

## Specifications

### Radio and Modem

Frequency Band	2.400-2.4835 GHz (SU-M-2.4) 902-928 MHz (SU-M-900)		
Operation Mode	Time Division Duplex		
Radio Access Method	FH-CDMA		
Standard Compliance	FCC Part 15.247, ETS 300 328		
Channel Bandwidth	1 MHz (SU-M-2.4) 2 MHz (SU-M-900)		
Output Power (at antenna port)	25 dBm Typical (SU-M-2.4) 23 dBm (SU-M-900)		
Maximum Input Power (at antenna port)	-20 dBm		
Nominal Receive Sensitivity (at antenna port, BER 10E-6) for each Bit Rate	1 Mbps	2 Mbps	3 Mbps
	-84 dBm	-77 dBm	-68 dBm (SU-M-2.4)
	-90 dBm	-84 dBm	-77 dBm (SU-M-900)
Modulation	GFSK modulation (1, 2, 3 bits / symbol @ 1 Msymbol/sec)		

### Data Communications

Standard Compliance	IEEE 802.3 CSMA/CD, Bridging based on IEEE 802.1D, support for 8 MAC addresses		
VLAN support	Based on IEEE 802.1Q		
Traffic Prioritization	Layer-2 Based on IEEE 802.1p Layer-3 ToS according to RFC791		
Security	FHSS signalling, RC4 WEP option for authentication, VLAN filtering, Mgt. IP filtering FIPS 140-2 when used with approved third party IP mobility software solution		
MIR/CIR bandwidth	Programmable for each user, separately for uplink and downlink. Range: 0 2200 Kbps, 1 Kbps resolution.		

### Environmental

Operating Temperature	-10°C to 60°C
Operating Humidity	5% - 95% non-condensing, weather protected

### Connectors

Connector	Description
Antenna	N-Type Connector with Omni 5dbi mobile antenna included (diversity support with SU-M-2.4 only)
ETH	10BaseT Ethernet (RJ 45)
DC IN	11 ft., 18 AWG, 2 conductors with fuse and automotive connector.

### Power Supply Requirements

Unit	Details
SU-M unit	External power supply 9-18 VDC or Battery. 2.5 A

### Mechanical

Unit	Structure	Dimensions	Weight
SU-M (excluding antennas and connectors)	Metal box, vehicle mountable	11.5 x 8.75 x 4.5 in 30 x 20 x 12 cm	5.5 lbs 2.5 kg

# BreezeACCESS SU-M Mobile Radio Unit

## Broadband Access for the Moving Mile

The BreezeACCESS SU-M Mobile Radio Unit is the first wireless access product designed to provide easy and quick access to IP services in a mobile environment. Unlike competing systems, a single base station can provide mobile coverage for dozens of square miles depending on terrain. Featuring the same technology used for years by the military to provide robust, interference resistant communications, the SU-M can reliably transfer large files in seconds, even in RF-hostile environments.

Ruggedized to meet the demands of public safety first responders, the SU-M is the ideal solution for mobile applications serving fast-paced and demanding business, homeland security, and public service organizations, ensuring true mobile broadband capabilities that help to increase the efficiency and effectiveness within these types of environments.

Most currently deployed mobile data systems are isolated off the infrastructure LAN, and operate on a slow, shared 28 Kbps connection. The data functions they can handle are limited in speed and size, which can result in an unnecessary reduction in the content of needed information. But when the SU-M is deployed, users enjoy a significant increase in efficiency because the SU-M can transfer large amounts of data at very high capacities.

The SU-M is designed to operate in unlicensed bands to enable simple installation, red tape-free deployment, and rapid demand-based scalability. Unlike most unlicensed devices, the SU-M uses special interference resilient modulation and advanced tuning features to ensure operation even in noisy environments. Models are available in 2.4 GHz and 900 MHz.

Featuring an Ethernet 10BaseT connection to the mobile computer and SNMP or Telnet remote management, the SU-M is immediately deployed and scales easily to the changing needs of the network environment. In addition, it ensures uncompromising security to prevent hacking and data theft. FIPS 140-2 security is available when used with an approved third party IP mobility software solution.

## Product Highlights

The SU-M delivers a comprehensive range of product features, ensuring fast, consistent, and reliable mobile networking services, including:

- Design compatibility with BreezeACCESS II and 900 base stations
- A rugged, trunk-mountable radio unit
- Assured operation using typical automobile power (9-18 VDC)
- A design compliant with EN300 019-2-5 transportation specifications for shock, vibration, and environment
- Support for diversity antenna (2.4 GHz model only)
- Robust anti-interference architecture
- A wireless connection to status utility for the PC
- SNMP or Telnet management capabilities
- An Ethernet 10BaseT connection to the PC
- Wide coverage from a single unit to lower cost, complexity, and maintenance

## BreezeACCESS SU-M System Components

Requirements: The SU-M requires BreezeACCESS II/900 infrastructure (base stations, access units, or cell extenders), a 12 Volt automotive power source, a 10BaseT Ethernet cable, and a vehicle-mounted PC. The SU-M package includes: one SU-M radio unit, one vehicle mounted 5 dBi antenna, one open-ended 12 Volt power cable assembly and one mounting hardware pack.

