AirEther™ 2000AP

High Power Dual Radio Indoor WIFI Access Point
Built-In Smart Antenna

FEATURES

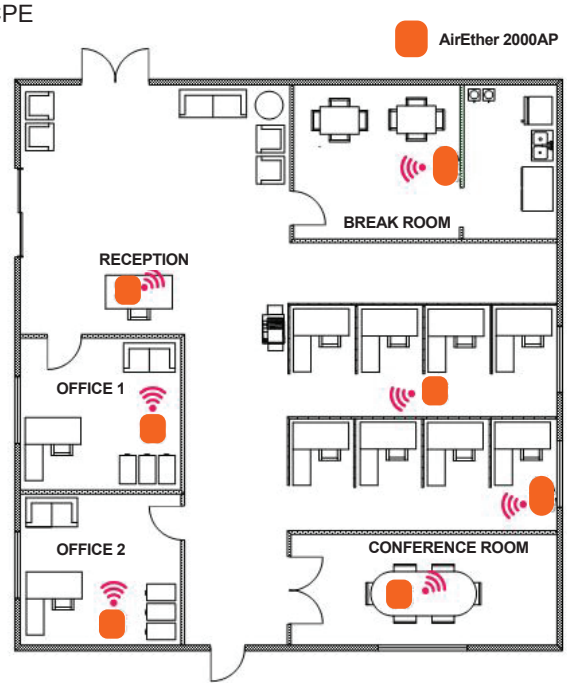
Inscape Data's AirEther™ 2000AP Access Point 802.11b/g/n/ac indoor Access Point, i.e., Hot Spot, System is designed for indoor wireless broadband access solution for wireless Internet applications. Based on the IEEE 802.11b/g/n/ac standards operating on 2.4GHz and 5GHz frequency with data rate up to 867Mbps in 802.11ac 80MHz channels. AirEther 2000 AP is the ideal cost-effective indoor wireless broadband solution for enterprises, school campuses, and hotels to support WiFi enabled smart phones, tablet computers, notebook computers, and mobile devices.

The AirEther wireless products are designed with the Power over Ethernet (PoE) feature, which allows power and data transmitted over a single network cable. This capability enables simple and convenient installation. When you use with one of Inscape Data's LinkPower™ 2000AF/AT Series PoE Switch products networked with any of the NVC Series IP Cameras, e.g., NVC660MP and NVC770MP, all the wireless devices and the IP video cameras are networked within a single indoor 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 indoor and outdoor PoE Switch significantly lessens wiring challenges for indoor and outdoor LAN design, integration, and deployment.

- IEEE 802.11ac compliant and backward compatible with 802.11abgn
- Atheros 533MHz Networking Processor AR9344
- 2.4G/5G concurrent radios,2.4GHz 26dBm and 5GHz 27dBm aggregate power
- Data rates of up to 867Mbps in 802.11ac 80 MHz channels
- Enhanced sensitivity performance
- Built-in 4Bi@2.4GHz & 5dBi@5GHz pyramidl omni smart antenna
- Antenna Alignment Site Survey - LEDs
- Integrated Power-over-Ethernet
- Support Wall-mounted or Ceiling-mounted

