

## Data Sheet: Bridgewater EPC 500

More than 150 service providers in over 60 countries around the world have announced plans to invest in Long Term Evolution (LTE) networks, with more than 100 network deployment commitments. In addition, industry verticals such as government, public safety, and utilities are planning to deploy LTE networks to meet specialized enterprise mobility requirements.

The award-winning Bridgewater® EPC 500 is an integrated LTE system that provides best-of-breed subscriber and device data management, and policy control functions for the LTE Evolved Packet Core (EPC).

Specifically designed to support LTE lab trials, field trials, and small- to medium-scale commercial deployments, the EPC 500 features the Bridgewater® Home Subscriber Server (HSS) and Bridgewater® Policy Controller (PCRF), anchored by Bridgewater's Subscriber Data Broker™. These proven Bridgewater products are pre-integrated on a single carrier-grade platform, creating an easy-to-deploy LTE system.

As a vendor-agnostic solution, the EPC 500 system offers standards-based interfaces to enable end-to-end interoperability testing. The system can be deployed in a matter of days to support a range of functions such as subscriber and service modeling, roaming, and quality of service (QoS) management.

### HIGHLIGHTS

The Bridgewater EPC 500 is an integrated "LTE in a box" system specifically designed to support lab trials, field trials, and deployments of up to 100,000 subscribers.

- Small footprint allows for accelerated LTE trials
- Flexible implementations
- Dynamic subscriber management
- Easy migration to commercial deployments



### Why the Bridgewater EPC 500?

- **Accelerate Trials:** Bridgewater provides the optimal control plane solution with all of the necessary standards-based control plane components for interoperability testing and trialing of new devices, as well as infrastructure and services to accelerate trials and early commercial deployments.
- **Flexibility in Equipment Choice:** Fully compliant with the 3GPP Release 8 and 9 standards, Bridgewater's solutions are vendor independent and can be easily integrated into multi-vendor EPC ecosystems to take advantage of vendor-specific enhancements.
- **Dynamic Subscriber Management:** The HSS and Policy Controller are powered by an intelligent policy-driven core that provides inherent flexibility to easily manage subscribers, networks, devices, and applications in real time. This is accomplished using configurable business rules that leverage a range of subscriber and device entitlements.

## Data Sheet: Bridgewater EPC 500

### System Overview

The EPC 500 includes the following Bridgewater solutions, pre-integrated as an LTE control plane system.

The **Bridgewater Home Subscriber Server (HSS)** is the master repository that contains subscriber and device profile and state information and supports authentication, authorization, and mobility management functions in LTE. It leverages the rich subscriber data management capabilities of Subscriber Data Broker to enable subscriber identity management, service profile management, static and dynamic QoS management, and state and usage tracking. The HSS supports broad interoperability using standards-based interfaces – 3GPP-AAA (Wx) and LTE MME (S6a). The HSS can federate data from existing Home Location Registers (HLR), as well as other databases, to ensure smooth service migration and allow service providers to leverage their investment in existing subscriber databases.

The market-leading **Bridgewater Policy Controller** provides real-time network, application, and subscriber policy control that allow service providers to implement intelligent broadband controls to manage mobile data growth and deliver personalized services. It functions as the Policy and Charging Rules Function (PCRF) required in LTE EPC networks, applying dynamic QoS to IP flows through its support of Gx, Gy, and Rx interfaces.

The Policy Controller leverages multiple types of policy and interfaces with various enforcement points to deliver a superior mobile experience. It also supports subscriber policy capabilities that give subscribers direct control over their own mobile usage including tracking real-time data, SMS, and applications usage; setting personalized limits, parental controls, and notifications; and receiving special offers.

**Bridgewater's Subscriber Data Broker** is an integral part of Bridgewater's LTE EPC solution. It brings together rich subscriber data such as location, context, profile, and usage with the sophisticated tools to broker that data to multiple systems and applications to personalize services. This is particularly important in an open LTE ecosystem in which third-party devices and applications are commonplace. Subscriber Data Broker provides a common subscriber data management solution for the HSS and Policy Controller, enabling rich, dynamic service personalization.

