Toshiba Strata AirLink Installation Manual

Digital business telephone systems

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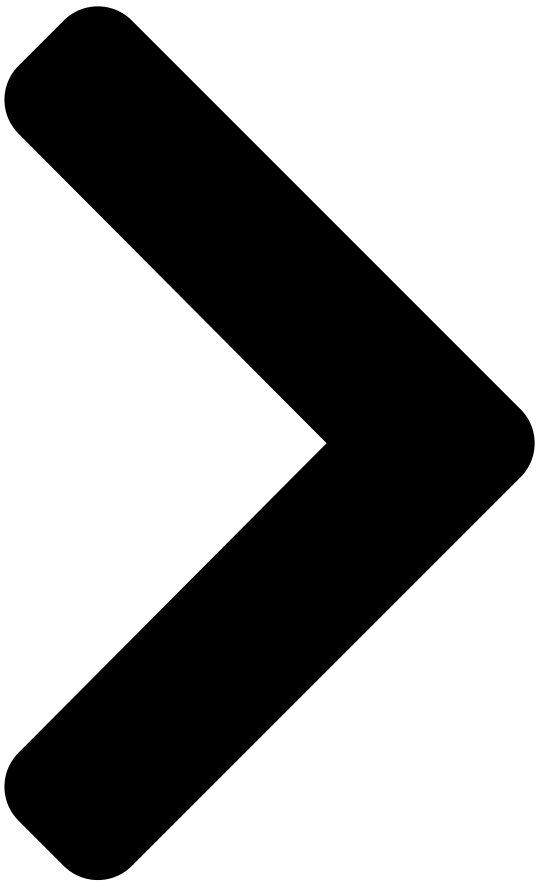

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Telecommunication Systems Division

TOSHIBA

Telecor

Digital Business Telephone Systems

Wireless Systems

Installation Guide

May 2000

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Related Manuals for Toshiba Strata AirLink

Handsets Toshiba Strata AirLink User Manual

Integrated wireless handset (132 pages)

Handsets Toshiba Strata AirLink User Manual

Integrated wireless handset (131 pages)

Handsets Toshiba Strata AirLink User Manual

External wireless handset (48 pages)

Telephone Accessories Toshiba Strata AirLink User Manual

External wireless handset (47 pages)

Telephone System Toshiba Strata DK Admin User Manual

Digital business telephone systems release 4 (178 pages)

Telephone System Toshiba Strata CIX Programming Manual

Telephone button programming manual (144 pages)

Telephone System TOSHIBA STRATA CTX User Manual

Dkt/ipt telephone with digital business telephone systems (139 pages)

Telephone System Toshiba Strata CTX Programming Manual

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Telephone System Toshiba Strata CTX User Manual

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Electronic key (12 pages)

Telephone System Toshiba Strata CT Digital Business Telephone Solutions Supervisor Manual

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Telephone System Toshiba Strata DK14 System Administrator Manual

Strata dk digital business telephone systems (56 pages)

Telephone System Toshiba Strata CTX Series Installation And Maintenance Manual

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Telephone System Toshiba Strata CTX Attendant Console Quick Reference Manual

(8 pages)

Telephone System Toshiba Strata CIX LVMU Installation And Programming Manual

Voice processing system (36 pages)

Summary of Contents for Toshiba Strata AirLink

Page 1: Installation Guide

726+,%$ Telecommunication Systems Division Digital Business Telephone Systems Wireless Systems Installation Guide May 2000...

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Page 3: Table Of Contents

System Configurations .....2 Base Station .....2 Handset ..... 2 Wireless Manager Software .....3 Strata AirLink BSIA Manager Software .....3 Strata AirLink RWIU Manager Software.....4 Chapter 2 – Pre-installation Step 1: Check System Hardware and Software Requirements .....6 Step 2: Review System Component Placement .....

Page 4 Step 4: Determine Base Station Power Supply ..... 21 Step 5: Connect Power Supply .....23 Step 6: Connect PC .....23 Step 7: Install Strata AirLink Manager Software .....24 Step 8: Copy Upgrade Software .....25 Step 9: Configure System ..... 26 Substep A: Activate UTAM .....

Page 5 Grounding Requirements .....99 FCC ..... 99 Part 68..... 99 Part 15.....100 UTAM, Inc.....100 Underwriters Laboratories (UL) .....102 Primary and Secondary Protectors .....102 System Line Circuit Requirements.....102 Glossary .....103 Index ..... 105 Strata AirLink Installation Guide 5/00...

Page 6 Contents Chapter 5 – Maintenance and Troubleshooting Strata AirLink Installation Guide 5/00...

