

3000 Series

Wireless Broadband Customer Premise Solutions



**2.4 GHz & 5.8 GHz
Unlicensed and
Licensed Frequencies**

Client Mode Solutions

**Secure Broadband
Wireless**

**Single Integrated
Solution**

10/100 Base-T

802.11x

DSL

T1 /E1

Voice

Non Line of Sight

Routing

**Secure
Switching**

Voice

Rapid ROI

The **3000 Series** products from AirRunner Technologies are broadly flexible, fully functional low cost customer premise equipment designed for mobile, office, and residential gateway environments. Designed with rugged outdoor or indoor enclosure configurations, the 3000 series is ideally suited to the provision of broadband Internet and voice services. The base units are available with either 1 or 2 switched Ethernet ports and either 0 or 2 VoIP ports. Each unit will accept two AirRunner PMC cards that support any combination of 2.4GHz or 5.8GHz wireless modules, a 4 port Ethernet switch card, a T1/E1 or ADSL port, serial asynchronous 4 port card or a 2 or 4 port VoIP port card. Other licensed and non-licensed frequency wireless modules are available.

Private or Public Networks

While primarily intended for Internet access usage, the 3000 Series can also operate in a private IP network including private Intranets for uses including military, government, heavy industrial, commercial, warehousing and tourism. Total control of bandwidth usage over wireless and routed links is provided using flexible traffic shaping and bandwidth management software.

Non Line of Sight (NLOS) and Meshed Solutions

Using proprietary meshed networking techniques AirRunner revolutionizes Non Line of Sight (NLOS) connectivity issues to seamlessly ensure high-speed communication connectivity. Each node in the network dynamically routes the packets to the intended host or gateway system eliminating the need for each host to have a direct line of sight access to the base station gateway. 3000's operate in client mode, supporting point-to-point operation and can see up to three other sites. Bandwidth aggregation and backhaul is handled by AirRunner 4000 and 5000 series Access point products.

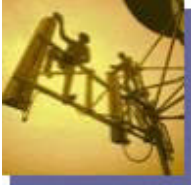
Secure Broadband Wireless

Wireless and Wireline Security concerns are addressed with the incorporation of VPN services using an IPSec endpoint via a hardware assisted onboard encryption engine. The strongest commercially available encryption techniques are supported. VPN is supported on all wireless and wireline links and supports a total throughput up to 15Mbps. Powerful Firewall support with stateful packet inspection and flexible packet filtering systems along with NAT, and local or relay DHCP services complement the security offerings. The 3000 Series products also include specific monitoring tools to detect and notify the network manager when the network appears to be the target of a Distributed Denial of Service (DDoS) attack.

Intuitive Management

All products in the 3000 Series feature an easy to use WEB user interface to manage and monitor the system. The multi-user WEB interface supports three levels of security access and modes where complex configuration settings are hidden from the inexperienced user. Configuration system access may be restricted on a per interface basis. Remote management is supported using SNMP. The command line interface is compliant with Cisco CLI (IOS) and can be accessed using the integrated serial port or remotely via a telnet session, providing access to all configuration options.





Voice over IP

Toll quality voice is supported in some versions of the 3000 via 2 integrated VoIP ports. Additionally the 2 or 4 port card may be added for a total of up to 6 VoIP ports. Service providers may offer both local and long distance calling plans. Industry Standard protocol support for SIP and MGCP ensure rapid and trouble free deployment.

High Speed Mobile Solutions

For high-speed mobile applications such as transport or emergency vehicle access AirRunner exclusively recommends using Dynamic Forward Routing (DFR) from Communique. Further information on DFR is available on application.

