



# GPS10RBN-16 BCD Time Output Extender



## Key Features

- BCD Time Code output with resolution to 100 ns. BCD time code updated every 100 ns
- BCD output accurate to UTC world time to typically  $\pm 200$  ns (when used with the GPS10RB)
- BCD output can drive 50  $\Omega$  cables
- BCD Output and Complementary output available on two 50 way D connectors
- 2U Rack mount case with LCD readout
- RS232 interface
- Operates in conjunction with GPS10RBN frequency standard.
- High quality design
- Low price
- Can be adapted to specific customers requirements

## General Description

The GPS10RB-16 Time Code Extender operates in conjunction with a GPS10RBN: GPS Frequency Standard. It generates a 13 digit, 48 bit, BCD Time Code Output with 100 ns frequency resolution and typically 150 ns accuracy to the 1 pps input.

The BCD time code output is synchronized to the rising edge of the 1 pps external input signal. The BCD output is updated every 100 ns and accuracy is typically 150 ns to the rising edge of the external 1 pps input.

The BCD format is HH:MM:SS.SSSSSSS, where H = hours, M = minutes and S = seconds and fractional seconds. The output is available on two 50 way "D" connectors.

One 10 MHz input and one 1 pps signal are derived from the GPS10RBN to synchronize the time code.

<b>Specifications</b>		
<b>Description</b>	<b>Specification</b>	<b>Remarks</b>
<b>BCD Time Code Output</b>		
Connectors	50 way D connector female socket	Two connectors
Output Level	AM26LS31 compatible	ANSI TIA/EIA-422-B
Code type	Binary Coded Decimal (BCD)	
Format	HH:MM:SS.SSSSSS	H = hours, M = minutes, S = Sec
Resolution and update rate	100 ns and 100 ns	
Accuracy to 1 pps input	< ± 150 ns typical	Rising edge of 1 pps input used
<b>1 pps Input</b>		
Frequency	1 pulse per second	1 pps output also available
Minimum pulse width	10 µs	
Input Level	TTL	
Edge used for synchronization	Rising edge	
<b>10 MHz Inputs</b>		
Frequency	10 MHz sinewave or squarewave	
Input level	+8 dBm to +13 dBm	
<b>RS232 Interface</b>		
Settings	9600 baud, 1 stop bit, no parity	Use Special RS232 cables only
<b>Miscellaneous</b>		
Ambient Temperature	0 °C to +40 °C	
AC Power Inlet with switch	IEC320 power cord	Rear Panel
AC Voltage Range	100 - 240 VAC @ 40 - 60 Hz	Auto switching
Power consumption	66 watts	
Dimensions (W x D x H) and weight	482.6 x 348 mm x 88 mm and 7 kg	
Accessories Supplied		
Power Cord	IEC320 type	
RS232 Interconnection Cables	“D” Connectors	Two supplied for GPS10RBN & PC
BNC Cables	2 x 300 mm BNC to BNC cables	Connect to GPS10RBN
Instruction manual		

#### **All other options**

Consult Precision Test Systems for further details of other options. Not all options can be fitted at the same time.

#### **Precision Test Systems**

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Specifications subject to change without notice. (291009)