

# DMR-200L Inmarsat D+ Low Elevation Terminals

## Product Overview

SkyWave's DMR-200 series Inmarsat D+ terminals set the industry standard for reliable burst-messaging satellite communications with low total cost of ownership. SkyWave D+ network operates over Inmarsat's high quality international satellite constellation, and is the one choice for mobile and stationary asset security and management applications deployed anywhere in the world.

The DMR-200L is the **only** D+ terminal that is specifically designed for low elevation applications. Incorporating a special antenna design, the terminal is able to support applications down to  $-5^{\circ}$  to the horizon. As with all SkyWave D+ terminals, the DMR-200L utilizes a high degree of integration to minimize cost and complexity of the overall solution. The DMR-200L contains a satellite transceiver and low elevation antenna, GPS receiver, digital and analog inputs/outputs and a variety of firmware-based options are all housed in a compact, ruggedized environmentally sealed package

## Applications

GPS reporting enables asset tracking for vehicles, equipment, or containers for security and fleet management. Tracking capabilities are enhanced with built-in support for sensors and actuators to monitor conditions and provide added features such as automatic door or engine locking. The low elevation antenna of the DMR-200L makes it ideal for deployment in geographic extremes on land, or at sea where terminal motion reduces the effective angle to the satellite.

In marine applications, the DMR-200L is the key component of vessel monitoring systems (VMS) or ship security alert systems (SSAS) which enable fleet operators to meet international legal and safety requirements.

SSAS has been a requirement of the International Marine Organization (IMO) since 2004. SkyWave's DMR-200L terminals exceed all applicable tests necessary to meet the IMO's hardware requirements for the SSAS market. The deployment of the DMR-200L in SSAS solutions enables operators to ensure compliance to the IMO's regulations, and the security of their ships, cargo, and crew anywhere in the world's oceans.

In commercial fishing, navigational or environmental weather buoy applications, use the DMR-200L as the heart of your solution to collect and relay data to maximize catch yields, aid in navigation or monitor oceanic conditions. The DMR-200L enables low total cost of ownership with its high reliability and ease of use.



### Key Benefits

- Reliable global coverage
- Low total lifecycle cost
- Easy to install
- Painless integration with application software
- Feature options balance capital and functional needs

### Key Features

- Exceptional low-elevation angle performance
- Ruggedized environmentally sealed packaging
- Prioritized communications
- Exception-based reports
- Over-air programming
- Integrated input/output
- Multiple geofences
- Data logging
- Inmarsat type approved
- Highly reliable network



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## Technical Details

- Full API & development toolkit for scripting
- Serial I/O via RS-232
- 4 Integrated I/O lines
  - Digital or analog
  - Voltage or current
  - Wake-up enabled
- From-terminal messaging
  - 64 bits typ; 80 bits max
- To-terminal messaging
  - Tone (4 alert codes)
  - Numeric (to 200 digits) or alpha (to 133 char)
  - Transparent (up to 100 bytes)

## Product Specifications

Physical	Size Weight Enclosure	160mm (diameter) x 100mm (height) 640g Ruggedized, environmentally sealed
Environmental	Operating Temperature Storage Temperature Humidity Vibration  Shock (survival)	-40C to +70C -40C to +85C 95% Relative Humidity at 30°C 5-20 Hz; 1.92 m2/s3 random noise 20-500 Hz; -3dB octave random noise Half sine 6ms, 300m/s2
Electrical	Input Voltage Power Consumption (typ @ 12VDC)  Mating Connector	9 VDC to 36 VDC Sleep: 500µA; Receive: 0.9W; Idle: 0.25W; GPS active: +0.5W; Heater active: +1.5W; Transmit: 10W Conxall Mini-Con-X® 6282-8SG-3DC
Satellite	Network Coverage Frequency  EIRP Elevation Angle GPS Accuracy	Global; Spot beams & 4 overlapping regions Rx: 1525.0 to 1559.0 MHz Tx: 1626.5 to 1660.5 MHz 9 dBW max 0 to 90 degrees 16 channels; 1575.42 MHz 2.5m CEP; 5.0m SEP
Certifications		Inmarsat Type Approval DCC004 FCC; RSS-201; CE Mark; E Mark NEMA 4/4X; IP56 IEC 60945:2002 (SSAS)

Product	Application/Configuration Description	Ordering Code
DMR-200L	Bottom-mount connector with GPS	SM200217-BHG
	Side-mount connector with GPS	SM200217-SHG
	Bottom-mount connector (non-GPS)	SM200217-BHN
	Side-mount connector (non-GPS)	SM200217-SHN
DMR-200 Evaluation Kit	Evaluation Kit for DMR-200; Limited Airtime; (order with DMR-200 terminal)	SM200232-EVA
DMR-200 Feature Options	Integrated Data Logging feature	**

\*\* Contact SkyWave for details

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# SkyWave

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