Page 7: Introduction

Chapter 2 – Pre-installation gives procedures that must be performed prior to installing the Strata AirLink system. Chapter 3 – BSIA System Installation contains information on installing the Strata AirLink External Wireless system. Chapter 4 – RWIU System Installation contains information on installing the Strata AirLink Integrated Wireless system.

Page 8: Action/Response Table

Additional notes and comments are also included. They can consist of either a single step or a series of numbered steps. 2. When the action you perform results in a screen, menu, etc., the screen displays to the right. 3485 Strata AirLink Installation Guide 5/00...

Page 9: Related Documents/Media

Feature Description Strata DK Feature Description Manual User Guides/Quick Reference Guides for: Strata AirLink External Wireless Handset User Guide Strata AirLink External Wireless Quick Reference Guide Strata AirLink Integrated Wireless Handset User Guide Strata AirLink Integrated Wireless Quick Reference Guide...

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Page 11: Chapter 1 - The Grand Tour

This chapter tells you how wireless calls take place and gives you the basic system configurations.There are two available configurations: Strata AirLink External Wireless System – The basis for this system is the Base Station Interface Adapter (BSIA) system that interfaces to Strata DK systems and many non-Toshiba systems using the standard telephone ports.

Page 12: System Configurations

The handsets used with the RWIU system have many of the same Strata DK Digital Telephone (DKT) features. Unique Electronic Serial Numbers (ESNs) are programmed into the handsets at the factory and are automatically configured the first time a call is made. Strata AirLink Installation Guide 5/00...

Page 13: Wireless Manager Software

Wireless Manager Software Wireless Manager Software There is a version of manager software for each of the wireless systems: Strata AirLink BSIA Manager Software and RWIU Manager Software. The software enables you to configure the wireless system from a PC desktop. See Step 7,“Install Strata AirLink Manager Software”...

Page 14: Strata Airlink Rwiu Manager Software

The Grand Tour Wireless Manager Software Strata AirLink RWIU Manager Software The Strata AirLink RWIU Manager software is a Windows 95 application that includes: Easy-to-use Desktop Toolbar for navigation Configuration Window for setting the system ID, handset IDs, time and date, and...

Page 15: Chapter 2 - Pre-Installation

Pre-installation This chapter provides common step-by-step pre-installation procedures and several sample configurations for both Strata AirLink Wireless systems. The configurations range from a single system with one or two Base Stations to multiple-overlapping systems. The anticipated coverage of 320,000 square feet per Base Station and a maximum number of 32 users for each system was used to layout the samples.

Page 16: Step 1: Check System Hardware And Software Requirements

Step 1: Check System Hardware and Software Requirements Step 1: Check System Hardware and Software Requirements Table 1 lists the minimum hardware and software that your PC must have to use the Strata AirLink Manager software. Table 1 Hardware and Software Requirements...

Page 17

5. Consider the high traffic areas and install the number of Base Stations required to meet the estimated traffic demand. When multiple Base Stations are needed in the same location, you can mount Base Stations as close as one meter apart. Strata AirLink Installation Guide 5/00...

Page 18: Step 3: Review Possible System Configurations

For example, the Base Stations could be placed in the same general area or on separate floors, but with overlapping coverage Base Station Broadcast Area Base Station 1 Base Station 2 BSIA 2969 Figure 6 BSIA System with Two Base Stations Strata AirLink Installation Guide 5/00...

Page 19: Multiple Bsia Systems As Single System

Station 1 Station 2 to BSIAs 1 and 2 Analog lines (32) from the office telephone system BSIA 1 Base Base Station 3 Station 4 BSIA 2 2971 Figure 8 Multiple BSIAs in One System Strata AirLink Installation Guide 5/00...

Page 20: Multiple Overlapping Systems

1. Typical usage assumes .1, .15, and .2 Erlangs (6 minutes, 9 minutes, and 12 minutes, respectively, where 1 Erlang equals 60 minutes of usage) per line during the busiest hour of the day. 2. CCS stands for centi-call seconds, or 100 seconds of telephone conversation. 3. Assumes Base Stations are co-located. Strata AirLink Installation Guide 5/00...

Page 21: Factory With Adjoining Offices

Base Station 1 and Base Station 1 in the manufacturing area. Align Base Station 2 with the entrance of the cafeteria to provide coverage into that area. Offices 2977 Figure 11 System in a Manufacturing Area Strata AirLink Installation Guide 5/00...

Page 22: Cubicles, Walled Offices, And Conference Rooms

PC cable with DB9 or DB25 adapter (BSIA) RWIU Manager interface cable (6-pin connector) Power supplies Optional power supply for locally powered Base Stations Base Stations, handsets, and Charger Bases Strata AirLink Manager and RWIU Manager software (two floppy

disks) Strata AirLink Installation Guide 5/00...