3000 Series Specifications

Software Specifications

Configuration Interface Network Services

CLI - Cisco IOS compatible; HTML Web User Interface; Telnet; Asynchronous Serial Terminal
Extensive and Flexible NAT (RFC 1918); PAT forwarding; DHCP Server, Client, Relay Agent; DNS Proxy; DNS Port Forward

IP Routing Services

RIP1 (RFC 1058); RIP 2 with MD5; OSPF; Static; DFR (Dynamic Forward Routing)

Network Services

Extensive and Flexible NAT (RFC 1918) and PAT forwarding; DHCP Server, Client, Relay Agent

VPN Services

Multiple link encryption – 3DES, DES, AES, Blowfish, CAST; AH; ESP; PPTP; PAP; CHAP

Diagnostics

Event log view; IP route table display; ARP; Ping; Trace route; DNS

Statistics

Link monitoring and statistics collection for each link including packets/bytes transmitted, received, dropped, errors, and average throughput etc.

Logging

Multi Level log file generation used to monitor network events, access attempts, and failures. Key events may trigger e-mail notification

Network Services

Extensive and Flexible NAT (RFC 1918) and PAT forwarding; DHCP Server, Client, Relay Agent

Operating Mode

Operates in Point-to-Point or Point-to-Multipoint mode and supports DFR and Mesh network architecture.

Protocols

IPv4, IPv6, PPPoE (RFC 2516), PPPoA (RFC 2364)

Product Codes

Externally mounted 3000 in outdoor enclosure

Indoor 3000 in office enclosure

E/3000-1-0	3000 with 1 Ethernet port and 0 VoIP ports	3000-1-0	3000 with 1 Ethernet port and 0 VoIP ports
E/3000-1-2	3000 with 1 Ethernet port and 2 VoIP ports	3000-1-2	3000 with 1 Ethernet port and 2 VoIP ports
E/3000-2-0	3000 with 2 Ethernet ports and 0 VoIP ports	3000-2-0	3000 with 2 Ethernet ports and 0 VoIP ports
E/3000-2-2	3000 with 2 Ethernet ports and 2 VoIP ports	3000-2-2	3000 with 2 Ethernet ports and 2 VoIP ports

2000 Series Product Option Modules – Maximum of two per 3000 base unit

2024-01-1	2.4Ghz ISM Wireless module	21ET-01-02	Dual Port T1 / E1 module
2058-01-1	5.8 Ghz ISM Wireless module	21V3-01-01	Single Port V35 Interface module
21SA-01-4	4 Port Serial Asynchronous module	26VI-01-02	2 Port VoIP module
2210-01-4	4 x Switched 10/100 Ethernet Port Module	26VI-01-04	4 Port VoIP module
23AD-01-1	Single port ADSL module		

Wireless Specifications

Frequency Range	2.4 to 2.4835 GHz DSSS	5.15 – 5.25 GHz; 5.25 – 5.35 GHz; 5.725 – 5.850 GHz
Data Rate	1 – 11 Mbps	72 Mbps
Sensitivity	-89 dBm for 11 Mbps	-70 dBm at full bandwidth
Bit Error rate	1 x 10 ⁻⁶	TX Power +10 dBm to +32 dBm selectable
Antenna Connector	N type. Indoor and Outdoor Omni, Sectorized and high gain directional antenna systems supported.	

Hardware Specifications

Humidity	5% to 95% non-condensing	Power	AC 240/120V input nominal	Temperature	0 – 50C
Dimensions	W 8 x H 1.8 x D 8 inches; W20 X H4.5 x D 20 Centimetres			Compliance	Pending

AirRunner Technologies
Suite 10, 605 Highway 50, Zephyr Cove NV 89449 USA
Tel +1 530 544 8800 Fax +1 530 544 9919

www.airrunner.com

P.O. Box 102 Kilmore Vic 3764 Australia
Tel +61 35781 1690 Fax +61 3 5781 1691



AirRunner reserves the right to modify specifications without notice at any time.
AirRunner is a registered trademark of AirRunner Technologies (Aust) Pty Ltd
DFR is a registered trademark of Communique
Cisco is a registered trademark of Cisco Systems
Antenna and Cabling not included
Version 1.2 April 2003