

Macro Roundup Article

Headline: [The Goal for China's Chip Giant: Cut Out the U.S.](#)

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Author(s)	Yoko Kubota
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Tweet: In an effort to eradicate dependence on US technology, China established another national semiconductor fund in May worth roughly \$48B on top of a previous \$50B. However, China has no homegrown alternative for higher-end lithography machines.

Summary: Last year, Huawei Technologies released its new Mate 60 smartphone, which contained a system-on-chip made with SMIC's technology comparable with the 7-nanometer process. It was seen as a feat because SMIC and other Chinese chip makers don't have access to the latest lithography machine made by ASML. Veteran semiconductor-manufacturing engineers think Huawei and its partners could have made the chips using a process that exposes the silicon to light multiple times instead of once—but doing so would lead to worse yields and higher costs. At more advanced levels of chipmaking, the technique would become even more difficult and less efficient, the engineers say. China has no homegrown alternative for the higher-end lithography machines. The country's top domestic option is Shanghai Micro Electronics Equipment Group, whose website shows it makes lithography machines for production of chips as advanced as 90-nanometer circuit size. Globally, that technology was introduced more than 20 years ago.

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