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**Subject: TeamPoS 36XX Controller**

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**SYNOPSIS**

This document is intended to supply sufficient information to North American service planners to enable them to plan for the introduction of the above product(s).

This SPG is the generic version, released by the product authority, Fujitsu Frontech North America (FFNA), Sustaining Engineering. Each group releasing the product will use the information contained as the basis for their Logistics and Field Service planning activities.

This document details only the corporate philosophies, and does not seek to cover such subjects as additional services offered by Managed Services, third party service providers, low level repairs, or the local sourcing of components and consumable items.

The service descriptions in this document are guidelines, detailing the recommendations of the product authority. The information within this document has been reviewed for accuracy, but as with most documents, errors may be found and corrected in future revisions. Fujitsu cannot be held liable for any inaccurate information found in this document.



<u>INQUIRIES TO:</u>		DATE
Fujitsu Frontech NA		
Exchange: Sustaining Engineering	_____ Sustaining Engineering	_____
Mail: Fujitsu USA04, Sustaining Engineering	_____	_____
FAX: 858-731-4781 (7888-4781)	_____ Product Manager	_____
Internet: <a href="mailto:SustainingEngineering@us.fujitsu.com">SustainingEngineering@us.fujitsu.com</a>	_____	_____
FTP: <a href="ftp://ftp.ftxs.fujitsu.com/">ftp://ftp.ftxs.fujitsu.com/</a>	_____ Author	_____
Original signature copies maintained by Sustaining Engineering.		

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## 0. DOCUMENT CONTROL

### 0.1. ISSUE LEVEL

This is the first issue of this document, introducing the TeamPoS 36XX into the Fujitsu Frontech NA product line.

### 0.2. CHANGES FROM PREVIOUS ISSUE

None

### 0.3. TERMS AND ABBREVIATIONS

AFR	Annualized Failure Rate
CLD	Confidence Level Diagnostic Software
EMI	Electromagnetic Interference
ESD	Electrostatic Discharge
FDD	Floppy Disk Drive
FRU	Field Replaceable Units
FPY	Failures Per Year
HDD	Hard Disk Drive
MSR	Magnetic Strip Reader
MTBF	Mean Time Between Failures
MTTR	Mean Time To Repair
POH	Power On Hours
PSU	Power Supply Unit
SPG	Support Planning Guide
UPC	Universal Product Code (Bar Code)
VFD	Vacuum Florescent Display

### 0.4. REFERENCE DOCUMENTS

N/A	Product Announcement
N/A	Product Requirements Document
L1KD02909-24XX	Product Specification Document
D900000338	Installation and Maintenance Manual

## 1. OVERVIEW

The TeamPoS 36XX is designed as a small form factor controller only, consisting of the following components:

- Chassis
- Micro ATX form factor motherboard
- Power Supply
- I/O Board Options

The chassis accommodates the following:

- Motherboard with on board LAN, Audio, and Video
- Front Operator Panel with one standard USB port in addition to the motherboard USB ports
- 350 Watt Power supply Unit with Fan
- 3.5", 7200 RPM, 160GB or greater, SATA HDD (Optional)
- 2<sup>nd</sup> HDD (same as above)
- DVD/CD-ROM, Combo Drive, SATA (Optional)
- Full Height PCI card
- One X16 PCI Express slot for optional video card
- Two X1 PCI express slots for 2<sup>nd</sup> LAN, Modem, etc. (low Profile)
- Powered USB I/O Option Card
- Legacy I/O Option Card
- Powered USB and Legacy I/O Option Card

### 1.1. TARGET MARKET

The TeamPoS 36XX is designed to satisfy the low end market where price and performance is of prime importance. This product is only planned for distribution in North America and possibly Australia.

### 1.2. RELEASE SCHEDULE

Description	Release Date
TeamPoS 36XX	June 19, 2009

### 1.3. PRODUCT DESCRIPTION

The TeamPoS 36XX has very few or no common components to the TeamPoS 3000 product lines. The controller will be offered in black only.

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## 1.4. SOFTWARE

### 1.4.1. OPERATING SYSTEMS

The TeamPoS 36XX controller supports the following operating systems:

- Windows XP Pro
- Windows XPe
- Windows Server 2003
- WePOS
- Linux, SuSe version SLED10, SP1, & SP2, Red Hat version RHEL55

Vista Business (Vista 64 bit is not supported)

Windows 2000 is not supported

## 1.5. HARDWARE

The TeamPoS 36XX is equipped with the following features:

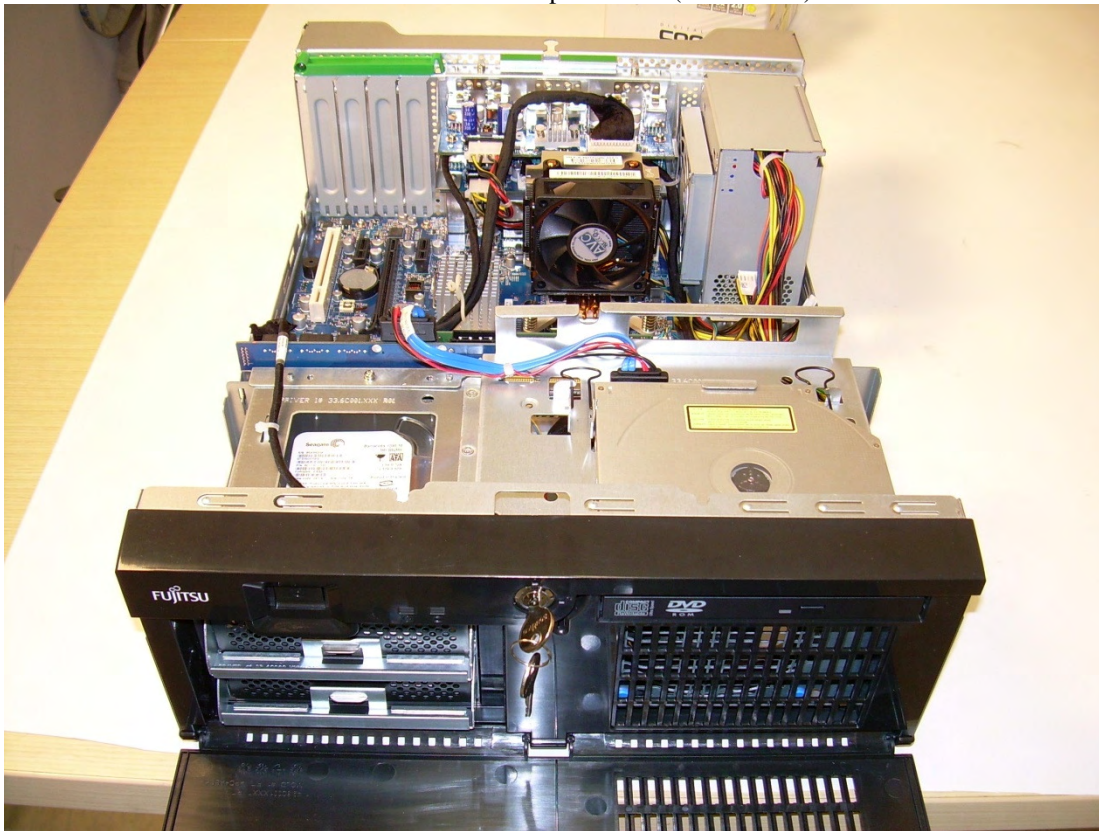
Motherboard Features:

