

**FUNCTIONAL SPECIFICATION DOCUMENT 7:  
DEPOT/SERVER INFRASTRUCTURE HARDWARE REQUIREMENTS**

**FOR**

**THE SUPPLY AND INSTALLATION OF DATA LOGGING**

**AND**

**AUTOMATIC BUS STOP ANNOUNCEMENT SYSTEM**

**-**

**FOR CITYBUS LIMITED**

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## **TABLE OF CONTENTS**

<b>1</b>	<b>INTRODUCTION.....</b>	<b>4</b>
<b>2</b>	<b>BUS DEPOT COMPUTER.....</b>	<b>4</b>
<b>3</b>	<b>MAIN SERVER COMPUTER.....</b>	<b>4</b>
<b>4</b>	<b>OFFICE COMPUTER.....</b>	<b>5</b>

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### AMENDMENT HISTORY

Issue	Date	Change Description	Originated by	Approved by
1.0	29/01/2008	First Draft Issue for Comment	Tara Nair	

## 1 INTRODUCTION

This document describes the minimum hardware requirements for the computers providing the hardware support for the Main Server, Bus Depot and Office Computers. These computers will be purchased by CTB and free issued to KGIS for software installation.

## 2 BUS DEPOT COMPUTER

The Bus Depot Computer will conform to the following minimum specifications.

System Component	Details
Processor	Intel Core 2 Duo E6300 / 1.86 GHz
Operating System	Windows® XP Professional Edition (English)
Memory	1 GB DDR2 SDRAM 667 MHz
Cache	2 MB L2
Storage	2 x 160GB drives configured as RAID
Graphics	Intel Graphics Media Accelerator X3000
Display	17" Flat Panel LCD Monitor
Backup	DVDRW
Ethernet	Gigabit Ethernet
I/O	SDcard and USB Flash Disc Interface

## 3 BUS DEPOT COMPUTER WIRELESS LAN (BDC WLAN)

In order to facilitate the wireless communication between the IVU and BDC WLAN, the WLAN equipment used must meet the following requirement.

WiFi Protocol: supporting 802.11b/g

WiFi Authentication: support WEP 128-bit key and WPA-PSK

WiFi Received Signal Level: -60dBm

WiFi SSID: Configurable via software API

WiFi SSID Broadcast interval: Configurable via software API

WiFi WEP Key: Configurable via software API

WiFi WPA-PSK Key: Configurable via software API

Firewall Setting: Configurable via software API

Parallel Downloading: Must support MIMO functionality to provide a minimum of 5 simultaneous uploads/downloads of speed no less than 10MBits/sec with good signal coverage.

Connection Restriction: Must support connection limiting to prevent more than a predefined number of buses (controllable via Software API) from connecting to the WLAN at any one time.

## 4 MAIN SERVER COMPUTER

The Main Server Computer will conform to the following minimum specifications to support the DL functionality. The ability of this server to support both the DL and ABSA functionality is dependant on actual operational loading and therefore it is agreed that CTB will purchase a single server but will purchase an additional identical server if system performance requires.

System Component	Details
Processor	(2) Dual-Core Intel Xeon 5160 Processors (3.00 GHz, 1333 FSB), 4MB (1 x 4MB) Level 2 cache – 5100 Series

Operating System	Windows® XP Professional Edition (English)
Memory	4GB (4 x 1GB); PC2-5300 Fully Buffered DIMMs (DDR2-667) expandable to 32GB (8xsockets)
Storage	Smart Array P400 Controller with 256MB cache (RAID 0/1/5) (8) small form factor (SFF) hot-plug drive bays to support Serial-attached SCSI (SAS) and Serial ATA (SATA) drives Total RAID storage not less than 185 GBytes
Display	17" Flat Panel LCD Monitor
Backup	DVDRW
I/O	5 USB Ports
Power/Cooling	(2) x 800W Hot plug power supply 12 x Hot Plug Fully Redundant Fans Standard
Ethernet	Embedded Dual NC373i Multifunction Gigabit

## 5 OFFICE COMPUTER

### 5.1 Office PC Hardware configuration requirements

The Office Computer will conform to the following minimum specifications.

System Component	Details
Processor	Intel Core 2 Duo E6300 / 1.86 GHz
Operating System	Windows® XP Professional Edition (English)
Memory	1 GB DDR2 SDRAM 667 MHz
Cache	2 MB L2
Storage	1 x 160GB drive
Graphics	Intel Graphics Media Accelerator X3000
Display	17" Flat Panel LCD Monitor
Backup	DVDRW

Please note that a sound card, speakers and an interface to match the selected LED display is required for the computer to be used as the Content Simulator and a USB slot and/or SDcard reader are required to input Survey data to the RDT.