

## Case Study: China is addressing the limited roof space and shading challenges with TS4 MLPE.

**Location:** Shanghai, China

**System Size:** 33.6kWp of Solar PV

**Modules:** 116 JA Solar 290W Mono  
4 Sungrow inverters  
Tigo® Smart Modules

### Challenge

A beautiful Tuscan style mansion on a golf course in Shanghai has challenging slopes and limited roof space along with tall trees surrounding the protected site.

### Summary

The owner wanted to have maximum energy harvest within a limited and challenging roof space.

JA Solar and their installer team have installed 116 x 290W Panels on a roof top in Shanghai, China. Hoping to get more roof space in such challenging roof slopes, the owner and the installer decided to integrate Tigo's smart modules to harvest energy from all panels even with a lot of shady spots.

### Projected outcomes:

Thanks to the Tigo's smart modules, the shaded panels do not impact the rest of their strings' production. Shade bypass allows the entire installation to generate 30% more energy than a traditional solar system. They were able to gain maximum energy within limited rooftop space regardless of modules direction, and were able to save money on the O&M service by using monitoring service.



Challenging roof space for panel set up



Ingenious and well thought design for this unusual rooftop. Thanks to Tigo® smart modules this difficult layout harvests maximum energy.



Underperforming panel doesn't impact the other panels in the same string.