Page 23: Step 6: Purchase Additional Equipment

Step 6: Purchase Additional Equipment Step 6: Purchase Additional Equipment ➤ Ensure that the following equipment has been purchased: PC (for the Strata AirLink Manager software) BSIA grounding wire (for gauge requirements, see Table 37 Page BSIA external alarm (see...

Page 24: Substep B: Set Up Base Station

1 2 : 1 5 7. Enter 8. Press The handset returns to idle. 9. Repeat Substeps 1~8 for each handset, substituting a different HID number (for example, 2, 3, 4, 5, etc.) in Substep 7. Strata AirLink Installation Guide 5/00...

Page 25: Substep D: Audio Coverage Test

BER tests so that you can test each Base Station 2. In idle mode, press $%& &$// 3. Press , then B E R M E A S U R E 1 2 : 1 5 Strata AirLink Installation Guide 5/00...

Page 26: Step 10: Mount Base Stations

2. Use locations that reduce attenuation and create a clear line of sight. 3. Always mount the Base Stations in a centralized location in open, symmetrical areas. Base Station placement guidelines are provided in “Review Possible System Note Configurations” Page Strata AirLink Installation Guide 5/00...

Page 27

9. Rotate the Base Station antennas so that they are perpendicular to the wall For specific installation procedures for the BSIA system, see Chapter 3 – BSIA System Installation and for the RWIU system, see “Maintenance and Troubleshooting” Page Strata AirLink Installation Guide 5/00...

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Pre-installation Step 10: Mount Base Stations Strata AirLink Installation Guide 5/00...

Page 29: Chapter 3 - Bsia System Installation

DIN connector. 2985 4. Connect the standoffs. Figure 15 Location of Screws on the BSIA Cover 5. Replace the BSIA cover and re-install the screws. Do not power on the BSIA at this point. Important! Strata AirLink Installation Guide 5/00...

Page 30: Step 2: Run Cable

Figure 17). 4. Connect the receive cable (pair 20 or 24) to the transmit jack 2982 +5VDC Local Power Antenna Power Cord (see Figure 17). Strain Relief Figure 17 Location of Transmit and Receive Jacks Strata AirLink Installation Guide 5/00...

Page 31: Step 3: (Optional) Activate External Critical Alarm

Purchase another power cord to fit the universal connector (three-pronged IEC 320 power inlet) on the power supply. Replace the 110VAC plug on the cable with an appropriate 220VAC plug. Connect a North American 220VAC adapter to the 110VAC plug. Strata AirLink Installation Guide 5/00...

Page 32

(Pair 20) Standard Silver Satin Line Cord Grey/Yellow Violet/Blue (Pair 21) Blue/Violet Base Station Violet/Brown (Pair 24) Standard Silver Satin Line Cord Brown/Violet Violet/Slate (Pair 25) Slate/Violet Figure 19 Base Station to BSIA Wiring Diagram Strata AirLink Installation Guide 5/00...

Page 33: Step 5: Connect Power Supply

Power Cord Strain Relief back of the BSIA (J2) (see Figure (Circuits 1~16) (Circuits 17~32) 3000 -48VDC Input RJ-45 25-pair Female Connectors Used (Admin Port) (Analog Lines and Base Stations) Figure 22 BSIA RJ-45 Jack (back side) Strata AirLink Installation Guide 5/00...

Page 34: Step 7: Install Strata Airlink Manager Software

BSIA System Installation Step 7: Install Strata AirLink Manager Software Step 7: Install Strata AirLink Manager Software 1. Check the PC hardware/ Refer to “Check System Hardware and Software software against the required Requirements” Page minimums. 2. Close any open

applications in Windows.

Page 35: Step 8: Copy Upgrade Software

BSIA System Installation Step 8: Copy Upgrade Software Step 8: Copy Upgrade Software 1. Place the Strata AirLink floppy disk #2 into drive A:\. 2. In Windows 98/95, double- click the My Computer icon ...or in Windows 3.11/3.1, open Program Manager.

Page 36: Step 9: Configure System

1 or 2 is received, check the software port configuration against the hardware configuration. 8. Enter the password and click 3289 Substep A: Activate UTAM 1. From the Desktop Toolbar, click the Status icon. 3484 Strata AirLink Installation Guide 5/00...

Page 37 Code. 3487 9. Click OK. The message “Wireless system has been activated” displays at the bottom of the Status window. Install the UTAM code in one hour or a new one Important! must be obtained. Strata AirLink Installation Guide 5/00...

Page 38: Substep B: Set System Time And Date

Step 9: Configure System Normal LED indications display on the BSIA (PWR and Master LEDs ON) and Base Stations (PWR LED ON). Several messages display (below) on the PC screen as Strata AirLink Manager tests the installation. 3491 If the message “Waiting for Wireless Manager”...

