Supporting figures for:

**Multiple value storage based on a nano-electronic-mechanical mechanism using graphene flakes**

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Figure S1. current level distribution of (a) the two-level storage mechanism and (b) the three-level storage mechanism.

Figure S2. (a) window size change on the measurement sequence with an exponential dependence at the beginning. (b) window size variation around a averaged value when stabilized.
Figure S3. (a) I-V relationship of single contact (S) and the double contact (D), respectively. (b) log-log plot of the I-V relationship show a SCLC conducting mechanism with the slope of ~ 1.5 (green lines).

Figure S4. (a) A current–position relationship that failed to show four current-level storage mechanism but only a three current-level storage mechanism due to the lost of window overlapping. (b) Current level distribution from the current–position relationship.
Figure S5. The lost of storage window in low current density condition. Low current density can be due to lower applied voltage. Arrows show positions of current level jumps. Two curves were shifted for a comparison.