

# AirEther™ SB54

## Dual Band Outdoor Wireless Bridge, Access Point, Repeater



Inscape Data's AirEther™ SB54 Dual Band Outdoor Wireless Bridge, Access Point, Repeater product is designed for outdoor long-range wireless communication up to 50km. Based on the IEEE 802.11 a/b/g standards operating on 2.4GHz or 5GHz frequency with peak transmit power up to 500mW\* and 300mW\* respectively. The AirEther SB54 is an ideal cost-effective solutions for building-to-building wireless communications, parking lot security, and last-mile internet subscriber applications. The SB54 product is capable of operating at one of the four modes: Access Point, Wireless Bridge, Repeater, or Client Bridge. The ruggedness of IP68 rated enclosure and extreme temperature ratings along with host of product features makes the AirEther SB54 the product choice for long range wireless networking and IP video security applications.

Our AirEther SB54 products are designed with the Power over Ethernet (PoE) feature, which allows power and data transmitted over a single network cable. This capability provides for simple, convenient installation. When you use the LPS1000 Outdoor PoE Switch and networking with any of the NVC Series Cameras, all the wireless devices and the cameras are networked within a single outdoor LAN (Local Area Network). It becomes much easier to manage, integrate, install, maintain, and troubleshoot. Based on Inscape Data's patent-pending technology, our new Outdoor PoE Switch greatly lessens challenges for outdoor LAN design, integration, and deployment.

\*For continuous power specification at various wireless data rates, please refer to backside of datasheet.

### KEY FEATURES & BENEFITS

#### Carrier Class Quality

Carrier class broadband wireless access solution provides scalability, reliability, and superior performance in the most challenging environments.

#### License Free Long Range Dual Band Operation

Software Selectable 2.4 GHz or 5 GHz operation offers over 20 non-overlapping channels for the most flexible interference free application scenario without the need for regulatory frequency licensing.

#### Internal and External Antenna Selection

Embedded 12 dBi 2.4 GHz antenna offers nominal wireless range. If extended range up to 50km is desired, the use of external 2.4 GHz or 5GHz antenna is optional.

#### Wireless Multimedia

Based on the IEEE 802.11e standard, Wireless multimedia (WMM) provides enhancement for voice and video over IP applications

#### Rugged Outdoor Weatherproof Design

The IP68 compliant weatherproof enclosure, connectors, and extreme weather rating electronic components continue to perform in the most extreme weather conditions.

#### Multi-Mode Configuration

Single device with up to four modes of operation: IEEE compliant 802.11a/b/g Access Point, Wireless Bridge, Wireless Repeater, and IEEE compliant 802.11a/b/g Client.

#### Power over Ethernet

The built-in PoE feature eliminates power connection at the camera location. This eliminates the need of running an additional power line cable.

#### Integrated RF Site Survey Tool

RF wireless site survey tool built into every radio for simplified frequency planning and installation.

#### Secure Wireless Transmission

Equipped with Government Strength Advance Encryption System (AES), transmission of top level information is highly secure with the AirEther outdoor wireless system.

### APPLICATIONS



#### WIRELESS VIDEO SECURITY

For hard to wire video applications, Inscape Data outdoor antenna system economically transmit and receive sensitive security images to secure parking lots, property perimeter, and even the most remote places.



#### WIRELESS NETWORK SOLUTIONS

Building to building wireless connectivity or point to multipoint wireless bridges, Inscape Data outdoor wireless system provides high reliability and performance for the most demanding wireless networking applications.



#### WIRELESS INFRASTRUCTURE

Complete outdoor wireless infrastructure solutions from Inscape Data catering to wireless internet service providers, municipalities, SCADA, wireless machine to machine, telemetry, institutions, campuses, and more. Inscape Data is your one-stop source for high performance economical wireless base station solutions.

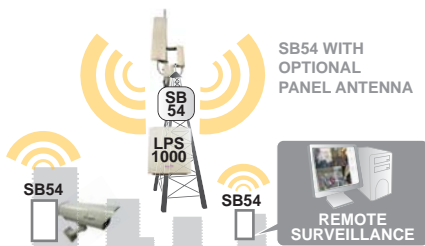


#### CARRIER SOLUTIONS

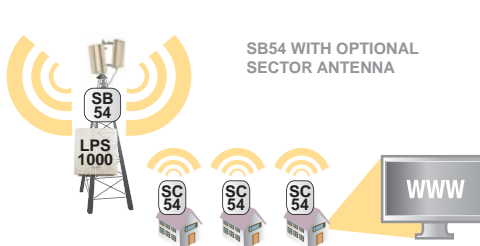
Inscape Data outdoor long range wireless solutions provide the best in class 2.4 GHz and 5.8 GHz IP bridge system. The high performance characteristics keep the carrier wide-band high capacity backhaul and wireless transmission networks moving in the most extreme weather conditions.