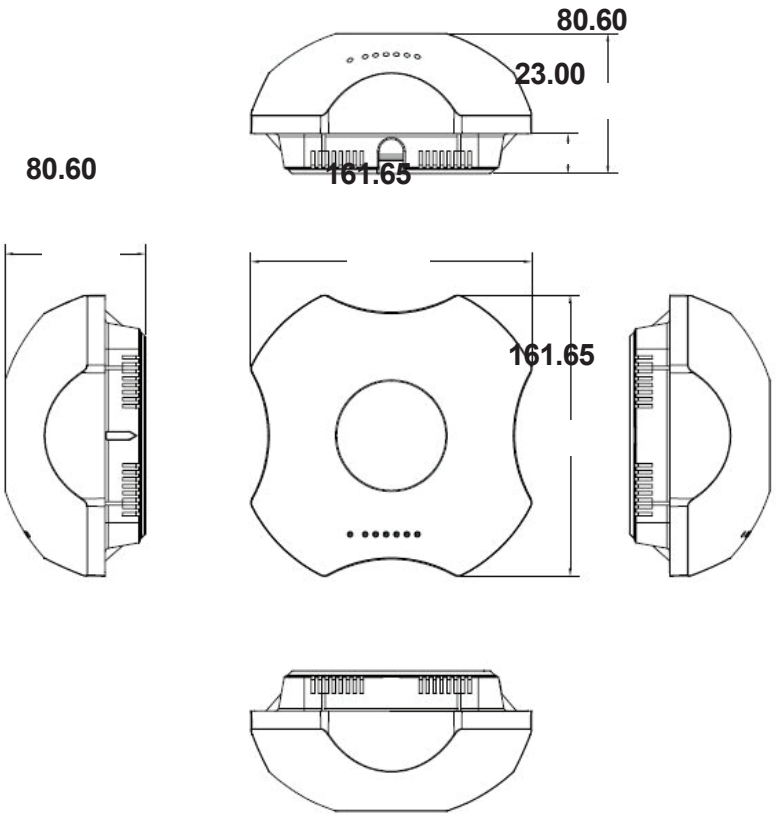
APPLICATIONS

- Dual band,Dual concurrent AP
- 802.11ac+802.11bgn AP / 802.11an+802.11bgn AP
- Point to Point / Point to MultiPoint
- CPE



(5G back-haul and 2.4G coverage)

DIMENSIONS (mm)



System Information	
Processor	Qualcomm-Atheros AR9344
Memory Size	128MB DDR2
NOR Flash	16MB
Antenna	Integrated 4Bi@2.4GHz & 5dBi@5GHz pyramidal omni smart antenna
Ethernet	2 GE ports with Auto-MDI/X
Power Solution	DC Jack Input:24-56V, Passive PoE: 36-48V, IEEE 802.3af/at PoE
Power Consumption	18W
RoHS Compliant	Yes
Humidity	Operating: 5% to 95% (non-condensing) Storage: Max.90% (non-condensing)
Temperature Range	Operating:-20ºC to 70ºC Storage: -40ºC to 90ºC
Dimensions (H x W x D)	161.5 x 161.5 x 80 (mm)

Transmit Power & Receiver Sensitivity

		Data Rate	Aggregate Power
2.4G On-board Radio	**Transmit Power**	6M	26dBm
		54M	22dBm
		HT20 MCS0	26dBm
		HT20 MCS7	20dBm
		HT40 MCS0	26dBm
		HT40 MCS7	20dBm
	Receiver Sensitivity	Data Rate	Sensitivity
		6M	-90dBm
		54M	-75dBm
		HT20 MCS0	-90dBm
		HT20 MCS7	-72dBm
		HT40 MCS0	-88dBm
		HT40 MCS7	-70dBm

			TCP [each client upload and download randomly from 384Kbps to 768Kbps]		UDP [each client upload and download 2Mbps]	
Max of concurrent associations	Encryption	Client Latency	Single radio	Dual radio	Single radio	Dual radio
	WPA2-PSK	<100ms	40 clients	70clients (35 per radio)	20 clients	30clients (15 per radio)

TX Specifications

	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance		Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
802.11a	6Mbps	24dBm	27dBm	±2dB	**5GHz 11n/ac HT20**	MCS 0	23dBm	26dBm	±2dB
	9Mbps	23dBm	26dBm	±2dB		MCS 1	23dBm	26dBm	±2dB
	12Mbps	23dBm	26dBm	±2dB		MCS 2	23dBm	26dBm	±2dB
	18Mbps	23dBm	26dBm	±2dB		MCS 3	23dBm	26dBm	±2dB
	24Mbps	23dBm	26dBm	±2dB		MCS 4	23dBm	26dBm	±2dB
	36Mbps	23dBm	26dBm	±2dB		MCS 5	23dBm	26dBm	±2dB
	48Mbps	21dBm	24dBm	±2dB		MCS 6	21dBm	24dBm	±2dB
	54Mbps	19dBm	22dBm	±2dB		MCS 7	19dBm	22dBm	±2dB
						MCS 8	17dBm	20dBm	±2dB
						MCS 9	16dBm	19dBm	±2dB
5GHz 11n/ac HT40	MCS 0	23dBm	26dBm	±2dB	**5GHz 11ac HT80**	MCS 0	23dBm	26dBm	±2dB
	MCS 1	23dBm	26dBm	±2dB		MCS 1	23dBm	26dBm	±2dB
	MCS 2	23dBm	26dBm	±2dB		MCS 2	23dBm	26dBm	±2dB
	MCS 3	23dBm	26dBm	±2dB		MCS 3	23dBm	26dBm	±2dB
	MCS 4	23dBm	26dBm	±2dB		MCS 4	23dBm	26dBm	±2dB
	MCS 5	22dBm	25dBm	±2dB		MCS 5	22dBm	25dBm	±2dB
	MCS 6	21dBm	24dBm	±2dB		MCS 6	21dBm	24dBm	±2dB
	MCS 7	19dBm	22dBm	±2dB		MCS 7	19dBm	22dBm	±2dB
	MCS 8	17dBm	20dBm	±2dB		MCS 8	17dBm	20dBm	±2dB
	MCS 9	15dBm	18dBm	±2dB		MCS 9	15dBm	18dBm	±2dB