- The BIOS will incorporate Windows Marker feature, which is required for OEM Vista support
- The motherboard will support Intel's Active Management Technology or AMT and VPro technology
- The Trusted Platform Module feature will be supported for Windows operating systems
- Form Factor uATX
- Chipset: Q35 & ICH9
- Front Side Bus: 800/1066/1333MHz
- Four RAM Slots
- Memory: 1GB to 8GB DDR2 (non ECC)
- Video: 1 – VGA
- Ethernet: 10/100/1000 MB
- Card Slots: 1 PCI full height, 2 PCIe X1, low profile, 1PCIe X16 low profile (video card)
- Connectors:
  - Keyboard/PS2
  - Mouse/PS2
  - Mic in
  - Audio Line in
  - Audio Line out
  - VGA, DB15
  - LAN, RJ45
  - COM1, D-sub 9 pin male
  - 4 standard USB
- Other Features:
  - Wake on LAN
  - APM 1.2 Support
  - ACPI Support
  - DMI 2.0 Support
  - SMBIOS Support
  - SLP 2.0
  - PXE Boot
  - AC Power Restoration
  - TPM Version 1.2 Support

Chassis Features:

- Locking Front door
- Handles two SATA 160GB-HDD's
- RAID Standard with two Drives
- CD-RW/DVD (optional)
- Power Switch
- Reset Switch (behind door)
- LED's:
  - Power
  - HDD Activity
  - LAN Activity
- I/O Board Options
  - Legacy Board I/O – 3 Powered COM Ports (+5 VDC/STD) with 2 Powered USB, 12VDC, (Teal)
  - Powered USB: 1 - 24VDC, (Red), and 5 – 12VDC (Teal)

TeamPoS 36XX with top cover off (Front View)



## 1.6. SPECIFICATIONS

### 1.6.1.1. Dimensions

Height	135mm	5.3in
Width	340mm	13.4in
Depth	490mm	19.3in
Weight	10.2kg	22.4 lbs (w/2HDD + DVD)

### 1.6.1.2. Power

Output Voltage	+12V, (+24V is converted from +12V on PUSB board), +5V, +3.3V, and -12V	
Output Current	+12V1 = 12A, +12V2 = 16A, +5V = 20A, +5VSB = 2.5A, +3.3V = 20.0A, -12V = .3A	
I/F Connector	1 – PCI slot, 1 – PCIe-X16, 2 – PCIe-X1	
Input Voltage	100 – 240VAC, 50-60Hz	
Input Current	<9.0A @ 115VAC, <4.5A @ 240VAC	
Total Wattage	350 Watts (maximum)	
Battery Charger Output Voltage - NA – No Battery Backup	Charging	N/A
	Non-Charging	N/A

### 1.6.1.3. Temperature & Humidity

Temperature	Operating	0°C ~ 35°C (32° to 95°F); 15° C/Hr (Non-Condensing)
	Non-Operating	-5°C ~ 50°C (23° to 122°F); 15° C/Hr (Non-Condensing)
Humidity	Operating	10 ~ 90% (Non-Condensing)
	Non-Operating	8 ~ 95% (Non-Condensing)

### 1.6.1.4. Environmental

Water Resistance	IP52 (EC)
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### 1.6.1.5. Safety & Regulatory

This product is RoHS compliant. Any part that is replaced or used during the service of this product must be replaced with the same RoHS compliant component. This includes all sub-assemblies and component parts (screws, washers, metal parts, cables, etc). Any Repair Center or service operation cannot impact the RoHS (or other regulatory) compliance.

ESD	Air Discharge	±8KV
	Contact Discharge	±8KV
EMI Standards		FCC 47CFR part 15 class B Canada ICES-003 Class B EN55022:2006 Class B AS/NZS CISPR22:2006 class B
Safety Standard		CAN/CSA-C22.2 No. 60950-1-03 EN60950 3 <sup>RD</sup> Edition, EN60825-1: 1994/A11: 1996/A2: 2001 IEC60825-1: 1993/A1: 1997/A2: 2001 (Laser)
Immunity		EN55024 1998/ +A1: 2001 +A2:2003 EN61000-3-2 2000 +A2:2005 EN61000-3-3 1995/ +A1: 2001 +A2:2005 EN61000-4-2 1998/ +A1: 2001 +A2: 2003 EN61000-4-3 1998/ +A1: 2001 +A2: 2003 EN61000-4-4 1998/ +A1: 2001 +A2:2003 EN61000-4-5 1998/ +A1: 2001 +A2:2003 EN61000-4-6 1998/ +A1: 2001 +A2:2003 EN61000-4-8 1998/ +A1: 2001 +A2:2003 EN61000-4-11 1998/ +A1: 2001 +A2:2003

## 1.7. OPTIONS

The TeamPoS 36XX has the following available options:

1. CD-RW/DVD
2. 2<sup>nd</sup> Drive RAID Capability
3. Powered USB I/O Board, and/or Legacy I/O Board
4. PCIe X16 slot for Video Card
5. Up to 8GB of DDR2 RAM

### 1.7.1.1. Option 1

The TeamPoS 36XX can be configured with a CD – Read/Write DVD. A blanking plate will be installed if no CD is installed.