Page 39: Substep C: Enter System Settings

7. Click Close. Substep C: Enter System Settings 1. Complete the System Table 5 Page Settings form. 2. Open the Strata AirLink Manager program. 3289 3. Click the Configuration icon. 4. Highlight Select Database. 3270 Strata AirLink Installation Guide 5/00...

Page 40 Hookflash duration – 500 ms FT pause duration – 1000 ms FT inter-event pause – 100 ms 9. Click the Send icon. The new data is sent to the BSIA. 10. Save the file (file extension is .sdb). Strata AirLink Installation Guide 5/00...

Page 41: Substep D: Configure Handsets

The current data from the BSIA displays. 7. Verify the previous BSIA settings. 8. Enter the handset ID. 9. Save the file (file extension is .udb). 10. Click the Send icon. The new data is sent to the BSIA. Strata AirLink Installation Guide 5/00...

Page 42: Substep E: Program Button Sequences

3. Open the Strata AirLink Manager program. 3289 4. Click the Configuration icon. 5. From the Configure Window, click Select Database and Feature Table. 3273 6. Click Select Event and Commands. 3264 Strata AirLink Installation Guide 5/00...

Page 43 1~20). A completed Feature Table looks like this: CALL WAIT CALLBACK , etc.). CAMPON 3258 10. Repeat Substeps 1~5 as necessary. 11. Save the file (file extension is .fdb). 12. Click the Send icon. The new data is sent to the BSIA. Strata AirLink Installation Guide 5/00...

Page 44 1. For example, a setting of 2 means 2 x 100 ms or 200 ms. 2. The Dial Tone Delay eliminates the possibility of a user dialing before the office telephone system is ready. 3. For example, a setting of 2 means 2 x 10 ms or 20 ms. Strata AirLink Installation Guide 5/00...

Page 45 P2, Pair 5 P2, Pair 6 P2, Pair 7 P2, Pair 8 P2, Pair 9 P2, Pair 10 P2, Pair 11 P2, Pair 12 P2, Pair 13 P2, Pair 14 P2, Pair 15 P2, Pair 16 Strata AirLink Installation Guide 5/00...

Page 46 Button Events 1 - 20 Sequence (Use the Commands or Text Displays Listed Below) FLSH FCN 1 FCN 2 FCN 3 FCN 4 FCN 5 FCN 6 FCN 7 FCN 8 FCN 9 FCN 0 FCN * FCN #...

Page 47: Substep F: Store Ids In Handset

A maximum of eight system IDs and associated handset enter all the system and IDs can be stored in handset memory. handset IDs required. 11. Press The ESN displays momentarily. &$// 12. Press The handset ESN is stored in the BSIA. Strata AirLink Installation Guide 5/00...

Page 48: Bsia Additional Information

Table 9 DB9 and DB25 Adapter Pinouts 8-Pin Jack DB9-F DB25-F 8-Pin Jack DB9-F DB25-F 1/BLU Not Used Not Used 5/GRN 2/ORG 6/YEL 3/BLK 7/BRN Not Used Not Used 4/RED 8/WHT Not Used Not Used Strata AirLink Installation Guide 5/00...

Page 49: Alm Removal

(see Figure 16 on Page CAUTION! 20). 5. Disconnect the ALM from the standoffs on the BSIA PCB. 6. Gently lift the ALM out of the BSIA. 7. Replace the BSIA cover and re-install the screws. Strata AirLink Installation Guide 5/00...

Page 50: Initial Configuration Change

3. Select Preferences from the menu bar and Password. 3268 4. Enter the old and new password and click OK. Base Station Addition 1. From the Desktop Toolbar, click the Configuration icon. 2. Open the Configure Window. Strata AirLink Installation Guide 5/00...

Page 51: Communications Port Change

Toolbar, click the Configuration icon. 2. Click Preferences and Port Setting. 3281 3. Click the new port Important! Click close immediately (before 10 seconds have elapsed) or the change does not take effect. and Close. Strata AirLink Installation Guide 5/00...

Page 52 BSIA System Installation BSIA Additional Information Strata AirLink Installation Guide 5/00...

Page 53: Chapter 4 - Rwiu System Installation Step 1: Check Dip Switches And Jumpers On Pcb

The RWIU has three DIP switches. The location of each is shown in Figure 23. The factory default positions are given in the following steps. RWIU (top view) JTAG 3513 Figure 23 Location of RWIU DIP Switches S1~S3 Strata AirLink Installation Guide 5/00...

