



Smart Micro Smoke Detection Unit Positioning Bracket (MK3S+)



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Summary

A bracket that holds the Smart Micro smoke detection unit directly over the extruder on the stock cross-member (MK3S+)

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I want to be able to print without babysitting, so for an added level of safety and peace of mind when I am not in the immediate vicinity of the printer, I opted to use the smoke detection system found here [Smart Micro™ - Pioneering Tech](#) just in case.

This bracket is so I can mount the smoke sensor directly above the extruder where I would imagine the majority of 3DP fires originate. The printer will be going in an enclosure as well, so at the top of the enclosure is the right place.

If you aren't familiar with Smart Micro, it is a system designed for detecting fires in microwave ovens. You put the base unit (nothing more than a pass-through plug) at the upstream wall socket and plug your main power into it. If the sensor “smells” smoke it will kill the power to

everything you have plugged in though the base unit, which will be EVERYTHING in my installation.

The theory is that most 3DP fires will come as a result of burned wires at the hot end and, since that kind of fault would certainly start with some smoke prior to ignition, this system could hopefully catch the issue at the smolder stage before any actual ignition. If it does go all the way to fire, having the power dead will still be a good thing.

The bracket uses the simple Prusa spool mounting approach so you can place the sensor anywhere along the main beam.

I printed it in PETG at 0.30 draft and auto supports.

Model files



smoke-detector-bracket.stl

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