## Data Sheet: Bridgewater EPC 500

### Features and Benefits

#### Provides Greater Flexibility in how LTE Trials are Conducted

- Can be configured to support HSS, Policy Controller, or 3GPP AAA functions or any combination of these, thereby providing flexibility in testing plans as part of a large interoperability or proof-of-concept program.

#### Standards-based and Vendor Independent

- Allows service providers to leverage existing investments in the migration to an LTE core.
- Enables a multi-vendor strategy with standards-based interfaces and interoperability with a range of network equipment vendors.

#### Easy Migration Strategy from Trial to Commercial Deployments

- Wide-ranging support allows for an easy transition from lab to commercial deployments with a common platform, thereby accelerating time-to-market.
- Scalable and can support the migration to separate HSS and Policy Controller platforms in order to meet commercial deployment requirements.

#### Pre-integrated and Pre-configured on a Single Platform

- Deployed in a matter of days, accelerating LTE EPC trials, and reducing time and complexity of setting up lab trials.
- Cost-effective, modular system with smooth migration from existing Bridgewater products.
- Features proven, carrier-grade platforms with support for both Solaris and Linux operating systems.
- Can be deployed in a standalone or redundant configuration.

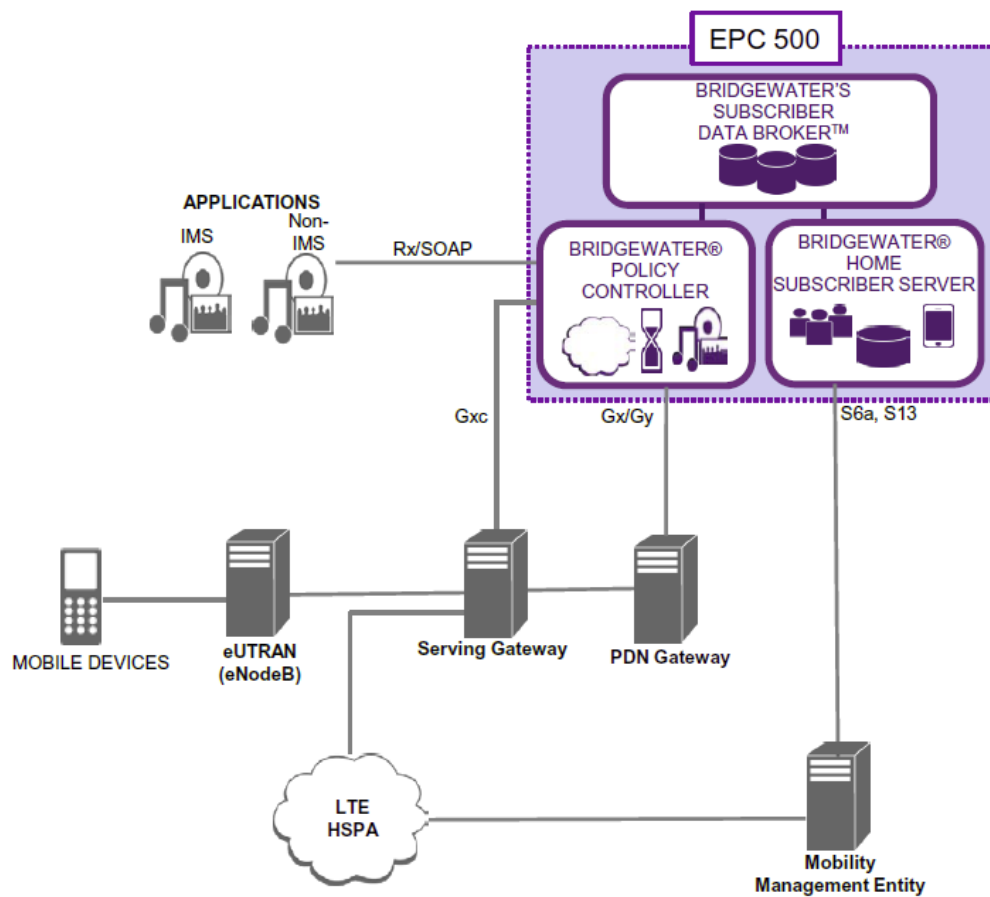
#### Supports a Range of LTE Trial Use Cases

- Basic interoperability testing between the EPC 500 (HSS) and the Mobility Management Entity (MME) using an S6a interface required as part of end-to-end testing – authentication, location, tracking, and notification.
- LTE Service Modeling and Testing – ability to model differentiated services to test QoS management and 3G/4G roaming.
- Wholesale/retail service modeling.
- Features sample test plans, and compliance and interoperability notes.

