



The full metal Koolance RAM-33 is among the most efficient liquid cooled memory product available. Koolance's (patent-pending) memory coolers physically run liquid along both sides of every DDR4, DDR3, DDR2, DDR, or SD DIMM. (Not compatible with FB-DIMM.) This occurs all the way down to the bottom of every chip!

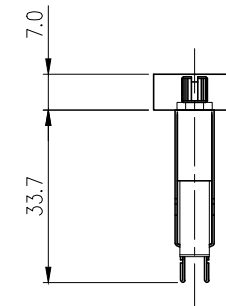
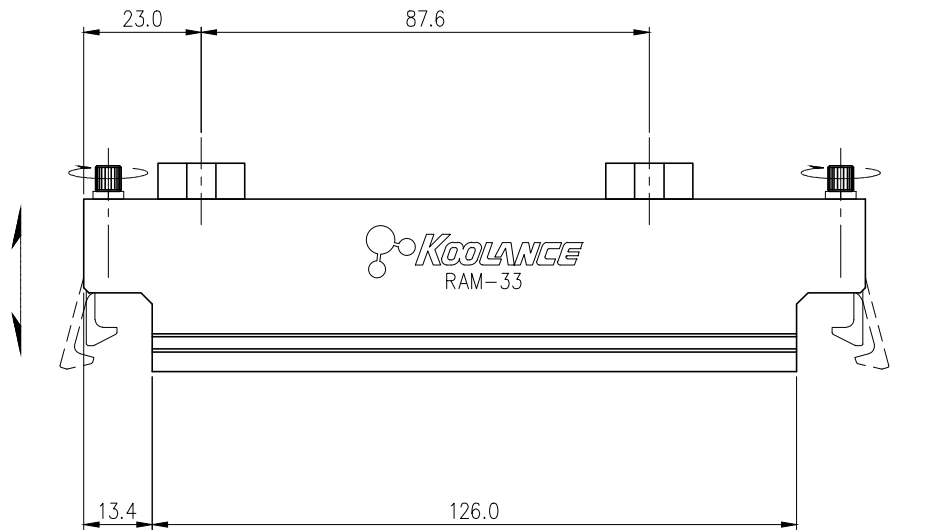
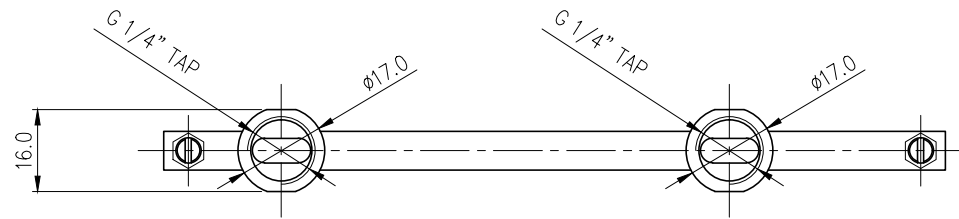
Competing products offer only partial coverage at best. Usually, liquid is simply run above two RAM heat sinks which extend in between banks, and most of these are not available in single slot solutions. Koolance memory products get liquid directly over every module.


The RAM-33 is fully expandable-- water cool 1, 2, or even 16+ consecutive DIMM slots using any manner of tubing configuration. G 1/4 BSPP (parallel) thread fittings are provided directly above each block. The RAM-33 includes

many other innovations, from its staggered design which allows for contiguous slot cooling, to a convenient spring-hook style mounting method. Thermal interface material is included if using single-sided memory sticks.

NOTES: To install the Koolance RAM-33 cooler, the memory's original heat spreaders or heat sinks (if any) should be removed in order to fit. If your memory sticks have heat spreaders, please verify these can be safely removed before purchasing the RAM-33.

| General | |
|--------------------------------|--------------------------------------|
| Weight | 0.25 lb (0.11 kg) |
| Max Pressure Tolerance @ 25 °C | 1.5kgf/cm2 (21.3psi) |
| Max Temperature Tolerance | 100 °C (212 °F) |
| Wetted Materials | Nickel-Plated Brass, Stainless Steel |



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|--|---------|-------------|----|-------|----|-----------|-----|-----------------|---------|
| | | | | | | | | | |
| NO. | | DESCRIPTION | | | | MATER'L | | QUANTITY | REMARKS |
|  KOOLANCE® | | | | | | UNIT | MM | PART NO. RAM-33 | |
| | | | | | | SCALE | N/S | TITLE | |
| DATE | BY | BY | BY | APPRO | BY | 3RD ANGLE | | Ass'y | |
| 05/09/2017 | S.J.LEE | | | | | DWG. NO. | | ITEM | |
| | | | | | | | | | |