



Items	Detection and tracking works	Simulation-based signal optimization
Consumed time	15 min	4 mins 48 secs including 53 simulation runs in total
Computing speed	25-30 fps which satisfy the real-time requirement	Around 5.4 secs for each 15-min simulation run
Whether the time consumption could be reduced	No. This time interval is fixed , as it is required by building traffic models for any signal optimization works, except that the CV module could run 24-hour make desired vehicle data available at any time.	Yes. Better computing equipment could further reduce the time consumptions.
Supporting materials	 <p>Videos clips in GitHub</p>	 <p>Screenshot during running traffic models</p>
Computing equipment	GPU farm: GPU: NVIDIA RTX 2080Ti for each video signal channel Ethernet switches:10G File servers:576T	A workstation: CPU: Intel Xeon Gold @ 3.00 GHz GPU: NVIDIA Quadro P2000 RAM: 128G ROM: 5T

Fig. S3 Time consumption of the CV-TM framework's application in the case study