### 1.7.1.2. Option 2

A second drive will allow RAID capability

### 1.7.1.3. Option 3

I/O board options consist of a powered USB board, a legacy board or both. The picture below shows both installed

### 1.7.1.4. Option 4

A PCIe X16 slot is available for use as a video card for dual display configurations

### 1.7.1.5. Option 5

Memory can be populated up to 8 GB of DDR2 RAM using a combination of 1 and 2 GB RAM modules



## 1.8. PRODUCT PERFORMANCE

### 1.8.1. RELIABILITY

Appendix A contains a work sheet for calculating the anticipated failure rate of a typical customer installation. The reliability data below is based on Engineering/Supplier data and assumes the unit/system is Installed, Maintained, Operated, and Preventive Maintenance performed as recommended.

Description	MTBF @ 35°C	MEASURE
Motherboard	270,399	Hours
Hard Disk Drive	700,000 *	Hours
HDD Interface Board	8,558,249	Hours
Legacy Board	3,219,323	Hours
USB Board	1,783,699	Hours
Power Supply (without Fan)	285,795 **	Hours
Power Supply Fan	70,000	Hours
Front Panel PCB	7,366,355	Hours
Chassis Fan ***	70,000	Hours
CPU Fan ***	70,000	Hours
CD R/W DVD	600,000	Hours
CPU	10,000,000	Hours
1GB DDR DIMM Memory	11,764,705	Hours
2GB DDR DIMM Memory	6,060,606	Hours

\* HDD MTBF not available at this temperature, value listed is at 25°C, value at rated temp would be much less.

\*\* Power Supply MTBF @ 50°C.

\*\*\* The life span for fans are defined as maintaining 70% of maximum rotation speed.

### 1.8.2. LIFE EXPECTANCY

The design life expectancy for the components are as follows.

Description	Life
Hard Disk Drive	>5 years at normal conditions, or 50,000 starts/stops
CD R/W DVD	9,000 hours laser life 10,000 times loading of disk tray 2,000,000 seeks- feed motor life

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## 2. RESOURCES

The following sections list support, training, documentation, spares, repairs, and diagnostics available for this product.

### 2.1. SKILLS REQUIRED

Customer Service Representative:

A good working knowledge of Intel-based PC components, POS peripherals, I/O card installation and supported operating systems is required. Prior experience and knowledge of POS terminals and their associated peripherals, Confidence Level Diagnostics (CLD), and commercial off-the-shelf PC diagnostics is assumed.

Consultant/Project Manager:

Good working knowledge of PCs, supported operating systems, and specific application experience is assumed.

Repair Center Technician:

An in-depth understanding of Intel-based PC components, POS peripherals, I/O cards, and supported operating systems is required. Knowledge of Confidence Level Diagnostics (CLD) and commercial off-the-shelf PC diagnostics is assumed.

Experience with troubleshooting multilayer PWAs, including surface mount technology (SMT) is required.

### 2.2. TRAINING

Field Service training is under the discretion of each specific business unit. Sustaining Engineering will provide ‘train the trainer’ operations. The schedule and funding for training will be established on an individual case by case basis. All requests for training by Sustaining Engineering should be forwarded to the Sustaining Mailbox (reference the cover page).

Sustaining Engineering estimates that the Technical Publications listed are adequate for this product and additional training will not be necessary for Field Service personnel currently trained on similar Fujitsu products. The TeamPoS 36XX should be included in any future standard training provided to Fujitsu Field Service personnel.

#### 2.2.1. THIRD PARTY TRAINING

Training for Dealer/VAR and self-serve customers will be contracted through National Technical Support (NTS)

### 2.3. TECHNICAL PUBLICATIONS

<u>Part Number</u>	<u>Description</u>
D900000338	Installation and Maintenance Manual

	Fujitsu Frontech NA	<b>SUPPORT PLANNING GUIDE</b> <b>TeamPoS 36XX</b>	SPG-09-005
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## 2.4. SPARES

The TeamPoS 36XX is a Fujitsu product and will follow standard spares lead times. It is assumed that organizations will spare the TeamPoS36XX at the FRU level. Some customers/organizations however, may choose to spare the major assembly level with the lower level repair performed at a central repair center or depot. The spares list takes both of these methods into consideration. Spares will be stocked at the North America Logistics Center (Richardson TX, USA24) and whole units should be returned on a RMA to the Logistics Center.

Refer to Appendix E for Spares list.

These part lists are provided as a reference only. The Fujitsu Engineering Data Base (PDM) is the final authority on part numbers and availability.

This product is RoHS compliant. Any part that is replaced or used during the service of this product must be replaced with the same RoHS compliant component. This includes all sub-assemblies and component parts (screws, washers, metal parts, cables, etc). Any Repair Center or service operation cannot impact the RoHS (or other regulatory) compliance.

