

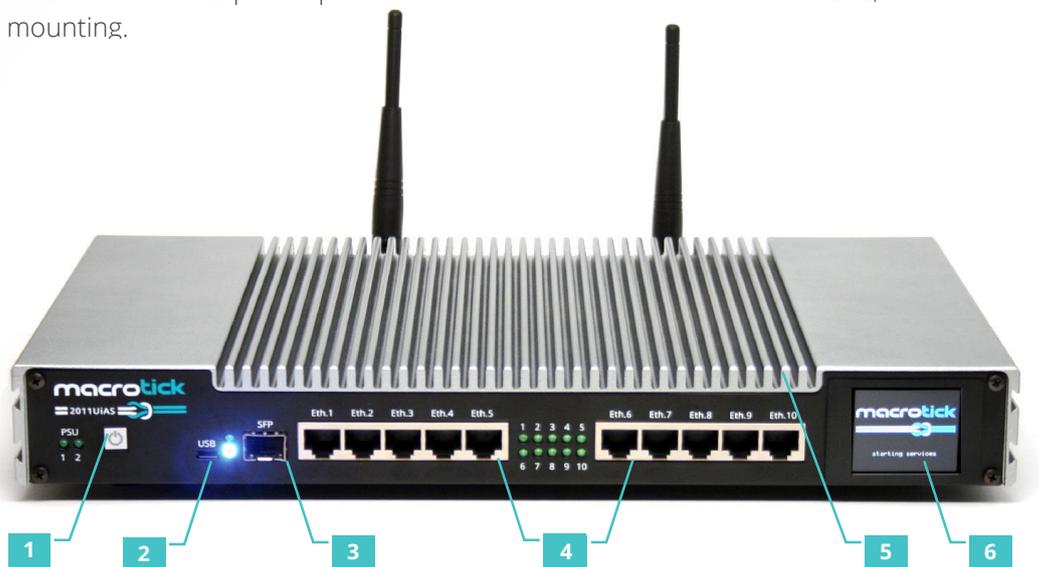
Edge Router ER2011

The next chapter in
business networking

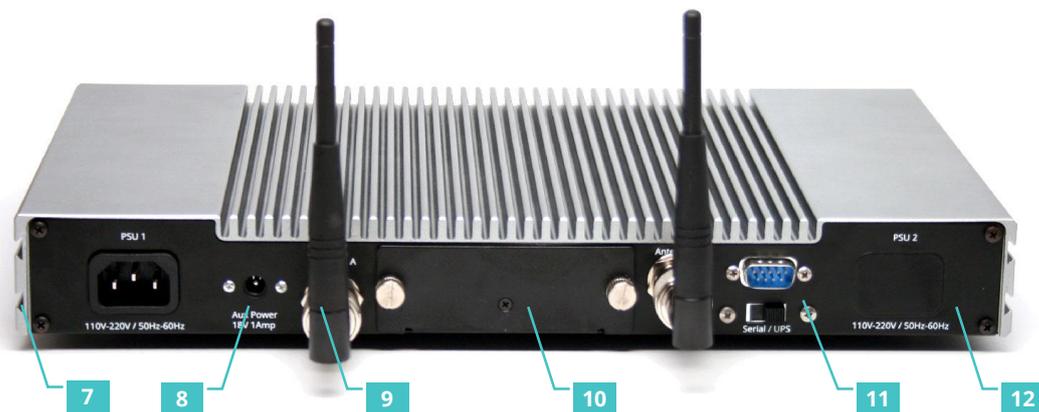


Edge Router ER2011

Business router with integrated single or dual power supplies and UPS with battery. Ten Ethernet, one fiber and one USB port. Optional Wi-Fi and failover to wireless 3G or LTE, and rails for rack or wall mounting.



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| <ul style="list-style-type: none"> 1. UPS & Power management 2. 3G/LTE backup (USB or build-in) 3. Fiber (SFP) port 4. 1Gb and 100Mb ports 5. Thermal efficient design 6. Touch screen LCD | <ul style="list-style-type: none"> 7. Sliding rails for rack or wall mount 8. Power for external modem 9. Extendable Wi-Fi 802.11 b/g/n 10. Removable tray with UPS battery 11. Serial/Console management 12. Optional Backup Power Supply |
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Enterprise grade networking is no longer the purview of large corporations and it implies more than simply high availability. Businesses of all sizes are bound by the same regulations. They are all vulnerable to the same Internet threats that can impair their operations.