Page 54 3. Check DIP Switch S3 settings to ensure that the correct number of handsets are enabled (see Table 13). Table 13 S3 Factory Default Positions (Number of Handsets) S3 DIP Switch Number Number of Handsets 4. Verify that the Watch Dog Timer (WDT) is jumpered correctly as shown in Figure Strata AirLink Installation Guide 5/00...

Page 55: Step 2: Mount Wwis Onto Rwiu

RWIU in Strata DK424i. The RWIU PCB can provide up to 16 or 32 Strata AirLink Handsets, depending on where it is placed. The RWIU slot provides eight handsets. Each additional set of eight handsets requires that an additional cabinet slot adjacent to RWIU be vacant.

Page 56 RWIU System Installation Step 3: Determine Proper Strata DK Slot Configuration Table 14 Strata AirLink RWIU PCB Cabinet Slot Configuration RWIU PCBs Handsets Slots RWIU Cabinet Slot Placement Needed Needed Needed Base Cabinet with any processor S103-RWIU1 9~16 S104-vacant 17~24...

Page 57: Step 4: Install Rwiu/Wwis Into Strata Dk

26) and run the opposite end RJ45 RJ45 RJ45 RJ45 out to the Base Stations. 3512 Figure 25 RJ-45 Pin Configuration To Base Stations WWIS1A (side) RWIU1A (side) 3724 Figure 26 EMI Connections to the RWIU/WWIS Strata AirLink Installation Guide 5/00...

Page 58: Step 6: Determine Base Station Power Supply

Calculation examples are shown in Tables 16 AC/DC OUT DC/DC OUT The maximum voltages for the RPSU280A Note AC IN Power Supply are 25.0 (+5VDC) and 65.0 110VAC (-24VDC). Power Cord 3923 Figure 27 RWIU Power Supply Strata AirLink Installation Guide 5/00...

Page 59 RCOS, RCOS2 RCOU (4 CO) RCOU + RCOS (8 CO) RCOU, RCOU2 RCTUA RCTUB RCTUBA/BB RCTUC/D RCTUE/F 10.0 RDDU RDSU/RDSS (-24VDC) With 4 DKTs and 4 SLTs. RDSU + R48S (-48VDC) RDTU REMU2/PEMU RGLU, RGLU2 RMCU Strata AirLink Installation Guide 5/00...

Page 60: Step 9: Program Strata Dk

Strata DK. Up to 32 handsets per RWIU are allowed. 2. Use the following programs: Program 03 for Code 61 (slot assignments). Program 32 for Auto Preference. Program 39 for flexible button assignments. Strata AirLink Installation Guide 5/00...

Page 61 Remote Retrieval of Held/Parked Calls Centrex/PBX Compatible Ringing Line Preference CO/Centrex Saved Number Redial Conferencing Timed Reminders Dial Pulse DTMF Mode Change Toll Restriction Override Code Revision Direct Station Selection (DSS) User Programmable Feature Buttons DSS Console Features Strata AirLink Installation Guide 5/00...

Page 62: Step 10: Connect Pc

6. Click Yes A dialog box displays recommending a destination path of C:\Wireless..or No if applications need to be closed. 7. Click OK C:\Wireless is accepted as the destination directory..or change the destination drive/directory. Strata AirLink Installation Guide 5/00...

Page 63: Step 13: Start Rwiu Manager

Manager icon. 3347 Step 14: Set General Settings 1. From the Desktop Toolbar, click the Config icon. 3348 2. Click General Settings and assign COM port 1. 3349 3. Click OK. Strata AirLink Installation Guide 5/00...

Page 64: Step 15: Enter Handset Ids

Handset IDs do not have to be in numerical order and can be changed at any time. 3746 4. Click OK. The Desktop Toolbar displays. 5. Upload the settings to the The new IDs are saved. RWIU. Strata AirLink Installation Guide 5/00...

Page 65: Step 16: Enable Utam

“Permission granted successfully” displays. If an error message displays, repeat Steps 1~7. If UTAM is required, the Base Stations have one Note power LED ON (green), two (center) transmission LEDs ON (red), and four additional LEDs that are red. Strata AirLink Installation Guide 5/00...

Page 66: Step 17: Store Ids In Handset

A maximum of eight system IDs and associated handset all the system and handset IDs can be stored in handset memory. IDs required. 11. Press The ESN displays momentarily. &$// 12. Press The handset ESN is stored in the BSIA. Strata AirLink Installation Guide 5/00...

Page 67: Rwiu Additional Information

Upgrading the RWIU and Base Stations Changing the Base Station number RWIU/WWIS Interface Unit The Strata AirLink Wireless System interfaces to Strata DK16, DK16e, DK40, DK40i, DK280, and DK424 systems with an RWIU Interface Unit. The RWIU PCB (shown in Figure...