While the component cost of the various FRU's within the TP36XX allow all these spares to be flagged as Expensed/Non-Returnable parts, it is FFNA's recommendation that all failed parts be returned to a central location. Ideally, this process should exist for the life of the product, but should at minimum exist for the first year after product introduction, and for the warranty period of any subsequent shipments/installations. All returned and verified parts should be held for a minimum of 60 days. The purpose for these returns is to:

- Validate the component failure
  - Perform failure/symptom confirmation and/or analysis
- Provides details for early failures, and deviations from target AFR/MTBF rating
  - Makes failed samples available to engineering and/or manufacturer for root cause failure analysis if needed
  - Allows for early analysis and samples to identify root cause and potential improvements
- Provides 'repairable' parts pool for the eventual EOL of any major component
- Provides for hardware availability for manufactures in the event it is requested prior to warranty allowances
- Allows for controlled and proper disposal of potentially environmentally sensitive materials
- Ensure accountability for product spares usage

### 2.4.1. THIRD PARTY SPARES

Spares strategy, availability and process for Third Party (Dealer/VAR/Self Serve Customers) will be available through Fujitsu SupplyPoint at 800-538-8716.

### 2.4.2. CONSUMABLE PARTS

User consumable parts and spares are available via normal ordering Channels and are replaceable by customers. Order consumable parts from Fujitsu SupplyPoint at 800-538-8716.

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## 2.5. REPAIR

North America Logistics Center (Richardson) offers repair services for the items they consider to be repairable. The OEM vendor also offers repair services that may be contracted by one of these repair centers or other organizations.

Logistics and Field Service organizations should utilize their own services to provide a test of units being returned from the field before shipment to repair centers as history has shown that not all units being returned from the field are actually faulty.

If faulty, logistics organizations may elect to have the repair done down to a component level replacement if parts and resources permit. However, at this time, there are no plans to have parts or FRU's repaired in the TeamPoS 36XX terminal.

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### 2.5.1. REPAIR STRATEGY

The terminal and all internal components are warranted by Fujitsu for a period of one year from date of shipment. All defective units/parts will be handled per the purchase agreement.

### 2.5.2. THIRD PARTY REPAIR

Repair strategy and process for Third Party (Dealer/VAR/Self Serve Customers) has not yet been determined and will be handled based on the purchase agreement.

### 2.5.3. FIELD REPAIR TIME

The following are time estimates for removing and replacing major assemblies on site. These time estimates do not include the time to diagnose the problem, gain clear access to the TeamPoS 36XX, or perform any software reloading to return the unit to full customer functionality. It is assumed that this service is performed by a qualified and trained technician in the event it becomes necessary to diagnose and replace components within the terminal.

Description	Replacement Time (min)
Hard Disk Drive	<1Min
Memory	~2Min
CD ROM/DVD	~3Min
Power Supply	~3Min
Combo Card	~4Min
Control Panel PCB	~4Min
Motherboard and CPU	~12Min
Fans	~4Min
*Average MTTR for Complete Unit	3.7 Min

\*Average MTTR for the Complete Unit is based upon these times and adjusted by the probability of a specific component failing.

### 2.5.4. REPAIR CENTER TIME

The following are time estimates for replacing FRU's and assemblies at some point if the FRU's are labeled repairable

Description	Repair Time (min)
Hard Disk Drive	<1Min
Memory	<1Min
CD ROM/DVD	~2Min
Power Supply	~2Min
Combo Card	~3Min
Control Panel PCB	~3Min
Motherboard and CPU	~8Min
Fans	~3Min
*Average MTTR for Complete Unit	2.44 Min

\* Average MTTR for the Complete Unit is based upon these times and adjusted by the probability of a specific component failing.

## 2.6. TOOLS

A Phillips head screwdriver is all that is needed to access the TeamPoS 36XX terminal.

### 2.6.1. DIAGNOSTICS

A new version (2.1) of WINCLD is available on the FTP site. In addition, some PC diagnostics like PC Doctor can be used to troubleshoot motherboard issues.

### 2.6.2. SERVICE TOOLS

None at this time.

### 2.6.3. REPAIR TOOLS

None at this time.

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### 3. SERVICE PROFILES

#### 3.1. PREVENTATIVE MAINTENANCE

Preventive Maintenance (PM) is a critical factor in keeping any system operating within its designed parameters and at peak efficiency, with minimal service calls. Appendix F contains a list of recommended PM activities and schedules. This list is broken down to the Device Level, so any specific installation should include all appropriate devices. Refer to the Service and Maintenance Manuals for details of performing the specific outlined tasks.

The recommended PM Schedule below is for ‘Typical’ retail installations. Depending upon specific Contract, Environmental, and Usage Profiles some customers or sites may require more or less frequent Preventive Maintenance schedules. It is also ‘assumed’ that the person performing the PM is fully trained on the details of service and support of the specific device/equipment in question.

In addition to the items identified, the various levels of Firmware and Software Driver levels should be verified. If found to be down-level, this should be noted. However, since many customers require internal validation and approval of any updates, other than noting the down-level object and notifying the customer and Managed Services management no further specific actions should be taken unless specifically called out for a customer or site.

Also included for each device is an estimated time to complete the PM for that device. This time estimate is only for performing the specified tasks and does not include items such as: gaining access to the system, performing repairs when found, atypical installation or mounting, etc.

Quarterly, six months, and yearly Preventive Maintenance should be scheduled and performed as required by the Preventive Maintenance guidelines below. During routine maintenance, as a result of a service call, it is recommended that Preventive Maintenance be performed on that device/assembly. If time allows additional Preventive Maintenance should be performed on other peripherals or lanes. Preventive Maintenance that is performed during a Service Call can be logged as completed scheduled Preventive Maintenance. Scheduled Preventive Maintenance Logs should be maintained for/at each site.

Items highlighted in *red Italic* are also considered Safety issues. Safety being to the Site, Personnel, or other Equipment and should be specifically addressed even if standard Preventive Maintenance is not contracted for a specific customer.

#### 3.2. CORRECTIVE MAINTENANCE

In the event of a failure the customer should be expected to confirm the malfunction by carrying out his or her own internal problem resolution procedures. If their procedures are unable to resolve the problem, they should contact their local Field Service/Support organization.

Field Service/Support organizations should provide a support desk facility whereby customers can telephone for advice before logging a service request. If telephone assistance is unable to resolve the problem, the local Field Service/Support organization should send a representative to assist, unless the RFR option/maintenance agreement was selected. Field Service/Support should affect on-site repairs to the FRU level recommended by their Field Service/Logistics management.

