

Sąd Rejonowy w Poznaniu VIII Wydział Gospodarczy KRS KRS 0000283678 Kapitał zakładowy 50 000 zł. NIP 7811806278 Regon 300614000

Certificate of Calibration

Certificate No: 09/09/12-133

Description:	High Accuracy Time Transfer System includes choke ring antenna		Manufacturer:	PikTime Systems Ltd
Model Number:	TTS-4		Serial Number:	
Customer: Hong Kong Observatory		Serial Number:		133
Calibration Date:	03/10/2012		Calibration Due Date:	
Temperature:	0 to 40 ° C		Relative Humidity:	0 to 80%
Cable dt values			Measured Device	Time transfer
100 m TTS4-133 =	415.12	ns	Accuracy:	Precision: ~1ns
2 m TTS4-133A =	8.11 ns	;		Time transfer
RMS 0,5 ns				accuracy: ~2ns

This is to certify that the equipment has been calibrated against a primary time standard that is traceable to the international time standard maintained by BIPM. The equipment is fully implement and comply with the Consultative Committee for Time and Frequency (CCTF) Group on Global Navigation Satellite System (GNSS) Time Transfer Standards (CGGTTS) guidelines for manufacturers of GNSS receivers used for timing. The ensemble is traceable to the National Institute of Standards and Technology (NIST) by the long-term comparison measurement with Global Positioning System (GPS).

Robert Urbaniak

Robert Ubarrat

03/10/2012