# Data Sheet: Bridgewater EPC 500

## Deployment Example

The Bridgewater EPC 500 is an integrated “LTE in a box” system that provides key service control, subscriber management (HSS), and policy control (PCRF) functions for the LTE evolved packet core. Specifically designed to support lab trials, field trials, and deployments of up to 100,000 subscribers, this LTE system features the Home Subscriber Server and Policy Controller anchored by the Subscriber Data Broker, pre-integrated on a single carrier-grade platform.



## Data Sheet: Bridgewater EPC 500

### Technical Specifications

<b>Platform</b>	<b>IBM x3650 M3 Server</b>
<b>Operating System</b>	Red Hat Enterprise Linux 5.4 x86_64
<b>CPU</b>	2.93 GHz x5670 Xeon dual socket (six core/socket)
<b>Memory</b>	48 GB RAM
<b>Hard Drives</b>	4 x 146 GB, 15,000 rpm SAS disks; expandable to 16 disks (hot pluggable)
<b>Optical Drive</b>	DVD+/-R/W, CD+/-R/W
<b>Ethernet Ports</b>	4 x 10/100/1000 Mbps, RJ-45
<b>USB Ports</b>	2 front, 2 rear
<b>PCI Express</b>	2 x PCIe x8 full-length, 1x PCIe x8 half-length, 1x x8 low profile
<b>Power</b>	2 redundant 675W power supplies, hot swappable, 110-240VAC
<b>Dimensions</b>	443.6mm x 85.4mm x 798mm (width x height x depth)

The EPC 500 is also supported on equivalently specified IBM HS22 servers in BCH chassis.

#### About Bridgewater Systems

Bridgewater Systems, the leader in intelligent broadband controls, provides pre-integrated solutions for mobile and converged operators to transform their networks, optimize mobile data growth, and innovate with new services. The Bridgewater portfolio of carrier-grade products includes Service Controller (AAA), Policy Controller (PCRF) and Home Subscriber Server (HSS), anchored by a common identity and device management system. More than 150 leading service providers worldwide leverage Bridgewater to create and deliver profitable services to consumer, enterprise, cloud and machine markets. For more information, visit us at

[www.bridgewatersystems.com](http://www.bridgewatersystems.com)

#### Copyright statement

© 2011. Bridgewater, Bridgewater Systems, the Bridgewater Systems logo, WideSpan, Smart Caps, myPolicy, and Subscriber Data Broker are trademarks or registered trademarks of Bridgewater Systems Corporation. All other company, product names and any registered and unregistered trademarks mentioned are used for identification purposes only and remain the exclusive property of their respective owners.

Company Headquarters  
303 Terry Fox Drive  
Suite 500  
Ottawa, Ontario  
Canada K2K 3J1  
P: +1 613 591 6655  
F: +1 613 591 6656

European Office  
1st Floor, 6 Faraday  
Office Park, Faraday Road  
Basingstoke  
United Kingdom  
RG24 BQQ  
P: +44 125 684 0877  
F: +44 125 636 3833

Asia Pacific Office  
Suite 211/250 Pitt Street  
Sydney, NSW  
Australia 2000  
P: + 61 2 9283 2313  
F: + 61 2 9283 3738

U.S. Office  
280 Madison Avenue  
Suite 912  
New York, NY  
United States 10016  
P: +1 866 652 0471  
F: +1 613 591 6656

Hong Kong Office  
Unit #30, Level 23  
One Island East  
18 Westlands Road  
Quarry Bay, Island East  
P: +852 3750 7588  
F: +852 3750 7469