

FM-SHIELD

Radio Mounting Kit for High-Impact Environments

FM-SHIELD provides an easy-to-use, reliable, and robust method of installing Fluidmesh radios in extreme environments. FM-SHIELD is an auxiliary mounting kit designed to withstand specialized hazards, such as extreme vibration, highly-pressurized hot and cold water, and destructive impacts from heavy objects. FM-SHIELD also provides a solid platform from which to install and maintain a Fluidmesh radio under challenging conditions.



FM-SHIELD was designed with open-pit and underground mining in mind, with specific focus on haul trucks, dozers, shovels, drills and loaders. The difficult environmental conditions of mining often mean that radios can only be installed inside the cabins of vehicles. This requires longer-than-optimum antenna cables, leading to degraded RF performance. In addition, the cabs of mining vehicles usually have limited space for installation and maintenance of radio gear, leading to unwanted complication. FM-SHIELD solves all these problems, allowing customers to install a Fluidmesh radio outside a vehicle and as close as possible to its antennas, thus limiting RF losses and increasing transmission ranges. As usual, power and connectivity can be provided by POE using a CAT5/6 cable, or through dedicated data and DC power connections.

Since it allows a larger range of installation options, FM-SHIELD provides customers with a platform to leverage Fluidmesh MPLS technology, and deploy multi-radio beam-forming configurations on vehicles. Using FM-SHIELD allows protected radio units to be freely installed around a vehicle without need to run overly long antenna cables. This feature is particularly valuable on, for example, dual-radio haul trucks, and when building a beam-forming configuration on a large shovel or drilling rig.

FM-SHIELD has been designed to fit all major-brand mining trucks, and for applications such as fleet management, tele-remote dozing, autonomous drilling and autonomous hauling. FM-SHIELD includes N-type connectors for RF cables, a metal structure with a variety of mounting holes, and a mounting bracket designed to fit tubular structures such as railing systems.

FM-SHIELD is compatible with all Fluidmesh FM4200M, FM4200F, FM3200E, FM3500E, FM4500M and FM4500F radios. The kit includes QMA-to-N jumper cables and a semi-transparent polycarbonate front cover to allow for easy radio-gear inspection.

FM-SHIELD is the result of more than 100,000 hours of field testing and validation in a production environment under the most extreme conditions, and once again demonstrates Fluidmesh's understanding of and commitment to customer requirements for reliable wireless communication in Operational Technology (OT) environments.

FEATURES

FM-SHIELD was designed and produced according to the highest standards of quality.

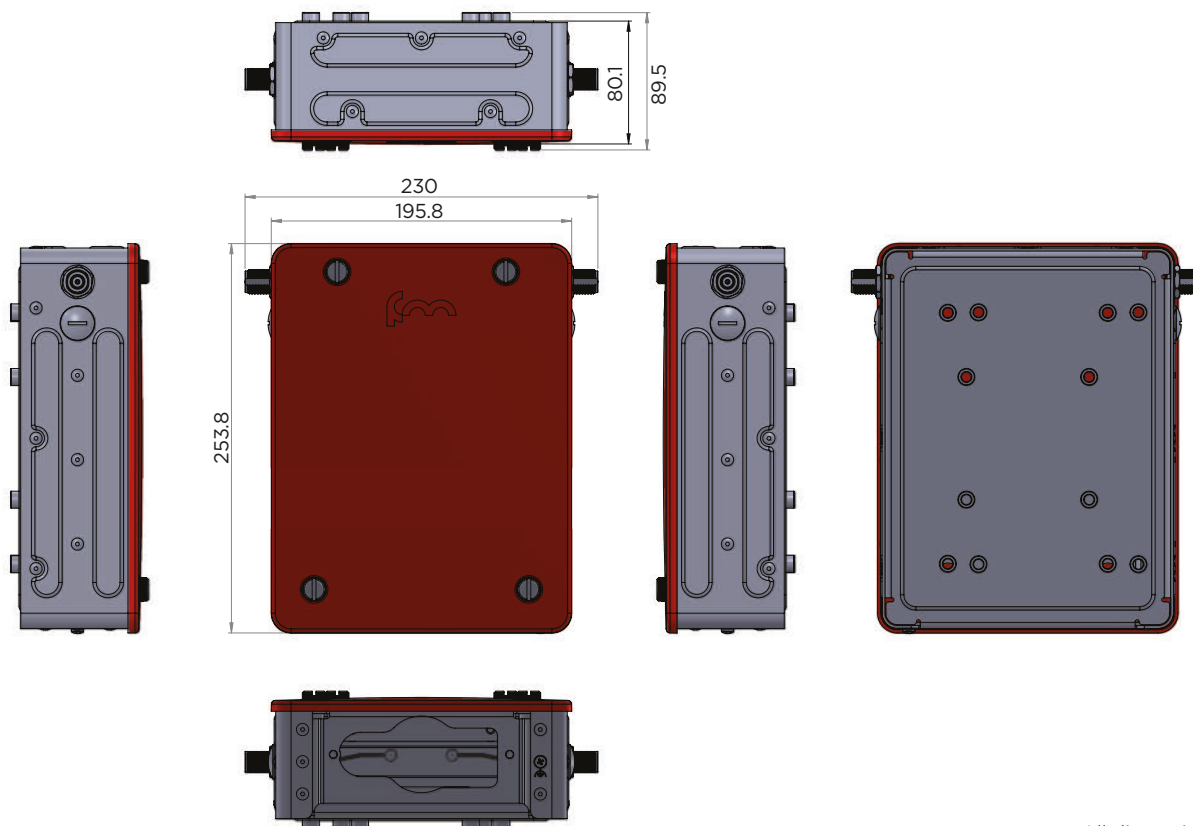
- Steel Protective Enclosure with Polycarbonate cover, designed to protect against high-pressure water jets and high-impact loads.
- Proven in high-vibration environments, including Dozers, Loaders, Drills, and Haul Trucks.
- N-Female antenna connectors for easy integration and minimal RF signal loss.
- Designed for Installation within Automation cabinets, or on Vehicle hand railings or Antenna poles.
- Transparent front panel with self-retaining screws for easy inspection.

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TECHNICAL INFORMATION

Supported products	FM 3200 ENDO, FM 3500 ENDO, FM 4200 MOBI and FIBER, FM4500 MOBI and FIBER
External connectors type	N-Female
Grounding pin	Please refer to the installation instructions for proper grounding
Dimensions	W x D x H 230 mm x 89.5 mm x 253.8 mm * Leave 10 cm on each side for cable installation
Weight	2,8 kg without pole-mounting bracket 3,5 kg including bracket
Operating Temperature	-40 °C to +70 °C
Coating	1. Salt spray test: 240 hours (NSS standard) 2. Pressurized hot water resistant: 80°C, 4-6Mpa, 120 seconds
Impact resistance	20 Inch/Pound
Wind survivability	180 km/h
Mounting options (included)	Wall mount, Pole mount



All dimensions are in mm.

Fluidmesh Networks products are installed locally by professional System Integrators and are available worldwide through a network of Authorized Dealers. For additional information please call +1.617.209.6080 or visit us at fluidmesh.com



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