

# Wireless FMC ROUTER

The Wireless FMC Router from Actiontec allows owners of hybrid mobile/WiFi phones to use their home WiFi network to make and receive cellular calls, automatically switching calls from the cellular network to the home WiFi network whenever the cellular signal strength drops below a certain level. Plus, it is the first Fixed Mobile Conversion router that intelligently detects other hardware connections and then configures itself.

## Perfect for Homes with Weak Cellular Signals

If you have problems receiving cellular calls while you are home, fret no more. With the Actiontec Wireless FMC Router you can now receive all of your cellular calls clearly, using your home WiFi network. Once you arrive at home, the phone will detect the presence of the WiFi signal and once the signal strength reaches a preset value (configurable by the provider), your hybrid phone will switch over to your WiFi network, allowing you make and receive calls using your stronger WiFi network.

## Switches Calls Transparently

At home, your hybrid phone will automatically and transparently switch from the cellular network to your Wi-Fi connection using the FMC Router, even while you are talking on the phone! On the phone but need to head out of the house, your hybrid phone will switch from its Wi-Fi interface to the mobile interface as the signal strength drops below a certain level. As this happens, the phone, automatically switches from the Wi-Fi to the cellular interface and the FMC Router will gracefully comply and transfer the call, disconnecting itself from the conversation.



Model # FMC3000

## Plug 'n Play Install with new Software

The FMC Router can be installed painlessly, even when you may have an existing router and/or broadband modem in your network. When attached to another router or other hardware, the router will automatically detect the other device and extract the necessary settings. For example, if it is connected to another router, it turns itself into a switch. If it is connected to a DSL modem, it automatically populates itself with the settings and passwords originally used for modem setup. If it is attached to another wireless router, it configures itself with a unique SSID (Service Set Identifier) and will channel hop to avoid signal interference. Alternatively, the Actiontec router can replace an existing router as a standalone broadband connectivity solution with built-in support for hybrid phone operation.

## Security Comes First

Security features include a robust firewall; 64/128-bit WEP, WPA and WPA2 encryption; and the ability to establish different virtual WiFi networks for each phone, laptop or other device to protect against eavesdroppers.

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### Features

- Integrated Wired/Wireless Networking with 802.11n Access Point
  - 4 Port 10/100 Mbps Ethernet Switch
  - 802.11n enabled to support speeds up to 200 Mbps wirelessly
  - 802.11b/g backward compatible, communicating with 802.11g wireless products at speeds up to 54 Mbps and with 802.11b products at speeds up to 11 Mbps
- Supports all major cellular carriers
- Extensive power management features such as WMM.
- Support for NAT and PAT functionalities according to RFC 2766
- Robust Firewall including:
  - Stateful packet inspection
  - IP source address filtering
  - IP destination address filtering
  - IP Protocol filtering
  - Port filtering
  - DMZ
  - ALGs
  - Port Forwarding
  - Denial of Service protection
  - Firewall rule partitioning per VLAN/IP subnets
- Remote Management
  - TR-069
  - Provisioning/monitoring of VoIP app (TR-104)
- Adaptive (0-80ms) Jitter Buffer with statistics (over run, under run, dropped packets, etc), VAD, Silence Suppression, Packet loss concealment.
- Other features include:
  - DCHP Client/Server
  - DNS Server/Relay
  - IGMP
  - LAN IP & WAN IP Address Selection
  - Port Forwarding
  - QoS Support (End to end Layer 2/3)
    - Diffserv
    - 802.1p/q Prioritization
    - Configurable Upstream/Downstream Traffic Shaping
    - Random Early Detection
  - Reverse NAT
  - Static NAT
  - Static Routing
  - Time Zone Support
  - VPN IPSec (VPN passthrough only)

