

Installation Instruction – SW3-771 L[G]M[X] Series

SW3-771 - Document Version 1.0

A. Introduction

The L[G]M[X]-24-58 range has been designed to provide MiMo dual band WiFi coverage in an ultra low profile package. The compact, robust low-profile housing contains up to four antenna elements with effective isolation and low correlation covering 2.4-2.5/4.9-6GHz.

The antenna is designed to be panel mounted on vehicles or devices and can be fitted on a conductive or non-conductive panel. Supplied with integral flame retardant CS32 cables (Compliant to UNECE 118.01 and EN45545-2) and a halogen free flame retardant radome, the antenna is suitable for many environments and applications.

The LGM variants have an integrated GPS/GNSS module with 26dB LNA gain.



Electrical Safety Note

Versions of this product contains an active GPS antenna (part number SR8-HG26). Rated voltage: 3-5VDC Rated current: 20mA maximum

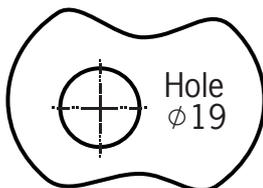
The supply to this device must be provided with overcurrent protection of 1A maximum.

B. Mounting requirements and selecting location

This antenna range can be deployed with or without a conductive ground plane.

Ensure that there is adequate under panel clearance and that there is no double skin panel or cross brace present. Measure to check for central position if applicable. For optimal performance the antenna should, if possible, be mounted at least 300mm (1ft) away from other conductive objects on the mounting panel.

C. Prepare and drill hole



Mask panel area around hole position to protect paintwork and headliner. Drill a pilot hole, and then increase to 19mm (3/4"), ensuring that drill/cutter bit does not contact headliner. Clean area around the hole, carefully removing all swarf. Do not mount to a hole larger than 19mm diameter.

If mounting to a conductive ground plane remove paint and primer from under panel surface to ensure adequate earth contact by washer and nut. Apply some petroleum jelly or paint around the hole to prevent corrosion.

D. Fitting the antenna

Remove protective backing from underside of antenna, feed coaxial cable(s) through panel. Position the antenna over the hole and stick to panel by applying firm downward pressure. Assemble nut from underside and tighten. **IMPORTANT:** Do not exceed a torque of 5Nm (3.6ft/lbs) when tightening the mounting nut.

E. Routing and terminating coaxial cable(s)

Connect the coaxial cables to antenna and route to equipment, taking care to avoid fouling any moving vehicle component. The cables must not be routed in front of any airbag device.

F. Commission and test

Check comms cables:

- Earth continuity: connector body to vehicle ground should measure $<0.2\Omega$;
- Using a suitable antenna analyser, carry out a VSWR test in each freq. band.
- The VSWR should comply with values shown in the data sheet.
- Connect the antenna to the coaxial cable and carry out a system check.

Check GPS cable:

- Check the GPS cable with DC to measure high resistance.
- Connect the GPS cable to the GPS receiver and check for satellite acquisition.

G. Notices



European Waste Electronic Equipment Directive 2002/96/EC

Please ensure that your old Waste Electricals and Electronics are recycled do not throw them away into standard waste.



RF Safety Note

This antenna should be mounted in such a way that no person is within 20cm (8") of the antenna during use.



Directive 2014/53/EU: Radio Equipment Directive (RED)

Harmonised Standards and References:

EN 301 489-1 (V2.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements".

Referencing EN 61000-4-2:2009 – Electrostatic Discharge Immunity and EN 61000-4-3:2006 +A1:2008 +A2:2010 – Radiated RF Immunity

EN 300 440-1 V1.6.1 (2010-08) – Electromagnetic compatibility and radio spectrum matters (ERM); short range devices; radio equipment to be used in the 1GHz to 40GHz frequency range; Part 1: Technical characteristics and Test methods in accordance with EN 300 440-2 V1.4.1 (2010-8) - Electromagnetic compatibility and radio spectrum matters (ERM); short range devices; radio equipment to be used in the 1GHz to 40GHz frequency range

Low Voltage Directive: Directive 2006/95/EC (Electrical Equipment designed for use within certain voltage limits) of August 2007. Compliance is declared according to:

EN60950-1: Safety of information technology equipment – according to test specification EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011.

Directive 2011/65/EU (RoHS 2)

This product is fully compliant with the RoHS 2 directive. Exemption 6.c applies