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### 3.3. ESCALATION PROCEDURES

The escalation of product error reports or requests for assistance should take place in the following order. While some of these steps may be in the same organization, they are listed as individual steps to illustrate the ‘functional’ process flow.

Customer’s Internal Service

    First Line Support Service (Help Desk)

        Field Service Organization

            Field or Local Technical Support (FTS)

                National Technical Support (NTS)

                    Sustaining Engineering

                        Development/Supplier Engineering – with Mgmt Escalation

Product reports raised on supported products or general inquiries should be sent to the Sustaining mailbox (reference the cover page).

#### 3.3.1. THIRD PARTY ESCALATION

The escalation process for Third Party (Dealer/VAR/Self Serve) customers will be through National Technical Support

#### 4. APPENDIX A: FAILURE PER YEAR WORKSHEET

The following are specific variables that need to be determined for your specific customer configuration when calculating Failures Per Year (FPY).

Description	Variables
Avg. Power On Hours per Year (8760 max)	(A) _____
Avg. 'Green Mode' Power On Hours per Year	(B) _____
Avg. Transactions per Trading Hour	(C) _____
Avg. Trading Hours per day	(D) _____
Avg. Trading Days per Week	(E) _____
Avg. Keystrokes per Transaction	(F) _____
Avg. Keylock Cycles per Transaction	(G) _____
Avg. MSR Usage's per Transaction (1 out of 3=.33)	(H) _____
Avg. Print Lines per Transaction	(I) _____
Avg. Cash Drawer Openings per Transaction	(J) _____
Avg. Transaction per Terminal Year (C*D*E*52wks)	(K) _____

Units Affected by Power On Hours:

Device	Power On Hours	/ MTBF Hours	=	FPY
*	(A) _____	/	*	= _____
*	(A) _____	/	*	= _____
*	(A) _____	/	*	= _____
*	(A) _____	/	*	= _____
*	(A) _____	/	*	= _____
Power On Total				_____

Units Affected by Green Mode Operational Hours:

Device	Power On Hours	/ MTBF Hours	=	FPY
*	(B) _____	/	*	= _____
*	(B) _____	/	*	= _____
*	(B) _____	/	*	= _____
*	(B) _____	/	*	= _____
*	(B) _____	/	*	= _____
Green Mode Total				_____

Units Affected by Mechanical Usage:

Keyboard:	(F) x (K) / *	= _____
Keylock:	(G) x (K) / *	= _____
MSR:	(H) x (K) / *	= _____
Printer:	(I) x (K) / *	= _____
Cash Drawer:	(J) x (K) / *	= _____
Mechanical Total		_____

Total for your customer configuration (per lane):

Power On Total	_____
Green Mode Total	_____
Mechanical Total	_____
Total FPY Per Lane	_____

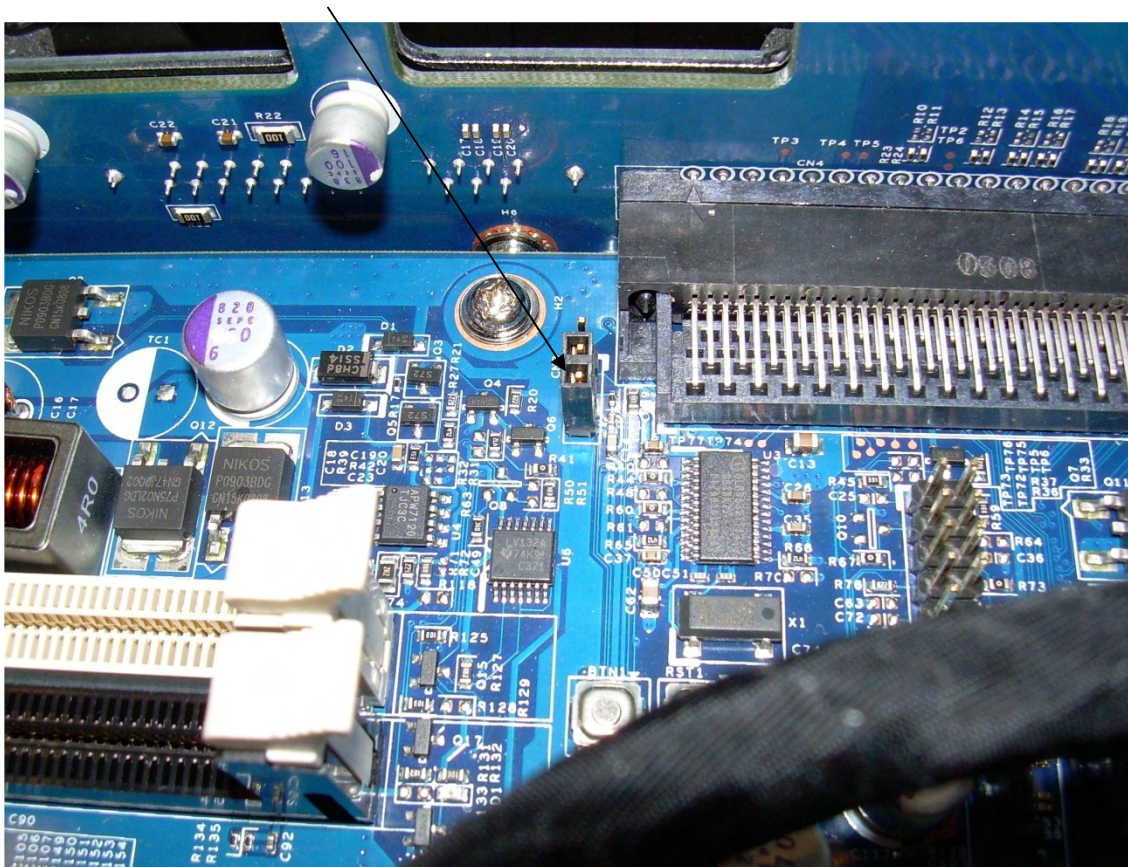
Note: This total does not include failures resulting from use of consumables (batteries, print heads, etc.), cables, software/firmware based problems, no-fault-founds, or resulting from use not considered standard for this type of equipment.