RX Specifications

	DataRate	Sensitivity	Tolerance		DataRate	Sensitivity	Tolerance
802.11a	6Mbps	-94dBm	±2dB	**5GHz 11n/ac HT20**	MCS 0	-94dBm	±2dB
	9Mbps	-94dBm	±2dB		MCS 1	-94dBm	±2dB
	12Mbps	-94dBm	±2dB		MCS 2	-92dBm	±2dB
	18Mbps	-92dBm	±2dB		MCS 3	-88dBm	±2dB
	24Mbps	-89dBm	±2dB		MCS 4	-84dBm	±2dB
	36Mbps	-86dBm	±2dB		MCS 5	-81dBm	±2dB
	48Mbps	-82dBm	±2dB		MCS 6	-78dBm	±2dB
	54Mbps	-80dBm	±2dB		MCS 7	-77dBm	±2dB
			±2dB		MCS 8	-74dBm	±2dB
			±2dB		MCS 9	-71dBm	±2dB
5GHz 11n/ac HT40	MCS 0	-93dBm	±2dB	**5GHz 11ac HT80**	MCS 0	-89dBm	±2dB
	MCS 1	-91dBm	±2dB		MCS 1	-88dBm	±2dB
	MCS 2	-90dBm	±2dB		MCS 2	-85dBm	±2dB
	MCS 3	-85dBm	±2dB		MCS 3	-81dBm	±2dB
	MCS 4	-82dBm	±2dB		MCS 4	-79dBm	±2dB
	MCS 5	-78dBm	±2dB		MCS 5	-75dBm	±2dB
	MCS 6	-77dBm	±2dB		MCS 6	-74dBm	±2dB
	MCS 7	-75dBm	±2dB		MCS 7	-72dBm	±2dB
	MCS 8	-73dBm	±2dB		MCS 8	-70dBm	±2dB
	MCS 9	-71dBm	±2dB		MCS 9	-68dBm	±2dB

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1.Multiple SSID
Supports up to 16 virtual access points (VAP) per radio, with unique BSSID. Each VAP can configure their own security
2.Long Range Support
Suitable for long range wireless deployment with Proprietary Long Distance Algorithm for ACK and CTS timeout adjustment support.
Provides recommended values for the parameters as well as allow for manual fine-tuning for optimal performance.
3.Selectable Spectrum Bandwidth Support
Options to select operation over 20MHz and 40MHz spectrum bandwidth

Key Software Specifications	
Operating Modes	• Access Points • Access Points WDS • Station • Station WDS
WAN Type	• Static IP • Dynamic IP • PPPoE • DHCP
Device Management	• HTTP / HTTPs Web Server • SNMP V3 • Telnet / Secure Shell (SSH)
Data Capture & Notification	• System Log • Kernel Log
Advanced Features	• Built-in DHCP server • Transmission Power Control (One dB per step) • Closed System (Suppress SSID) • Transmission Rate Control • Spanning Tree Protocol
Other Prominent Features	**Description**
Long Range Parameter Settings	Suitable for Long Range wireless deployment with high receiver sensitivity
CPE Point-to-Point (PtP)	Ideal as CPE device connecting PtP with a central AP
IEEE 802.11h (DFS & TPC)	Enables worldwide operation through support for standards-based Dynamic Frequency Selection (DFS) and Transmission Power Control (TPC)
SNMP	For multiple SSID, firmware upgrades. Easy for customers to integrate with SNMP-based controller
Signal Strength LEDs Indicators	4 Step Progressive Bars. Each bar represents a progressive increase in Signal strength, with 4 bars representing maximum signal strength (100%)
VLAN Management	Can manage the AP through VLAN ID
VLAN Ethernet Trunk	Map VLAN IDs to multiple SSID
Chillispot (Hotspot)	Can use with/without Radius Server

