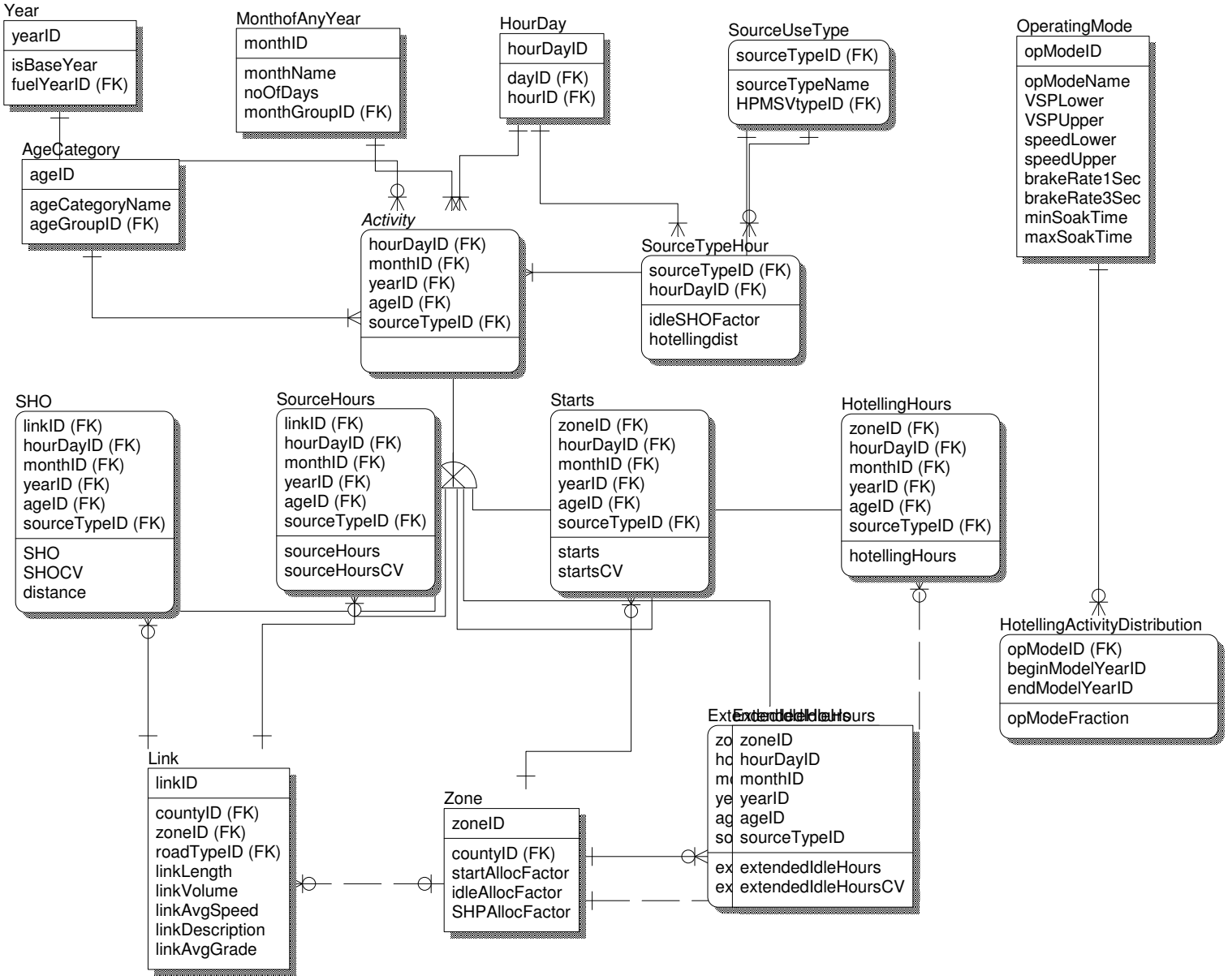Core Model Total Activity Input