### SYSTEM CONFIGURATIONS

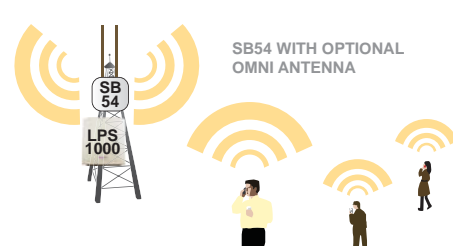
#### Outdoor Wireless IP Video Surveillance




#### Outdoor Wireless Internet Service



#### Outdoor Wireless VoIP Service



Hardware	
<b>Enclosure Protection</b>	IP68 Compliant
<b>Environmental</b>	-40°C to +85°C
<b>Humidity</b>	95% @ 55°C
<b>Frequency</b>	2.412 ~ 2.477 GHz, 5.180 ~ 5.250 GHz, 5.260 ~ 5.320 GHz, 5.745 ~ 5.825 GHz
<b>LAN port</b>	1
<b>Number of Radio</b>	1
<b>Operating Channels</b>	IEEE802.11 b/g: 1 ~ 11 Channels (America), 1 ~ 13 Channels (General Europe), 1 ~ 14 Channels (Japan) IEEE802.11a: 4 Channels (Japan), 19 Channels (Europe), 18 Channels (USA)
<b>Modulation</b>	OFDM (64-QAM, QPSK, BPSK / DSSS (DBPSK, DQPSK, CCK)
<b>Transmit Power 802.11a**</b>	19dBm @ 6-24Mbps, 18dBm @ 36Mbps, 17dBm @ 48Mbps, 16dBm @ 54Mbps
<b>Transmit Power 802.11g**</b>	25dBm @ 6-24Mbps, 23dBm @ 36Mbps, 22dBm @ 48Mbps, 21dBm @ 54Mbps
<b>Transmit Power 802.11b**</b>	25dBm
<b>Receiver Sensitivity 802.11a</b>	-92dBm @ 6-24Mbps, -80dBm @ 36Mbps, -76dBm @ 48Mbps, -72dBm @ 54Mbps
<b>Receiver Sensitivity 802.11g</b>	-92dBm @ 6-24Mbps, -80dBm @ 36Mbps, -76dBm @ 48Mbps, -72dBm @ 54Mbps
<b>Receiver Sensitivity 802.11b</b>	-96dBm @ 1Mbps, -95dBm @ 2Mbps, -93dBm @ 5.5Mbps, -92dBm @ 11Mbps
Software	
<b>Wireless</b>	802.11R IEEE 802.11a IEEE 802.11 b/g Wireless Channel Support Country Selection: FCC, ETSI, Japan SSID assignment Client BSSID assignment WMM Support Bandwidth Control: UP/DOWN kbps 802.11g Only Support TPC (Transmit Power Control) Support: 5 Steps RSSI (dBm) RF Site Survey Burst Mode Maximum Range (Use of External Antenna): 50km
<b>Operation Mode</b>	AP: 64 Stations PTMP Bridge - No AP (AP + PTMP Bridge) WDS Client
<b>Security</b>	Http User Name & Password Access Control List, i.e (None/Accept/Deny) Wireless Encryption: Open, Shared, WPA-PSK, WPA2-PSK, WPA & WPA2, 64bit/128bit/256bit WEP, TKIP, AES-CCMP Support Wireless Station Isolation Hide SSID
<b>Management</b>	Wireless Client/Station List HTTP Web Based Configuration (IE) IP Alias Configuration File Backup / Restore SNMP v1, v2c, 802.11 Mib Host Name
<b>Configuration Retention after FW Upgrade</b>	Yes
<b>DHCP Client</b>	Yes
<b>VPN Pass Through</b>	Yes
Network	
<b>Protocols</b>	TCP/IP, RTSP, UDP, IGMP, DHCP, Tags, PPPoE
<b>Maximum Ethernet Clients Supported</b>	64
Compliance	
	

\*\* 2.4GHz Peak Transmit Power Up to 500mW. 5GHz Peak Transmit Power Up to 300 mW.

**Dimensions**  
a. 7.5 inches  
b. 4.73 inches  
c. 1.84 inches

**Interface**  
1. Status LED  
2. Type N Antenna Interface  
3. RJ45 Female Power over Ethernet Power



**ACCESSORIES**

**PIS200**  
Dual-Port DC PoE Injector with Surge Suppressor



**PES100**  
1-Port PoE Surge Suppressor



**LSS001**  
RF Lighting Arrestor (0 to 6GHz)



**WC002**  
Waterproof Connector Set



**AC100 1M**  
Low Loss Antenna Cable, N-Male to N-Male



**WC Series**  
Outdoor UV protected Cat5 Network Cable



**OA Series Omni-Directional Antenna**



**PA Series Panel Antenna**



**SA Series Sector Antenna**



**GA Series Parabolic-Grid Antenna**



**COMPATIBILITY**

- LPS1000 Adjustable Voltage Outdoor 5-Port PoE Switch
- NVS IP Video Server
- SC54 Dual Band Outdoor Long Range Wireless Client Bridge
- NVC IP Video Camera

**PACKAGE CONTENT**

1. SB54
2. AC/DC Power Adapter
3. WC002 Weatherproof Connector Set
4. PIP100 1-Port DC PoE Injector
5. User Manual CDROM
6. Pole Mount Bracket System
7. Installation Guide and Warranty



THE LEADING  
OUTDOOR NETWORK  
APPLIANCE COMPANY

Total Turnkey Solutions for Outdoor PoE, Wired/Wireless, and IP Video Applications

Product Information Online: <http://www.inscapedata.com/sb54.htm>

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