



## Product overview

Eseye's Hera 600 series router is a managed M2M 3G/4G WiFi router that enables high-speed, secure, reliable and resilient global connectivity for your IoT machines, systems or remote assets.

Highly adaptable and encryption-capable, the Hera provides secure cellular, WiFi and Ethernet access options to thousands of globally-deployed IoT devices.

Coupled with AnyNet SIM technology and Eseye-managed services, the Hera enables remote monitoring, access, and over-the-air (OTA) configuration of connected equipment, without physically mobilising staff and resources to sites.

The Hera is compact and encased in rugged aluminium for durability, allowing remote deployment in outdoor cabinets. The direct mounting ensures easy and secure installation.

## Product description

Eseye's Hera 604 IoT router is designed to simplify IoT device connectivity to customer systems and the cloud, ensuring that network connections are reliable, and data transfer is secure and resilient.

The Hera router has robust, proven integration across varied IoT deployments, including vending machines, battery powered devices, digital signage, electronic charging points, industrial control panels, and much more.

Coupled with an AnyNet SIM, the Hera router enables IoT devices to automatically connect across 190 countries worldwide and achieve near 100% connectivity via over 700 mobile (3G, 4G/LTE) networks. Optimised with over-the-air (OTA) network switching, zero-touch management and advanced security features that include private APN and VPN connections, the AnyNet SIM reduces both the risk and total cost of ownership of your global IoT deployment. Firmware updates are easily sent OTA to the Hera router when new functionality becomes available.

The Hera router integrates with Eseye's Infinity IoT Platform for data management and monitoring purposes. Using Infinity, device data is transparently accessible, and enables intelligent condition monitoring and alert notifications.

### Hera 604 router components

- Worldwide triple-SIM cellular connectivity
- Embedded AnyNet SIM for near 100% connectivity
- Access and management for all available 3G/4G cellular networks globally
- Four Gigabit Ethernet ports and optional 802.11ac 2.4Ghz / 5Ghz concurrent WiFi
- Ethernet failover to cellular network in the event of network failure
- Local and remote management provisioning via LWM2M, TR.069, SSH, CLI, HTTP, HTTPS, or SMS
- Cat 13 LTE module, delivering 400 Mbps Downlink and 150 Mbps Uplink
- Embedded security with IP filtering, stateful inspection firewall, and NAT/NAPT
- Tunnelling and VPNs using IPSEC / GRE
- AnyNet SMARTconnect integration to simplify and manage secure, reliable connectivity and service availability across cellular networks
- VLAN support for simplified network design and separation
- Supplied applications, including:
  - Serial to IP
  - UDP/TCP to MQTT
  - Serial to MQTT
  - Modbus to MQTT
  - AnyNet Secure Cloud Connection
- Industry compliance, meeting all core requirements for CE and FCC

All of these features are wrapped in a compact and robust aluminium casing for easy integration.

# Architecture and key features

The Hera is designed to deliver life-long zero-touch service, with highly resilient data connectivity delivered within M2M grade hardware in a robust aluminium casing. This makes it an ideal high-speed 3G/4G network failover solution.

## Architectural highlights

- Cat 13 LTE support
- Triple-SIM
- Optional 802.11ac 2.4Ghz / 5Ghz concurrent WiFi
- Two RS232/RS422/RS485 serial ports for customer application use
- Four integrated 10/100/1000baseT/TX Ethernet ports for WAN or LAN
- Pre-installed service applications
- Post-installation management and reconfiguration

## Highly available

Coupled with an AnyNet SIM, the Hera 604 router can connect globally across 190 countries via 700 mobile (3G, 4G/LTE) networks, ensuring near 100% connectivity. The Hera 604 router has optional 802.11ac 2.4Ghz / 5Ghz concurrent WiFi capability and 3G/4G fallback for post installation management and reconfiguration. It is fitted with four Gigabit Ethernet ports.

## Easy onboarding

The Hera is preconfigured to the customer's unique specifications for easy deployment. It will connect to a local network, ready to receive and send your IoT device data.