Page 68 The Random Access Memory (RAM) consists of two CMOS SRAM chips, 128KB (55 ns), used as main data memories. It is expandable to 512KB (55 ns) using two additional chips. The total size of the data memory of the CPU is 512KB. Strata AirLink Installation Guide 5/00...

Page 69 The RWIU interfaces to the Strata DK system using a 32 time slot, 2.048 MHz Pulse Code Modulator (PCM) channel. The PCM channel has the following signals: PHOUT – 32 time slots (receiving data) PHIN – 32 time slots (transmitting data) PHFS – 8 KHz frame synchronization output Strata AirLink Installation Guide 5/00...

Page 70 RD04 internal synchronous PCM channel N4 receive data. XDI4 internal synchronous PCM channel N4 transmit data signal, derived from input N4 (IN4) of the matrix while the output signal is derived from output N4 (OUT4) of the same matrix. Strata AirLink Installation Guide 5/00...

Page 71 RX and TX line transformers with protectors 320 ms synchronization signal insertion logic (channel N17) Loop back controls RWIU generated Base Station reset (relays K1~K4) RFI protectors (common mode chokes - optional) Electronic circuit breakers for each E1 channel Strata AirLink Installation Guide 5/00...

Page 72 Time slots N9~N15 – idle (free) time slots Time slot N16 – signaling CCS time slot

Time slot N17 – multiframe 320 ms synchronization pulse time slot Time slots N18~N31 – idle (free) time slots Strata AirLink Installation Guide 5/00...

Page 73 CPU using the output port that drives the LED of a photocoupler. A short circuit indication flag is provided to the CPU for each electronic circuit breaker. The following are additional protection devices for each E1 interface: Four slow-blow fuses One polyswitch Strata AirLink Installation Guide 5/00...

Page 74 System and Base Station power up controls RWIU cross connects Base Station software download Start-up diagnostics (BIT) Online diagnostics Loop tests System audit and parameter refresh RWIU and Base Station configuration Alarm reports and LEDs Strata AirLink Installation Guide 5/00...

Page 75 CPU (Intel 80186EC) E1 Transceiver (DALLAS DS2153) Matrix (MITEL MT8985) WDT (CPU) UART (16550 compatible and internal to the CPU) External UART (16550 compatible) PIC (8259 compatible and internal to the CPU) Strata AirLink Installation Guide 5/00...

Page 76: Change Initial Configuration

Change Communications Ports 1. From the Desktop Toolbar, click the Config icon. 3348 2. Click General Settings. 3349 3. Click the new port and OK. The Desktop Toolbar displays. Strata AirLink Installation Guide 5/00...

Page 77: Check Rwiu And Base Station Software Versions

Check RWIU and Base Station Software Versions 1. From the Desktop Toolbar, click the Status icon. 3360 2. Click Versions. 3742 View Log Messages 1. From the Desktop Toolbar, click Status. 4145 2. Click Log Messages. Strata AirLink Installation Guide 5/00...

Page 78: Reset Base Stations And Rwiu

1. From the Desktop Toolbar, click the Software Upgrade icon. 3743 2. Click RWIU Software The software downloads. 3744 ...or Base Station Software. 3736 3. Click BS0~BS3 ...or Download BIN File to The software downloads. RWIU. Strata AirLink Installation Guide 5/00...

Page 79: Change Base Station Numbers

1. From the Desktop Toolbar, click the UTAM Activation icon. 3737 2. Click Change BS Num. You are prompted for a password. 3739 3. Enter the password and click 4. Enter the new Base Station number. Strata AirLink Installation Guide 5/00...

Page 80 RWIU System Installation RWIU Additional Information Strata AirLink Installation Guide 5/00...

Page 81: Maintenance And Troubleshooting

Maintenance and Troubleshooting This chapter describes maintenance procedures and troubleshooting tips for the Strata AirLink Wireless BSIA and RWIU systems. Problems are classified and cleared by replacing the malfunctioning unit and by performing operational tests in the sequences described in this chapter.

Page 82: Chapter 5 - Maintenance And Troubleshooting Maintenance

2. Insert the spare battery into the Charger Base rear pocket. 3912 Battery LED The rear pocket LED changes to amber while the handset finishes charging or alternates between green and amber, indicating in-progress discharge. Strata AirLink Installation Guide 5/00...

Page 83: Discharge Batteries

Enables 5&/ to initiate handoff to another Base Station in the system Handoff by Recall while a call is in progress. Restores the handset to factory default settings. All changes made via Reset to factory defaults the handset menu are removed. Strata AirLink Installation Guide 5/00...