Every company needs to provide employees with secure access from any location and multitude of devices to ensure productivity. The challenge has always been to achieve the required reliability, security and flexibility for growth cost effectively.

FEATURES

Macrotick provides the latest in routing and networking technology with enterprise grade elements not found in any other traditional solutions.



Reliability

ER2011 incorporates an integrated power supply and micro UPS, with **optional backup power supply**. Output voltage from the primary power supply is monitored and filtered to prevent router restarts due to power surges. The failover to UPS or backup power supply is achieved in less than 30ms. The **Built -in UPS** notifies the board to perform a backup and graceful shutdown. Based on the router configuration, the internal **battery** can provide power for up to 2 hours. Furthermore, the ER2011 offers an **AUXILLIARY output power** port from the UPS with the ability to power an external broadband modem to minimize the effects of any potential power loss.



High availability

Loss of Internet access can be prevented with **seamless failover** between multiple WAN connections, including a **3G or LTE** wireless connection. Furthermore, **tethering** over a smart phone is available to ensure critical traffic is maintained while the cost of backup connectivity is minimized. To eliminate a hardware single point of failure, **Virtual Router Redundancy Protocol (VRRP)** provides hot-standby failover capability of WAN and LAN connection between the two routers.



Security

The ER2011 builds on the foundation of **advanced, customizable firewall rules**, with real time monitoring and logging capability. Going far beyond IP addresses, hostnames, and ports, the router can perform actions based on time, connection state, peer-to-peer applications, content and **Layer 7 deep packet inspection**. For secure access, the router supports multiple types of VPN (**PPTP, L2TP, IPsec, OpenVPN**) and can act as a VPN client or a VPN server for mobile workers or site to site connectivity. For authentication, the VPN server can use either a local user database, company **Active Directory** or any **RADIUS** compatible server.



Deployment flexibility

The design of the ER2011 enclosure fits any type of deployment. **High rubber feet** are optimized for desktop deployment and allow cables to pass below the router. Optional **sliding rails** can be used for either **wall or rack mounting**, leaving the cables accessible and the LCD screen visible. The **touchscreen color LCD** allows for quick access to device statistics and basic configuration options.



Connectivity

Physical layer connectivity is achieved using an SFP port for multi or single mode **fiber connection**; 100Mb or 1Gb ports can be configured as either WAN or **multiple LAN** ports, in one or many switch/bridge groups. When connected to one or multiple network switches, the ER2011 router can support thousands of connected clients while keeping them isolated with **VLAN tagging** and virtual interfaces. Furthermore, higher data rates and link failover are possible with bonding and 802.3ad (LACP) support in enterprise deployments with **stackable switches**.



Advanced Routing

The ER2011 supports business growth and extending the network to new locations or data centers with advanced routing protocols such as **OSPF, MPLS and iBGP**. Support for Virtual Routing and Forwarding (VRF) IP technology enables the creation of multiple instances of a routing table on the router. VLAN tagging, tunneling, bridging and **multiple PPPoE** connections over a single DSL modem allow for traffic separation to meet security and regulatory requirements. Full IPv6 support including **IPv6 to IPv4 tunneling** allows for seamless growth and Internet traffic aggregation. In addition, multiple IP addresses per physical or virtual port allow for efficient **virtual networking** and virtual machine connectivity.



Wireless

Advanced wireless capabilities on the Macrotick ER2011 provide **802.11 b/g/n** connectivity with extendable antennas. These can be used to connect to **fixed wireless** antennas as primary or secondary WAN connections for remote location connectivity or added reliability. The wireless router can act as an **access point, hot spot** or as a Wi-Fi client supporting diverse business needs. The solution supports **multiple SSIDs** and uses multiple wireless authentication protocols for added security, ensuring that corporate traffic is not visible to unauthorized clients who may be using the wireless network. Detailed **statistics of connected clients**, as well as a **wireless scanner**, packet sniffer and frequency usage are provided for management and auditing purposes, simplifying any regulatory requirements.



Traffic shaping

Class of Service and Quality of Service with **bandwidth prioritization and reservation** of traffic allows for deployment of even the most demanding applications like **Voice over IP, video conferencing**, trading or traffic control.