Product Information Online: http://www.inscapedata.com/2000ap.htm
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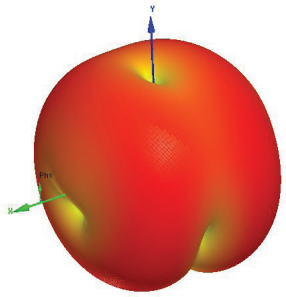
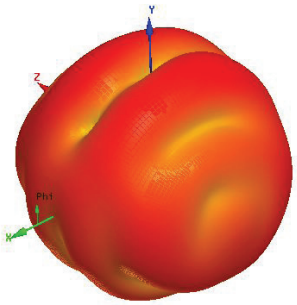
Antenna Radiation Patterns

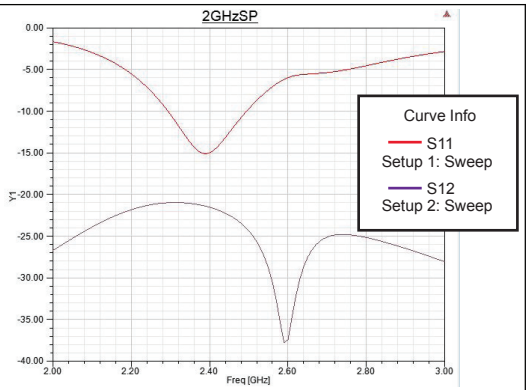


2.4GH – 4dBi

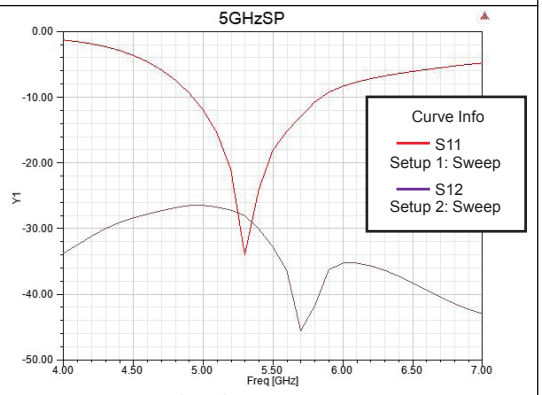


5GH – 5dBi

S- Parameters

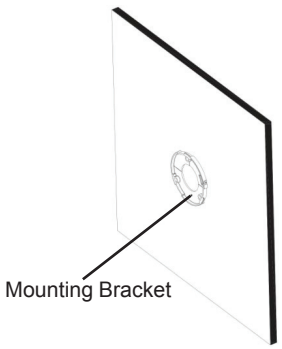


2.4GHz S-Parameters

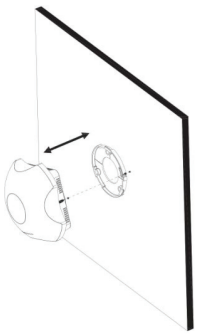


5GHz S-Parameters

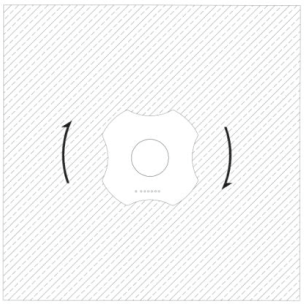
MOUNTING INSTRUCTION



Step 1:Mounting bracket



Step 2:Align the notch on the AP with the AP with the notch on the Mounting Bracket



Step 3:Turn the AP clockwise until it locks into place (To remove the AP,turn the AP counterclockwise)

PACKAGE CONTENTS

1. AirEther 2000AP
2. PIS1000 802.3af Gigabit PoE Power Injector
3. Ceiling Mount Screw Set
4. Quick Install Guide
5. Product CD

InscapeData
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/2000ap.htm

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