## 5. APPENDIX B: SWITCH AND JUMPER SETTINGS

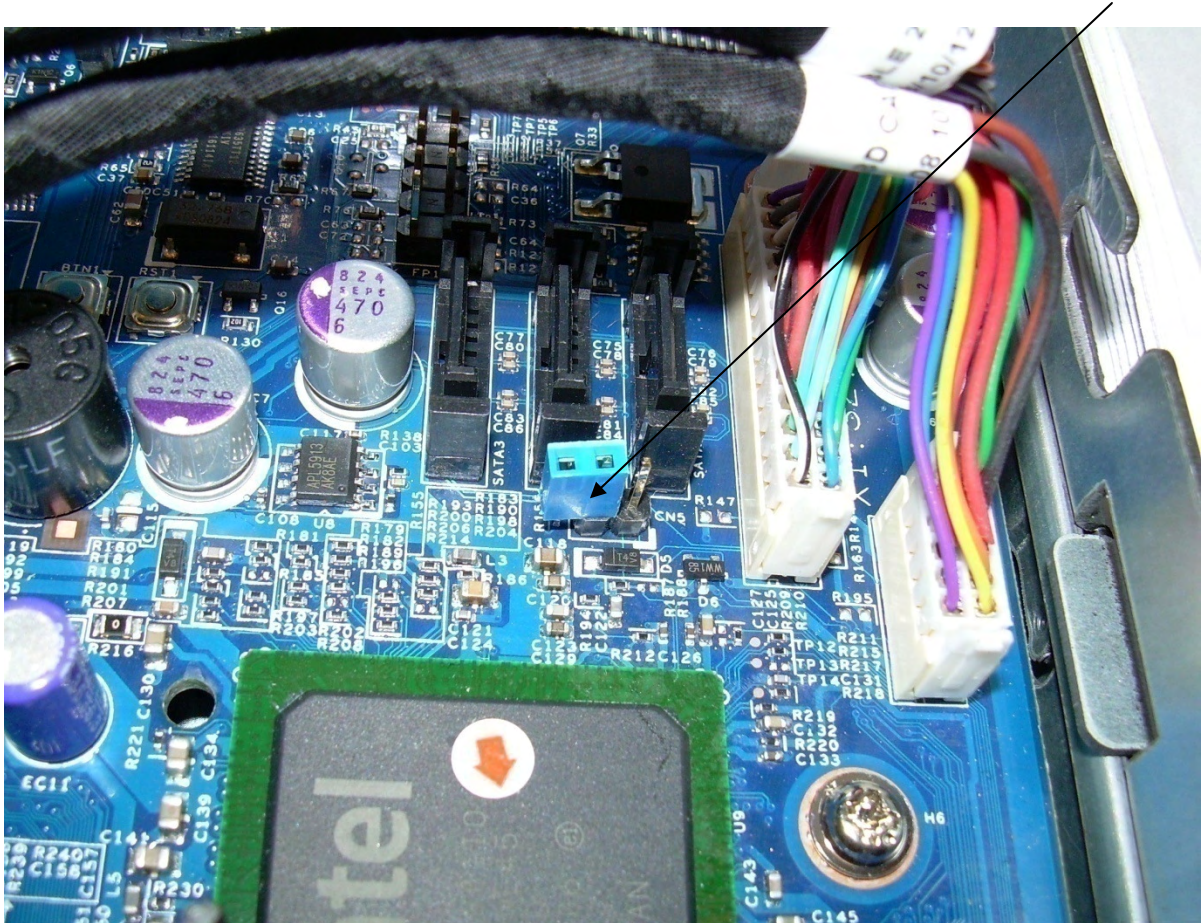
### MOTHERBOARD

There are two jumpers on the motherboard. The Clear CMOS jumper is located next to the connector going to the HDD converter board. The label on the jumper is CN3 and is shown below in its normal operational state. In order to clear CMOS the following procedure needs to be followed:

- Power needs to be turned off and the AC plug removed.
- Move jumper from 1-2 to the 2-3 position.
- Plug in the AC power cord
- Remove the AC power cord
- Move jumper back to position 1-2
- Plug in the AC power cord and power up the terminal, this will clear CMOS