Management

A full suite of management functions allows the network administrators to securely access the routers whenever necessary. An integrated database with **user level access permissions** will ensure that only authorized personnel can make specific changes. To simplify and centralize the user management across multiple locations, **Active Directory authentication** is available as well. To minimize the dependence on highly skilled IT staff, users can utilize a Web browser to access a simplified **web management portal** (Webfig). More experienced users can use a **windows GUI utility** (WinBox), command line (**SSH/Telnet**) or even a mobile app, to access the router configuration.



Network applications

Several integrated applications such as **DNS server**, **Web proxy** or even **Wi-Fi Hotspot**, can be easily enabled with a full range of features. For example, the wireless Hotspot can provide a login page to guest users with limited Internet access, while keeping the corporate network **completely isolated**. To provide additional customization, there are many **3rd party scripts** available for download which are written using a custom scripting language. It provides full access to all elements of the router configuration and the possibility of accessing remote servers with FTP, HTTP, HTTPS and SMTP (email) protocol.

Accessories



Sliding Rails

Universal sliding rails and cable rings for rack and wall deployments



Magnetic Mount

WiFi Antenna extension cable connector with magnetic base ideal for rack deployment



7dBi WiFi Antenna

High gain 7dBi antennas to replace the standard antennas to extend WiFi coverage



3G/LTE modem

External USB modem for primary access or failover to 3G/LTE wireless network



Cables tray

Reversible tray for easy and effective cable management in rack deployments



Aux power cable

DC power cable for external devices (i.e. DSL or Cable modem) powered by ER2011



Replacement battery

2 cell battery for integrated UPS in ER2011 or AR2011 (located in the removable tray)



Internal PSU

Secondary (or replacement) internal power supply for ER2011 and AR2011 units



AC power cable

Additional AC cable for units with dual power supplies (only one cable is included)

Cloud Services

Centralized monitoring and management services with holistic information about the network and devices, offer automated real time notification of any abnormal activity, Internet or power outage. Services also provide capacity planning reports, off site backup and network activity logging to simplify administration and regulatory compliance.



Geolocation of your devices with site and contact details



Device information and connections details



Device configuration provisioning and backup



Internet usage with upload and download bandwidth



Monitoring and real-time notification of critical status



Device logs accessible even when the device is off-line

Macrotick uses a secure HTTPS protocol to provide information about your device as an alternative to the traditional network monitoring tools using standard protocols such as ICMP and SNMP. This means:

- No need for direct access to the device, unless you want to perform remote provisioning
- Devices can be installed behind any firewall without the need for static and public IP address
- Ensured privacy, since the cloud services do not send any sensitive user data or application traffic.

Starting in 2016, Macrotick Cloud Services will be included with the purchase of ANY compatible device (including the Mikrotik products) sold through Macrotick online shop or authorized resellers.

Free service provides access to inventory and installed device details and locations. Real time monitoring, notifications, backup and provisioning are offered as a monthly subscription based service.



Why Macrotick

Macrotick's disruptive solutions provide optimized network performance and security for the next generation of communications systems and applications. Our products and services offer enterprise grade, end to end capabilities of unparalleled value. We are committed to innovation and cost effectively incorporating the latest, emerging technologies in all our solutions.

Our solutions are a result of over 20 years of hardware, software and IT services experience, deep understanding of modern business requirements, and relentless out-of-the-box thinking. By integrating hardware, software, cloud services and applications we have developed unique technical solutions that go far beyond simple networking and address even the most complex business challenges.



In all our solutions we have decoupled support and hardware to allow our customers to benefit from an extremely feature rich hardware and affordable prices while leveraging in-house IT expertise. But if required, support can be outsourced to Macrotick and our partners.

Support and Training

Our team is present in North America and Europe to offer 24x7 expert support globally. With a full suite of support and training services, we can meet the specific needs of your organization.

Maintenance

Our global presence coupled with extensive partner network of distributors, enables timely resolution of hardware issues. Local channels enable us to offer a diverse set of cost effective maintenance solutions.

Network

Redundant and geographically diverse data centers enable high availability for our cloud services, while established partnerships with diverse telecom providers ensure lower cost of the overall solution.

The ER2011 routerboard is manufactured in Europe and introduced in 2012. Hundreds of thousands of units have been deployed globally in both large and small organizations.