## Intelligent device monitoring

Using the Hera together with Eseye's Infinity IoT Platform, your IoT device data is transparently accessible, enabling intelligent condition monitoring and alert notifications. Infinity offers comprehensive connectivity management and SIM performance assurance.

## Secure

- Tunnelling and VPNs using IPSEC / GRE
- Embedded security with:
  - *IP filtering* – to control network traffic
  - *Stateful inspection firewall* – to monitor the state and context of network traffic, give granular control over how this traffic is filtered, and detect security threats
  - *NAT/NAPT* – to prevent unauthorised access to devices, ensure IoT project scalability at minimal cost, allow connection flexibility across the available mobile networks, and ensure continued connectivity in the event of a network failure

## VLAN support

For increased network performance and security, offering more flexibility than non-virtual networking solutions for network configuration and workgroup formation, and reducing the overall administrative effort to manage services and devices.

## Easy device configuration and monitoring

The Hera has a GUI-based device-management tool to simplify configuration, deployment, monitoring and troubleshooting.

The Health Monitor application in the Hera router continually checks that a connection is performing as expected. It automatically detects any changes in the performance of a connection and alters the connectivity preferences to enable seamless self-managing failover. Customers can configure the Health Monitor to:

- Detect failed system polls on WAN interface restart or router reboot
- Detect failed interface tests
- Send ping and DNS requests
- Select the best WAN interface
- Provide editable and read-only WAN interface information on priority, interface, IP address, DNS, and other actionable features
- Apply overrides for each WAN interface

# Technical specifications

<b>Cellular</b>	<ul style="list-style-type: none"> <li>Triple SIM, including embedded AnyNet SIM</li> <li>Receiver Diversity Support</li> <li>3G/LTE support</li> </ul>
<b>LTE Models</b>	<ul style="list-style-type: none"> <li>LTE FDD 2100(B1)/1900(B2)/1800(B3)/1700(B4)/850(B5)/2600(B7)/900(B8)/700(B12)/700(B13)/700(B14)/850(B18)/850(B19)/800(B20)/1900(B25)/850(B26)/700(B28)/700(B29)/2300(B30)/1500(B32)/1700(B66)/600(B71)</li> <li>LTE TDD 2600(B38)/1900(B39)/2300(B40)/2500(B41)/3500(B42)/3700(B43)/3600(B48) CBRS</li> <li>Cat 13 LTE up to 400 Mbps Downlink/150 Mbps Uplink</li> <li>UMTS HSPA 2100(B1)/1900(B2)/1700(B4)/850(B5)/800(B6)/900(B8)/1700(B9)/800(B19)</li> <li>Cat 24 3G up to 42 Mbps Downlink/5.72 Mbps Uplink</li> </ul>
<b>RS232 Serial Interfaces</b>	
<b>Management (1 x Micro USB)</b>	<ul style="list-style-type: none"> <li>Baud Rate: 115200</li> <li>Data format: 8 Bit; NParity; 1 Stop Bit</li> </ul>
<b>Data (2 x RJ45)</b>	<ul style="list-style-type: none"> <li>RS232/RS422/RS485 configurable</li> <li>Baud Rate: 300 - 230400</li> <li>Data format: 7 or 8 Bit; 1 or 2 Stop bits; Mark, Space, Odd, Even parity; software or hardware flow control; BREAK support</li> <li>RS232 Signals: RTS/DTR/RxD/DSR/GND/TxD/DCD/CTS</li> </ul>
<b>Ethernet (4 x RJ45)</b>	<ul style="list-style-type: none"> <li>10/100/1000baseT/TX</li> <li>AutMDI/MDIX</li> <li>Configurable WAN or LAN</li> </ul>
<b>WLAN (optional)</b>	<ul style="list-style-type: none"> <li>4 SSID</li> <li>WEP</li> <li>WiFi Protected Access (WPA)</li> <li>WPA2-Personal/Enterprise</li> <li>Auto-channel selection</li> <li>Auto-rate selection</li> <li>2.4Ghz 2x2 and 5Ghz 2x2 concurrent</li> <li>802.11ac Wave 2, 802.11n, 802.11a, 802.11b, 802.11g, 802.11e (QOS), 802.11i, 802.11p</li> <li><b>IEEE</b></li> <li>802.11a up to 54 Mbps</li> <li>802.11b up to 11 Mbps</li> <li>802.11g up to 54 Mbps</li> <li>802.11n up to 450 Mbps</li> <li>802.11ac up to 1.733 Gbps</li> </ul>
<b>Command Line Interface</b>	via Telnet, SSH, Direct Serial
<b>Firmware updates</b>	via HTTP, HTTPS, FTP, TR.069 , LWM2M
<b>Diagnostics</b>	via ICMP Ping, syslog, traceroute
<b>Data and Routing</b>	<ul style="list-style-type: none"> <li>PPP with PAP/CHAP security</li> <li>VLAN termination</li> <li>Up to 16 LAN subnets</li> <li>DHCP server, client, relay</li> <li>DNS client, relay</li> </ul>