Page 84 ➤ To view the software version 1. Press M . S O F T W A R E V E R S I O N 1 2 : 1 5)&1 2. Press The software version displays. Strata AirLink Installation Guide 5/00...

Page 85 1 2 : 1 5)&1 ...or again. H A N D O F F R C L O F F 1 2 : 1 5 3. Press ...or M to go the

next password-protected function. Strata AirLink Installation Guide 5/00...

Page 86: Upgrade Base Stations

This procedure should only be performed if technical support requires it. CAUTION! Attempting the procedure without technical support, could destroy the system. 1. From the Desktop Toolbar, click Status. 3496 Monitor the upgrade by viewing the status messages as the BSIA powers up. Strata AirLink Installation Guide 5/00...

Page 87 If the BSIA does not boot automatically within a Note few seconds, which occurs sometimes during the initial upgrade, press the reset button on the BSIA. A series of screens display: Upgrade of the BSIA software: Upgrade of the Base Station software: Strata AirLink Installation Guide 5/00...

Page 88 Get UTAM Inputs From Strata AirLink. 3485 Important! Make a note of the BSIA serial number and input codes before calling the Strata AirLink Activation Desk because the staff will ask for these numbers. Strata AirLink Installation Guide 5/00...

Page 89 Maintenance and Troubleshooting Maintenance 8. Call the Strata AirLink The hours of operation are: Monday through Friday, Note 8:00 a.m. to 5:00 p.m., Pacific Standard Time. Activation Desk, (949) 598- 4980 for the activation code. After the BSIA serial number and input codes are given to the activation desk, the technician will give you the UTAM system activation code.

Page 90 Normal LED indications display on the BSIA (PWR and Master LED ON) and Base Stations (PWR LED ON). Several messages display (shown at the right) on the PC screen as Strata AirLink Manager tests the installation. 3491 Important! If the message “Waiting for Wireless Manager”...

Page 91: Troubleshooting

“Set Up Temporary Installation” Page 13 for more information). Contact Strata AirLink Activation Desk at (949) 598-4980 for the code between the hours of 8:00 a.m. and 5:00 p.m. (Pacific Standard Time), Monday through Friday. Voice mail is available for messages after hours.

Page 92: Base Station

2. Check whether the Base Station transmit/receive cables enable another Base Station to initialize. 3. Verify power supply. 4. Test the Base Station on the another BSIA or RWIU Base Station port and with good transmit/receive cables. 5. Reset the BSIA. Strata AirLink Installation Guide 5/00...

Page 93: Replace Defective Base Station

3. Mount the new Base Station and connect the cables and power supply, if applicable. 4. If the Base Station does not come online within a minute, perform a software upgrade using the latest version of software. See “Upgrade Base Stations” Page Strata AirLink Installation Guide 5/00...

Page 94: Handset

ID not already in use. Change the handset ID in the User Database to match the ID programmed in the handset. Make a call on the handset to store its ESN. Strata AirLink Installation Guide 5/00...

Page 95: Battery

Try recharging the battery. If the problem continues, replace the Charger has green flashing LED. battery. Strata AirLink Installation Guide 5/00...

Page 96: Charger Base

Amber/green Alternate flashing Battery is discharging. BSIA System Reports Strata AirLink Manager generates reports with troubleshooting information. Some of the reports are: Alarm conditions Traffic statistics Line, channel, and call status Analog Line Continuity To check the analog line continuity throughout the system, use an installer test set at individual MDF/IDF locations.

Page 97 If not, there are open connections somewhere in the installation; check and correct

all punch-down connections and repeat Steps 8~11. Strata AirLink Installation Guide 5/00...

Page 98 Contact Toshiba for an UTAM activation code. INVALID_HSID_FROM_BS A handset with invalid handset ID, but valid system ID, tried to make a call. Compare the handset ID against the user database in the Strata AirLink Manager and ensure that they match. INVALID_INCOMING_BCC A bad connection exists between the BSIA and Base Station.

Page 99 “Step 3: (Optional) Activate External Critical Alarm” on Page 21). To reset the alarm relay and determine the cause of the critical alarm, check the critical alarm report in the Strata AirLink Manager. Checking the critical alarm report also stops the flashing LED. LEDs There are LEDs on the BSIA (controller) that give continuous system status and assist in diagnosing symptoms.

Page 100 The test that checks the integrity of boot software stored Yellow in non-volatile memory failed because there is a hardware failure. The test that checks volatile Yellow memory failed because there is a hardware failure. Strata AirLink Installation Guide 5/00...

Page 101 &$// Log Files The Strata AirLink Manager creates log files that open in any text editor for viewing. If the log file has blank lines when opened, Strata AirLink Manager is running in the background. Close the software and re-open the log file.