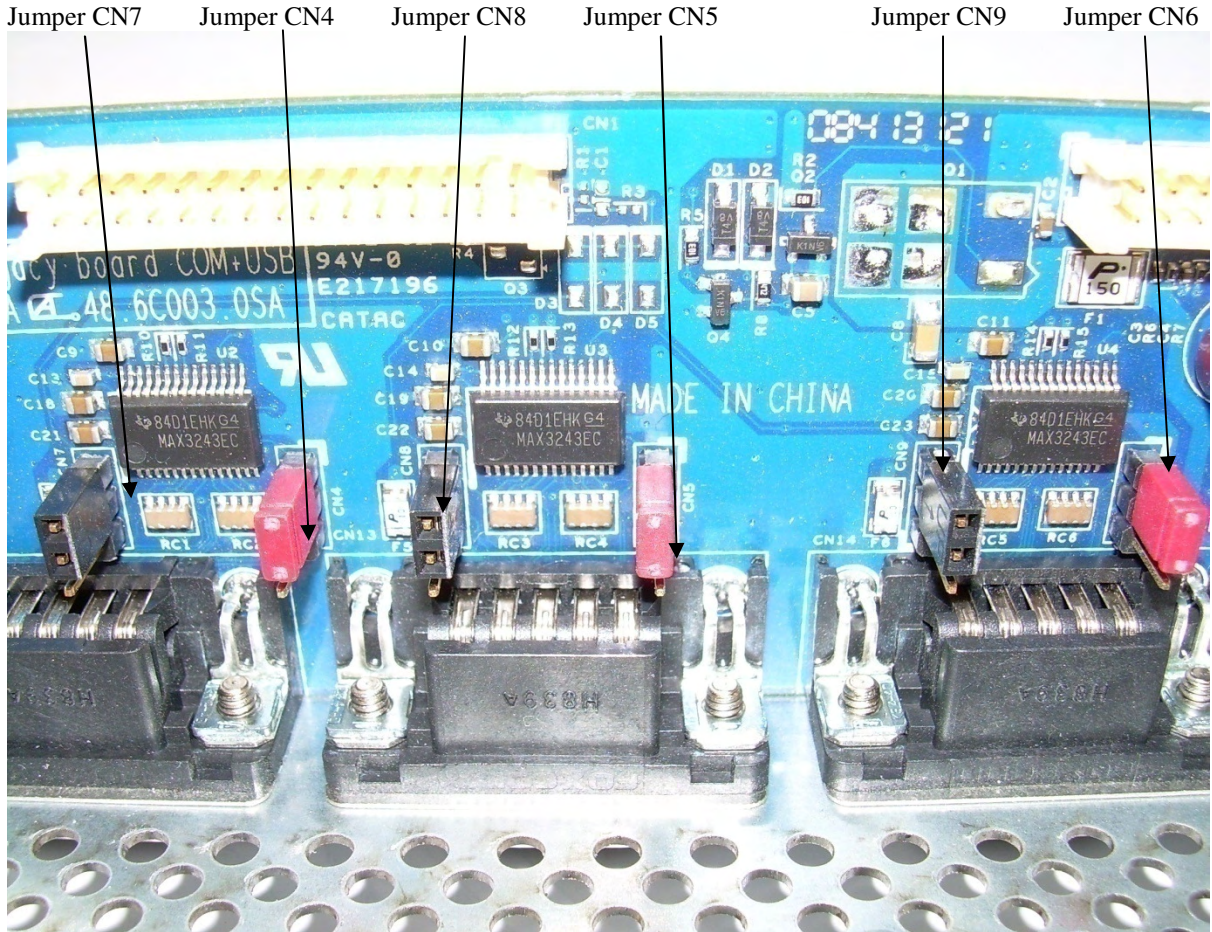


The second jumper on the motherboard is the test jumper. This jumper is located next to the SATA1,2, & 3 plugs. Do not use this jumper. A picture of this jumper is shown below for reference only. The jumper is shown in the normal position (not shorted)



**COMM BOARD**

The COMM board contains six jumpers. Three of the jumpers (CN7, CN8, & CN9) will either provide +5 V on pin 9 of DB9 connector or provide the RI signal on that pin. Default is set as RI on that pin. Jumpers CN4, CN5, and CN6 enable the DCD signal on pin 1 of the DB9 connector and should remain in this default position if DCD is required.



**COMM Board**

Pin	COM Female connector	COM Male Connector
1	Data Carrier Detect (DCD)	Data Carrier Detect (DCD)
2	RX	RX
3	TX	TX
4	DTR	DTR
5	Ground	Ground
6	DSR	DSR
7	RTS	RTS
8	CTS	CTS
9	RI or +5V depending upon jumpers CN7,8, or 9	RI or +5V depending upon jumpers CN7,8, or 9

## 6. APPENDIX C: CONNECTORS AND PINOUTS

The powered USB and COM connectors shown below have the same pin outs as the TP3K and TP2K connectors. See the T2K or TP3K SPG's or Installation and Maintenance Manuals.



There are two jumper blocks on the COM Card (PW1 for COM5 and PW2 for COM6). Each block will determine if a voltage or RI (ring) signal is on pin 9 of the DB9 connector and whether the Data Carrier Detect (DCD) signal is used on pin 1. See chart on following page for jumper positions.

### TeamPoS 36XX Pin Assignments

	COM 1 & 2 Female Connector	USB +24V	USB +12V
	Ground	Red powered USB connector	Green powered USB connectors
1	RX	5V USB Pwr	5V USB Pwr
2	TX	Data -	Data -
3	24V	Data +	Data +
4	Ground	Gnd	Gnd.
5	+5V	+24V Return	+12V Return
6	RTS	+24V Pwr	+12V Pwr
7	CTS	+24V Pwr	+12V Pwr
8	Ground	+24V Return	+12V Return

Other connectors are industry standard and need not be detailed in this document

## 7. APPENDIX D: INTELLIGENT PIN

Below is the Intelligent PIN configuration as of February 11, 2009. Refer to the latest intelligent PIN document (D900000317) for any updates or changes.

IP Digit	Value	PN	Brief Description
1	<b>R</b>	11002856	Yukon Chassis, TP3KXE Standard/BLK
1	<b>Q</b>	11003060	Yukon Chassis, TP3KXE Standard/WHT
2	<b>Q</b>	11003001	OPN Yukon Motherboard Q35( No tray no HS)
3	<b>1</b>	11003061	OPN Celeron 440 CPU+ fan/heatsink
3	<b>4</b>	11003067	OPN E8400 CPU + fan/heatsink
3	<b>5</b>	11003064	OPN E5300 CPU + fan/heatsink
3	<b>6</b>	11003066	OPN E7400 CPU + fan/Heatsink
4	<b>1</b>	11003011	OPN DDR2, 1GB, DDR2
4	<b>2</b>	11003012	OPN DDR2, 2GB, DDR2
4	<b>3</b>		OPN DDR2, 3GB, DDR2( 3011+3012)
4	<b>4</b>		OPN DDR2, 4GB, DDR2 ( 2 x 3012)
4	<b>5</b>		OPN DDR2, 5GB, DDR2 ( 2 x 3012 + 1 3011)
4	<b>6</b>		OPN DDR2, 6GB, DDR2 ( 3 x 3012)
4	<b>7</b>		OPN DDR2, 7GB, DDR2 ( 3 x 3012 + 1 3011)
4	<b>8</b>		OPN DDR2, 8GB, DDR2 ( 4 x 3022)
5	<b>1</b>	11003040	No I/O Option ( blank panel)
5	<b>2</b>	11002846	Powered USB I/O
5	<b>3</b>	11002847	Legacy I/O
5	<b>4</b>	11003039	Powered USB & Legacy I/O
6	<b>0</b>	11003041	No hard Drive
6	<b>4</b>	11003042	OPN 160GB HDD, SATA, 7200 RPM
7	<b>0</b>	11003041	No second hard drive
7	<b>1</b>	11003042	OPN 160GB HDD, SATA, 7200 RPM
8	<b>0</b>		Spare digit
9	<b>0</b>	N/A	No Operating System
9	<b>6</b>	OS-XpPro-3KQ35	OEM WIN XP Pro for Q35, Preloaded
9	<b>7</b>	OS-XPECS-3KQ35	OEM Windows XPe, Server Downloaded
9	<b>A</b>	OS-W2K3S-3KQ35	WIN 2003 SERVER for Yukon W/5CAL EMB