# Wireless FMC Router

## Technical Specifications

Features	Descriptions		
<b>IP Addressing</b>	<p>Default IP address of 192.168.1.1 for local VDSL Gateway addressing.</p> <p>Default subnet mask of 255.255.255.0 for assignment to DHCP leases for local Gateway addressing.</p> <p>Configurable to specify alternate private subnets (without restriction) for local Gateway addressing.</p> <p>Manually configurable to specify the start address within a subnet used for local addressing.</p> <p>Manually configurable to specify the stop address within a subnet used for local addressing.</p> <p>Automatically negotiate its Internet IP address (WAN IP Assignment) whenever it is powered-on or reset.</p> <p>Configurable to use a Static IP address.</p> <p>Support Static Address Maps for up to 5 IP pre-selected hosts.</p> <p>Support RFC 2663 “IP Network Address Translator (NAT) Terminology and Considerations”.</p> <p>Support RFC 3022 “Traditional IP Network Address Translator (Traditional NAT)”</p>		<p><b>QoS (cont'd)</b></p> <p>Support traffic prioritization, and policing on all network interfaces</p> <p>Support common firewall functions, such as access control, port forwarding, DMZ, port triggering, remote administration, website blocking, and filtering.</p> <p>Configurable to allow specifying or selecting the following: Source and/or destination IP address, source and/or destination IP range, host names, protocol, source and/or destination ports, MAC addresses, egress and ingress interfaces, for each firewall function if applicable.</p> <p>Support static NAT in addition to common NAT functions.</p> <p>Honor layer 3 QoS markings including TOS, DSCP, IP precedence bits.</p> <p>The mapping between layer 3 and layer 2 QoS marking is configurable.</p> <p>Support traffic shaping or rate shaping on each egress and ingress interface.</p> <p>Support priority queuing, weighted fair queuing, custom queuing, and FIFO.</p> <p>Support DHCP vendor class identifier extension.</p> <p>Support Traffic classification based on DHCP Option 60.</p>
<b>LAN</b>	<p>4 LAN facing Ethernet ports and one LAN facing MoCA interface.</p> <p>Support, at a minimum, a 256 MAC address table for LAN Devices.</p> <p>Comply with IEEE 802.1D, Bridging between all LAN interfaces; including Spanning Tree Protocol (STP).</p> <p><b>DHCP</b></p> <p>Support a minimum of 253 LAN devices.</p> <p><b>DNS</b></p> <p>Support manual configuration of DNS entries.</p> <p>Support Dynamic DNS, RFC 2136</p> <p><b>ARP/RARP</b></p> <p>Display the ARP table upon request.</p>		<p><b>Firewall</b></p> <p>Stateful Packet Inspection (SPI) Firewall</p> <p>Pre-defined Security Policies</p> <p>Even Logging</p> <p>Denial of Service (DoS) protection:</p> <ul style="list-style-type: none"> <li>- General: Ping Flood, ICMP Echo Storm, UDS Snork Attack, ICMP Smurf, UDS Fraggle, TCP Window Checks, Invalid TCP Options, TCP Flags, TCP 3WHS, TCP LAND, TCP 3SYN/UDP/ICMP Flood, PROTOS Attacks, Short IP Packets</li> <li>- IP Spoofing Attacks: FTP Bounce, Broadcast/Multicast Source IP Attack</li> <li>- Intrusion and Scanning Attacks: IP Source Router, ICMP Echo Reply without Request, ICMP Ping Sweep, TCP Stealth Scan (FIN XMAS, NULL), UDP Port, FTP Passive Attack, Loopback/Echo Chargen</li> <li>- IP Fragment Overlap: Teardrop, Teardrop2, Newtear, Opeear, Bonk, Boink Syndrop, Nestatea</li> <li>- Ping of Death: SSPing, Jolt, Jolt2, Flushot Attack, Oshare Attack</li> <li>- Fragmentation Attacks: Overlap, Changed Data, Changed Length, Microfragments, Empty Fragments, TCP Header Fragments</li> </ul> <p>DMZ (Demilitarized Zone) Hosting</p> <p>Access Control</p> <ul style="list-style-type: none"> <li>- Remote Access Control (HTTP, SNMP, Telnet, Diagnostics)</li> <li>- Block Internet Services from LAN hosts</li> </ul>
<b>QoS</b>	<p>Support Ethernet 802.1P/Q Prioritization</p> <p><b>DiffServ</b></p> <p>Support RFC 2474 “Differentiated Services Field”</p> <p>Support RFC 2475 “Architecture for Differentiated Services”</p> <p>Support RFC 2598 “An Expedited Forwarding PHB”</p> <p>Support three strict priority queues for Upstream and Downstream traffic</p> <p>Support up to eight upstream traffic classes on WAN interface</p>		

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### Technical Specifications (cont'd)

<b>Firewall (cont'd)</b>	Intrusion Detection Firewall Breach E-mail Notification MAC Address Filtering Control IP-TOS Manipulation with Firewall Rules TCP MTU Clamping.
<b>Vocoders /Algorithms</b>	G.711, G.723.1, G.726, G.729A ILBC – 13.33/15.2kbps BroadVoice - 16kbps G.168 Echo Cancellation Fax/ Modem G.711 Pass-Through T.38 Fax Relay DTMF Tone Det, Tone Relay (RFC2833) Call Progress Tone Gen/Det DTMF-based Caller ID TxFSK-based Caller ID / Rx
<b>VoIP/Call Control Protocols</b>	SIP ( RFC3261) MGCP ( RFC3435) RTP Port Randomization Voice Configuration Manager - support SRTP for SIP per RFC 3711 Multiple SIP accounts SIP TLS (RFC 2246)
<b>Environmental</b>	Operating Ambient Temperature: 10°C to 40°C, 32°F to 104°F Relative Humidity: 8% to 95% non-condensing Shipping and Storage Temperature: -20°C to 85°C with Relative Humidity of 5% to 100%.
<b>Regulatory</b>	UL FCC Part 15, Subpart B, Class B FCC Part 68 Wi-Fi Certified

### Minimum System Requirements

- PC or Macintosh with Ethernet connection
- Broadband Internet Access
- Hybrid Cellular Phone that supports WiFi networking using 802.11b/g/n
- Microsoft Windows 98SE, Me, 2000, XP; Mac OS 9 or higher; Linux/BSD, Unix
- TCP/IP Network Protocol Installed
- Internet Explorer 5.0+ or Netscape 7.0+

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