

Hong Kong Satellite Positioning Reference Station Network (SatRef)
Automatic GPS Data Computation
Processing Parameters

(i) GPS Computation Software:	Leica Geo Office 4.0
(ii) GPS Baseline Processing Parameters:	
Cut-off Angle	10 degrees
Ephemeris Type	Broadcast
Solution Type	Automatic
Frequency	Iono free (L3)
Fix Ambiguities Up To	80 km
Minimum Duration for Float Solution (Static):	300 sec
Sample Rate:	Use All
Tropospheric Model:	Hopfield
Ionospheric Model:	Automatic
Stochastic Modelling:	Yes
Minimum Distance:	1 km
Ionospheric Activity:	Medium
(iii) Computation Precision:	
$\sigma = \pm\sqrt{[A^2 \text{ mm} \pm (B*L)^2]}$	where L is length of baseline in km. A and B are selected by user before uploading the RINEX files.
(iv) GPS Baseline Acceptance Criteria:	
<ol style="list-style-type: none"> Integer ambiguities of all GPS baselines must be fixed. GDOP must be less than or equal to 5. Spreads of repeated GPS baselines must be less than $2\sqrt{2}\sigma$ in all GPS baseline components (i.e. all horizontal and vertical components). Residuals of all GPS baselines after Least Squares Network Adjustment must be less than 2σ in all GPS baseline components (i.e. all horizontal and vertical components). 	
(v) Datum Transformation and Map Projection:	
The Geodetic Datum Transformation and Map Projection Parameter Set published by the Geodetic Survey Section of Lands Department on 1 March 2002 are used for transforming the ITRF96 Geodetic Coordinates to Hong Kong 1980 Grid Coordinates.	