Page 102 Click OK and input numeric values. 3269 When adding a Base Station and a word was entered that Strata AirLink Manager does not recognize in the Second Base Station Service Enable field, the following displays: Click OK and input TRUE or FALSE.

Page 103 = 31. Pls try again” or “ALM #200. Invalid Try the upgrade again. msg during Base Station sw upgrade” displays If the Strata AirLink Manager loses its Restart the software to re-establish the connection. communication link with the BSIA...

Page 104: Rwiu System

3. Get current handset IDs. 4149 4. Highlight the defective handset ID and press Del. 5. Input the new handset ID. 6. Click OK. 7. Go off-hook and press New ESN is locked to the RWIU. &$// Strata AirLink Installation Guide 5/00...

Page 105 9, the transmit and receive pairs are probably reversed or shorted somewhere in the installation. If not, there are open connections somewhere in the installation; check and correct all punch-down connections and repeat Steps 4~9. Strata AirLink Installation Guide 5/00...

Page 106 Maintenance and Troubleshooting Troubleshooting Strata AirLink Installation Guide 5/00...

Page 107: Appendix - Specifications

Line Power: 1,186 ft. (24 AWG) 2,985 ft. (22 AWG) Wiring Distances from BSIA/RWIU Local Power: 3,280 ft. (22 and 24 AWG) Modulation p/4 differential (QPSK) Gross Bit Rate 384 kbs (QPSK) Access Method FDMA/TDMA/TDD Strata AirLink Installation Guide 5/00...

Page 108: Handset Specifications

1 internal Antenna Gain 3 dBi maximum, 2 dBi typical π/4 (QPSK) Modulation Operating: 0°~40°C Temperatures Storage: 0°~50°C (without battery) -10°~70°C (with battery) Types: 8 Ringer Volumes: 3, plus mute 2 lines and 9 characters Strata AirLink Installation Guide 5/00...

Page 109: Grounding Requirements

0~113 feet 8 AWG The Strata AirLink wireless telephone system operates under the FCC Part 15 rules for Unlicensed Personal Communications Service (UPCS) equipment in the 1920~1930 MHz band. Part 15 ID numbers for the Base Station (BS) and handset are BS-CJ6DT-WRLS-BS-01 Note and HS-CJ6DT-WRLS-HS-01, respectively.

Page 110: Utam, Inc

The Frequency Coordination Service Request (sample on Page 101) must be completed and sent to UTAM before activation of the system. Contact the Strata AirLink Desk at (949) 598-4980 for more information between the hours of 8:00 a.m. and 5:00 p.m. (Pacific Standard Time),

Monday through Friday.

Page 111 PFC ID (if not a new site) UTAM Site ID: Part 6 - Approvals Jeff Parkin Telephone: (949) 598-4980 Name/Signature of Company Rep./Coordinator: Fax: (949) 583-3097 Title: Primary Frequency Coordinator Date: UTAM Member Contact (if different from above): Paul Keith Strata AirLink Installation Guide 5/00...

Page 112: Underwriters Laboratories (Ul)

Line Unit Pair 16 25-pair Cable Primary Protection (ONEAC 6-AP-200) Base Station 1 Pair 20 BSIA Pair 21 Base Station 2 Pair 24 Pair 25 ON-Premise Equipment 3004 OFF-Premise Equipment Figure 31 Primary and Secondary Protectors Strata AirLink Installation Guide 5/00...

Page 113: Glossary

Duration of the full DTMF cycle (length of tone plus length of silence between tones) for dialing and other telephone system operations. DTMF Off Duration Duration of silence between DTMF tones. ElectroMagnetic Interference. EPROM Erasable Programmable Read Only Memory. Strata AirLink Installation Guide 5/00...

Page 114 Static Random Access Memory. Stop Ringing Time Length of time the RWIU waits after last detection of ring voltage on a line before it stops the ring. Transmit. UART Universal Asynchronous Receiver/Transmitter. Voltage Alternating Current. Watch Dog Timer. Strata AirLink Installation Guide 5/00...

Page 115: Index

DC resistance error messages initial configuration change handoff by recall feature LEDs handsets log files configure password change lock program button sequences perform bit error rate (BER) test replace defective handsets Strata AirLink Installation Guide 5/00...

Page 116 RWIU suitable locations change base station numbers system change communication ports component placement change initial configuration configuration examples check RWIU/base station software configurations versions base station LEDs cubicles, walled offices, conference measure DC resistance rooms Strata AirLink Installation Guide 5/00...

Page 117 DC resistance defective base station 84-85 handset handset password noisy circuits RF link termination , 85, system reset underwriters laboratory (UL) unpack shipment upgrading base stations UTAM activation of codes frequency coordination service request Strata AirLink Installation Guide 5/00...