 10/100 Base-T on RJ45 - GPR1100 only
	Alarm Relay	Dry Contact Alarm Relay available on RS485 connector - GPR1100 only
	External Power Supply **Models GPR2100, 2110, 2120**	12 Vdc; 50 mVp-p ripple (max); max 600 mA
	AC Power – Model GPR1100	100 - 240 VAC, 50 - 60 Hz; max 60 VA
Environmental Characteristics	**Operating Temperature**	0°C to +55°C (32°F to +131°F)
	Storage Temperature	-40°C to +85°C (-40°F to +185°F)
	Relative Humidity	max. 95%, non-condensing
	Altitude	3,048 m (10,000 ft.) maximum
Mechanical	**Dimensions (W x H x D)**	483 mm x 44mm x 330mm (19"x 1RU x 13") – GPR1100 140mm x 25.5mm x 140mm (5.5"x 1"approximately x 5.5") - GPR2100, GPR2110 170mm x 30.5mm x 150mm(6.7"x 1.2"x 5.9") - GPR2120
	Weight	GPR1100 –3 kg (6 lbs.), GPR2120 – 0.8kg (1 lb. and 12 oz)

Head Office - 400 Spinnaker Way - Vaughan - Ontario - Canada - L4K 5Y9 - Tel: **905 669 8533** - North America Toll Free: **1 877 669 8533** - **www.uniquesys.com** - Email: **sales@uniquesys.com**