

**Supplementary Table 1**

<b>Single-cell parameters</b>		
$\theta$	33mV	spike emission threshold (E and I)
$v_R$	24.75mV	reset potential (E and I)
$\tau_m$	10ms	membrane time constant (E and I)
$\tau_{arp}$	1ms	absolute refractory period (E and I)
<b>Network parameters</b>		
$N_E$	32000	number of E neurons
$N_I$	8000	number of I neurons
$c_{EE}$	0.2	probability of E→E connection
$c_{IE}$	0.3	probability of E→I connection
$c_{EI}$	0.4	probability of I→E connection
$c_{II}$	0.4	probability of I→I connection
$\langle W_{EE} \rangle$	0.37mV	average E→E efficacy
$\langle W_{IE} \rangle$	0.66mV	average E→I efficacy
$\langle W_{EI} \rangle$	0.44mV	average I→E efficacy
$\langle W_{II} \rangle$	0.54mV	average I→I efficacy
$\langle W_{EE}^2 \rangle$	0.26mV <sup>2</sup>	average square of E→E efficacy
$\langle W_{IE}^2 \rangle$	0.65mV <sup>2</sup>	average square of E→I efficacy
$\langle W_{EI}^2 \rangle$	0.49mV <sup>2</sup>	average square of I→E efficacy
$\langle W_{II}^2 \rangle$	0.53mV <sup>2</sup>	average square of I→I efficacy
$H_E^{(ext)}$	77.6mV	external input to E neurons
$H_I^{(ext)}$	57.8mV	external input to I neurons
$f$	0.1	memories' coding level (sparseness)