9	<b>D</b>	OS-VISTABDG-36XXQ35	VISTA UNR-SGL PRELOADED
9	<b>W</b>	OS-WEPOS-3KQ35	WePOS Operating System for Yukon
9	<b>V</b>	OS-VISTA-3KQ35	VISTA B TP3K XL for Yukon PRELOADED
9	<b>P</b>	OS-POSRDY-36XXQ35	POSReady, PRELOADED
10	<b>0</b>		N/A
10	<b>3</b>	TBD	OPN TP3K XE CD-RW/DVD/WHT
10	<b>4</b>	11003020	OPN TP3K XE CD-RW/DVD/BLK
11	<b>0</b>		none
11	<b>1</b>	11000044	CBL TP2K Mains/U.S. Beige
11	<b>6</b>	11000049	CBL TP3K Mains/U.S./BLK
12	<b>0</b>		Spare
13	<b>C</b>		Spare
14	<b>0</b>		Spare
15	<b>U</b>		Manufactured FHR U.S.A. (Regulatory label Made in USA)
15	<b>C</b>		Manufactured Wistron China ( regulatory Label made in China)

## 8. APPENDIX E: SPARES LIST

These part lists are provided as a reference and planning purposes only. The Fujitsu PDM System is the final authority on part numbers. Many of the spare parts for the various models are the same. The following parts list includes both FRU and Whole Unit Assembly (**bolded**) levels. Crossed out parts are withdrawn or obsolete, included for reference only. When the Installation & Maintenance Manual is released, the parts lists within that manual will take precedent over this 'planning' list.

Description	PIN
Chassis, Bare Bones, No CPU, HDD or I/O Board, Black, TP36XX, Yukon	11002856
PCB, Motherboard, BIOS version <b>TBD</b>	11003001
PSU, Power Supply, SPS 350W, 100/240VAC	11003009
Kit, Operator Panel w/ Bracket	11003014
Cable, Operator Panel	11003017
Fan, Chassis, 12VDC	11003016
Panel Assy, Front w/ Door and Keylock, Black	11003188
Keylock.....22.40137.001	
Keys.....34.6C012.001	
Front Cover, Black	11003190
PCB, I/O Board, Powered USB option	11002846
PCB, I/O Board, Legacy option	11002847
PCB, I/O Boards, Legacy and Powered USB option	11003039
Plate, Rear I/O Blanking	11003040
Cable Assy, Q35 MB to Powered USB Bd, 26 Pin, 390mm	11003080
Cable Assy, Q35 MB to Legacy I/O Bd, (2) cables	11003079
Fan/Heatsink, 12VDC	11003015
CPU, Intel Core 2 Duo, E8400, 3.0Ghz, 1333Mhz FSB, 6.0MB L2 Cache, Socket LGA 775	11003037
CPU, Intel, Celeron 440, 2.0Ghz, 533Mhz FSB, 512K L2 Cache, Socket LGA 775	11003010
CPU, Intel Pentium Dual-Core, E5300, 2.6Ghz, 800Mhz FSB, 2.0MB L2 Cache, Socket LGA 775	11003058
CPU, Intel Core 2 Duo, E7400, 2.8Ghz, 1066Mhz FSB, 3.0MB L2 Cache, Socket LGA 775	11003059
CPU ASSY, Intel, Celeron 440, 2.0Ghz, w/ Fan/Heatsink	11003061
CPU ASSY, Intel, E5300, 2.6Ghz, w/ Fan/Heatsink	11003064
CPU ASSY, Intel, E7400, 2.8Ghz, w/ Fan/Heatsink	11003066
CPU ASSY, Intel, E8400, 3.0Ghz, w/ Fan/Heatsink	11003067
DIMM, Memory Module, 1.0GB DDR2, 800Mhz	11003011
DIMM, Memory Module, 2.0GB DDR2, 800Mhz	11003012
HDD, Hard Disk Drive, 3.5, 160GB SGT, SATA	11003013
HDD ASSY, 160GB, SATA, w/ Chassis Hardware	11003042
Kit, HDD PCB Assy with Bracket	11003081
Kit, Adapter Tray, 2.5, SSD, Black	11003083
Tray, HDD Bay, 3.5, Black	11003085
CD/RW-DVD, Combo Drive, 24X, w/ Bezel, Cable, Mtg HW, w/ NERO & WinDVD SW, Black	11003020
CD/RW-DVD, Combo Drive, 24X, w/ Bezel, Cable, Mtg HW, w/ NERO Software, Black	11003087
CD/RW-DVD, Combo Drive, 24X, with Bezel, Cable, Mtg HW, No SW, Black	11003090
Cable, CD/RW-DVD Combo Drive	11003078

## 9. APPENDIX F: PREVENTIVE MAINTENANCE SCHEDULE

### Systems and Controllers

TeamPoS	Preventive Maintenance Task	Service Call	Quarterly	6 Months	Yearly
<b>Controller</b>	Clean the interior with compressed air			X	
Est.: 11 min	Clean intake and exhaust vents	X		X	
	Check BIOS fan speeds and temp (if applicable)	X		X	
	Inspect the Cables	X		X	
	<i>Clean &amp; check Chassis Fan for proper operation</i>	X		X	