



Savi® Mobile Reader SMR-650



Built on Savi's EchoPoint™ technology, the Savi Mobile Reader takes real-time data collection to a new level. The Savi Mobile Reader is an integrated mobile, low profile, lightweight, battery operated reader module that is used for the purpose of commissioning, identifying and configuring Savi RFID tags. The SMR-650 includes a serial DB-9 interface connector and works in conjunction with a notebook or desktop PC or other devices with DB-9 RS-232 serial connectors.

Savi Readers


Savi Readers are a key component of RFID solutions for real-time, end-to-end visibility of goods and critical assets moving through the supply chain. Our mobile readers provide greater flexibility to locate specific items and augment Savi Fixed Reader coverage with the operational flexibility provided by portability.

EchoPoint Technology

Savi's EchoPoint technology is an innovative and patent pending technology that leverages the best features from several traditional RFID technologies into a single, highly cost-effective solution. Using two operating frequencies, EchoPoint combines long-range communication with precise spot-level locating. Together with worldwide acceptance and low infrastructure costs, EchoPoint is uniquely suited to the demands of today's global supply chains.

Key Features:

- Battery operated RFID reader for reading and configuring Savi and Savi Network compatible RFID tags.
- Short-range, low frequency transmitter for commissioning EchoPoint RFID tags.
- Long-range, two-way UHF receiver/transmitter for tag wakeup, read, and write.
- Compatible with all Savi RFID tags, including Savi ST- 41x series tags and Savi EchoPoint Series 600 tags.



SMR-650 Product List

Model #s	Description	Power	Plug
SMR-650-210 (Short - 1 ft cable)	Kit includes <ul style="list-style-type: none"> SMR-650 mobile reader, DB-9 cable (short 1 ft) with over-molded connectors and w/integral 1/8" jack for external charger, power. 	Battery Charger Supplied via Wall Charger	DB9
SMR-650-213 (Long - 9 ft cable)			



Specifications

Physical	Dimensions:	6.25 in(L)* x 2.5 in(W) x 1 in(H) - 15.88 cm(L)* x 6.35 cm(W) x 2.5 cm(H) *Note: Length includes antenna and cable
	Weight:	6.4 ounces (181 grams) with clip
Environmental	Temperature:	Storage: -4°F to + 140°F (-20°C to + 60°C) Ambient Operating: -4°F to + 140°F (-20°C to + 60°C) Ambient; 32°F to + 104°F (0°C to + 40°C) When Charging
	Humidity:	5% to 95% non-condensing. IP64 Compliant.
	Altitude:	Max is 40,000 ft (12,192 m); Rate of change is 2,000 ft (610m) per minute
	Vibration:	MIL STD 810E Method 514.4, Category10, Procedure 1, Minimum
	Shock:	MIL STD 810E Method 514.4, Category10, Transit Drop Methods 516.4, per NTSA Project 1A
	Enclosure:	Sealed to IP62
UHF Receiver (Uplink)/	UHF Frequency:	433.92 MHz
	UHF Range:	Up to 200 feet with the SaviTag 600/410 series, line of sight reader and tag; 5 ft above ground
	Modulation:	FSK, deviation +/- 50KHz
	Data Rate:	27.8 Kbps, 50% duty cycle
UHF Transmitter (Downlink)	Data Coding:	Manchester (EBCS/EP) and PCM (BCS)
	UHF Air Protocol:	EchoPoint Air Protocol 2.1 (Two-way UHF commands; Seal extension commands) BCS/EBCS Commands
	RX Signal:	Rx Signal Strength Indicator (RSSI) Supported
	Receiver Sensitivity:	-100 dBm
	UHF Antenna:	50 Ohms matched external helical antenna
	Max. Transmit Power:	0.6 mW
Network	Interface:	Interface back to network requires mobile computer to be enabled with wireless or wired docking station.
	Protocol:	UDAP protocol used to communicate with Savi SmartChain Site Manager.
LF Transmitter	Frequency Range:	123 KHz, Up to 3.5 feet (1.07 meters) with SaviTag-6XX Series
	Modulation:	ASK On-Off keying
	Data Rate:	Avg. 1.6 Kbps, 50% duty cycle
	Data Coding:	Pulse Code Modulation
	Antenna:	Integrated on-board ferrite core antenna
	Air Protocol:	EchoPoint Air Protocol 2.1; EchoPoint Air Protocol 1.1
Power	AC Source for RFID Reader:	AC wall adapter for charging battery 6 ft. cable; Input 110/220 VAC, Output 5V +/- 10%regulated, 300mA
	Internal battery:	Rechargeable Li-Ion battery (3.7V for @420mAh up to approx. 500 recharging cycles @ 80% or more of full battery capacity). Capacity sufficient for 3 to 4 days of continuous operation depending on usage assumption. Battery is non-replaceable by the user.
	Indicators:	Green LED (Heart Beat and Battery Charge Status); Yellow LED (UHF Valid Packet Receive Activity)
Approval	Radiated Emission:	FCC Part 15; RSS 210; ETSI, EN 300 220-1 (433 MHz) and EN 300 330 (123 KHz); IEC 60601-1-2; EN 301 489-1
	Electromagnetic Emission:	ESD Compliance (EN 301 489-1)
	Safety:	AC Adaptor: U.S. UL 60950; CSA C22 950; CE EN 60950 Ordnance: HERO Rated min. 4" or more of safe separation distance Other Safety: U.S. UL1604 (approved for use in Hazardous Locations, Division 2, Class I, Groups A,B,C,D, Class II, Groups F,G, Class III.; EN 60950
Connectors	1 foot and 9 foot cables with integrated DB9 connector	

About Savi

With over 16 years experience, Savi is a proven leader in RFID solutions for the management and security of supply chain assets, shipments and consignments. Savi's integrated RFID hardware and software solutions drive business value, such as reducing supply chain assets, inventory and operational costs. Founded in 1989, Savi Technology is a wholly-owned subsidiary of Lockheed Martin, with headquarters in Sunnyvale, California, and offices in Johannesburg, London, Melbourne, Singapore, and Washington D.C. For more information, visit www.savi.com.

Contact Savi

Let us show you how Savi's supply chain solutions can work for your organization. In the United States, call toll-free 800-428-0554, international customers dial 408-743-8000. Contact Savi Asia at 65-62411191, Savi Australia at +61 03 9882 4430, and Savi EMEA at +44 1344 742 815 (Great Britain), or +2711 469-3144 (S. Africa). Visit www.savi.com or email us at sales@savi.com.

About Lockheed Martin

Headquartered in Bethesda, Md., Lockheed Martin employs about 135,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2005 sales of \$37.2 billion.

Copyright © 2006 Savi Technology, Inc.
All rights reserved. 6/11/06

