



Trimble EMPOWER

EM120 2.4 GHZ MODULE

The Trimble® EMPOWER EM120 is a rugged, lightweight, EMPOWER module that can connect to any Trimble EMPOWER base device. It is designed to allow communication between Trimble robotic-enabled total stations and compatible base devices—providing seamless integration to robotic total stations through a wider range of data collectors—without compromising range or robotic functionality.

RADIO

Module only

- 2.4 GHz radio

ENVIRONMENTAL SPECIFICATIONS

Independently tested IEC ratings:

Water/dust ingress.....	IP68 (IEC 60529)
IP-X8	protected against the effects of total water immersion beyond 1 m for long periods under pressure—user stated requirement
IP-6X	Protected against dust; IEC-60529, dust chamber with under-pressure 8 hours of operation with blowing talcum powder

Meets or exceeds the following standards based on MIL-STD-810G test ratings:

Drops.....	Survived multiple drops of 1.2 m (4 ft) on concrete; Method 516.6, Procedure IV, Transit Drop
Operating temperature.....	–30 °C to +60 °C (–22 °F to +140 °F); Method 502.5, Procedure I, II, III (low temp operating –30 °C); Method 501.5, Procedure I & II (high temp operating +60 °C) (max temp may be duty-cycle limited)
Storage temperature.....	–40 °C to +70 °C (–40 °F to +158 °F); Method 502.5, Procedure I, II, III (low temp storage –40 °C); Method 501.5, Procedure I & II (high temp storage +70 °C)
Temperature shock	Cycles between –30 °C and +60 °C (–22 °F and +144 °F); Method 503.5, Procedure I-C
Humidity.....	90% relative humidity non-condensing temperature cycle between –30 °C and +60 °C (–22 °F and +144 °F); Method 507.5, Procedure II
Vibration.....	General minimum integrity and loose cargo tests; Method 514.6, Procedure I & II, Category 5
Solar exposure	Survives prolonged UVB exposure; Method 505.5, Procedure II

PHYSICAL DIMENSIONS

- Dimensions (L x W x H): 102.5 mm x 55 mm x 49.7 mm (4.04" x 2.17" x 1.96")
- Weight: 163 g (5.75 oz)
- Housing: Polycarbonate + Polycarbonate/PET blend
- Color: Black

COMPLIANCE CERTIFICATIONS

- FCC and IC (USA & Canada) approvals
- ACMA (Australia & New Zealand) approvals
- ANATEL (Brazil) approvals
- CE Mark (Europe) approvals
- TRA (UAE) approvals
- ICASA (South Africa) approvals
- Safety: NRTL & CB Scheme, RoHS compliant

IN THE BOX

- Trimble EM120 EMPOWER module
- External antenna
- Quick start guide



Key Features

- ▶ **Rugged:** Meets the rigorous MILSTD-810G military standard for drops, vibration, humidity, and extreme temperatures with IP68 rating for dust and water ingress
- ▶ **Trimble EMPOWER:** The EMPOWER solution expands the capabilities of your base unit now or in the future with optional modules

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