	<ul style="list-style-type: none"> <li>Virtual Router Redundancy Protocol (VRRP)</li> <li>Loopback Interfaces</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>IP filtering</li> <li>NAT/NAPT (PAT)</li> <li>Port Forwarding</li> <li>Password access</li> <li>Configurable access controls</li> <li>Stateful inspection firewall</li> <li>DOS protection</li> </ul>
<b>Status LEDs</b>	Power; LAN Link; LAN data; 3G/4G WAN; WiFi
<b>VPN Services</b>	<ul style="list-style-type: none"> <li>IPSec Client / Server</li> <li>LAN-to-LAN and teleworker-to-LAN (Dialin)</li> <li>Authentication: Null, MD5 and SHA-1</li> <li>Internet Key Exchange (IKE)</li> <li>Authentication Pre-shared Key</li> <li>Digital Signature Algorithm (DSA)</li> <li>Rivest, Shamir and Adleman (RSA)</li> <li>Triple Data Encryption Standard (3DES)</li> <li>Data Encryption Standard (DES)</li> <li>Advanced Encryption Standard (AES)</li> </ul>
<b>General</b>	<ul style="list-style-type: none"> <li>Configurable SMS alerts and controls</li> <li>Device Health Monitor</li> <li>Connectivity and service supervision</li> </ul>
<b>Supplied apps</b>	<ul style="list-style-type: none"> <li>Serial to IP</li> <li>UDP/TCP to MQTT</li> <li>Serial to MQTT</li> <li>Modbus to MQTT</li> <li>AWS AnyNet Secure</li> </ul>
<b>Antennas</b>	Cellular: 2 x 50 Ohm SMA WiFi: 4 x 50 Ohm SMA
<b>Size</b>	155 x 140 x 28 mm
<b>Product weight</b>	0.5kg
<b>Packaged weight</b>	1.3kg
<b>Input</b>	12Vdc
<b>Consumption</b>	10W max
<b>Connector</b>	Molex Mini Fit Jnr
<b>Operating temp</b>	-20 to 55°C
<b>Humidity</b>	5 - 95% Rel. Hum.
<b>Product</b>	RoHS compliant; FCC and CE marked
<b>Safety</b>	IEC62368
<b>EMC</b>	<ul style="list-style-type: none"> <li>Emissions EM55032</li> <li>Immunity EN55035</li> </ul>
<b>EN</b>	<ul style="list-style-type: none"> <li>EN 301 489-1</li> <li>EN 301 489-17</li> <li>EN 301 489-52</li> <li>EN 300 328</li> <li>EN 301 893</li> <li>EN 301 908-1</li> </ul>
<b>FCC</b>	<ul style="list-style-type: none"> <li>47CFR15.107</li> <li>47CFR15.109</li> <li>47CFR15.247</li> <li>47CFR22</li> <li>47CFR24</li> <li>47CFR27</li> </ul>
<b>IC</b>	<ul style="list-style-type: none"> <li>ICES003</li> <li>RSS-210</li> <li>RSS-247</li> <li>RSS-132</li> <li>RSS-133</li> <li>RSS-139</li> </ul>

## Ordering information

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