

Bulletin No.: 193_ITP_5100

June 8, 2009

ITP-5100 Series New Software Release

Samsung Telecommunications America is pleased to announce the general availability of two new software versions for the ITP-5100 Series IP Keysets.



These new software versions may be downloaded from the GSN website or obtained from Samsung Technical Support. The new 5100 Series IP Keyset software has feature enhancements and bugs fixes which are described in this bulletin.

OfficeServ SYSTEM REQUIREMENTS

The ITP-5100 Series keyset family requires the **software v4.22** or higher on the OfficeServ 7000 family to take advantage of the new features.

However, the Idle Mode or Hot Desking feature requires the **software v4.30** or higher on the OfficeServ 7000 family.

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SOFTWARE ENHANCEMENTS

1. ***Idle Mode Log-In (HotDesking):** By enabling this feature during the phone setup multiple users can share the same type of keyset. Uses log-in with their extension (User ID) and station password. When finished for the period required dial the access code to exit. The phone is now idle and ready for a different user.
2. ***Plug and Play (PnP):** ITP phones can be automatically registered to an OfficeServ system after making programming on the DHCP server and OfficeServ 7000 system. This means ITP phone may connect to an OfficeServ system right out of the box without any end user intervention.
3. ***Multiple Server Support:** When the primary server (OfficeServ system) is down or does not respond to IP requests, then the ITP keyset automatically registers to the next server in line (There are four server IP Address entries available). When the ITP is connected and running off a backup server and the primary server comes back online, then the ITP automatically re-registers to the primary server. Back up server must be programmed with the same user ID (extension number) and password.
4. ***VLAN 802.1q Support:** To distinguish between voice packets from the phone and data packets from the PC, the ITP software now supports the VLAN tagging (802.1q) function.
5. ***QoS 802.1p Support:** To set priorities on Layer 2 packets, the ITP software now supports the QoS (802.1p) function.
6. **Handset Gain Adjusted:** The handset Rx gain has been adjusted to improve the voice quality.
7. **Packet Loss Concealment (PLC):** When the network is experiencing some packet loss, the PLC feature prevents the VoIP voice quality from noticeably degrading.
8. **ITP Ring Level Changed:** ITP phone now can use 8 ring volumes levels out of the 12 ring levels in the OfficeServ system. The 8 levels (1 to 8) can be programmed in MMC 841 to correspond to the 8 levels of the 12 ring levels (0 to 11).

**Please refer to the Service Tips section for more detail description.*

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BUG FIXES

All ITP Keysets:

- 1. VLAN bug:** When the PC is connected to the PC port of the ITP phone, the multicast packet for the PC is not passed if VLAN feature is used.
- 2. DND Bug:** When DND is enabled, the Terminal Status Indicator (TSI) on top of the keyset LED does not blink on incoming call.
- 3. Barge-in Bug:** When two ITPs were in a conversation and another ITP barged into the conversation, once the barge-in feature was discontinued then the original ITP callers could no longer hear each other.
- 4. Intermittent Voice Distortion:** This intermittent bug would cause distortion on the voice quality. In order to address this issue a new DSP image was applied to the ITP sets.
- 5. DHCP Mode Bug:** When an ITP was using the DHCP Mode and the IP Address was changed by the DHCP Server, the ITP would not function properly using the newly assigned IP Address.
- 6. DHCP and PPPoE Bug:** If an ITP was using DHCP or PPPoE Mode and the DHCP Server or PPPoE Server did not respond for a long time, the ITP did not display an error message. The Error message is now displayed after 1 minute.
- 7. IP Address Conflict Bug:** If another IP device is issued a conflicting IP Address assignment with an ITP, the ITP could not clear the conflict even after an ITP reboot.
- 8. Sidetone Volume Bug:** Although an ITP's sidetone volume was changed in MMC 807, it would have no effect.
- 9. Broken Voice Bug:** In the beginning of a conversation there might be a clicking sound during the first few seconds of the call.
- 10. ITP Clock Bug:** When an ITP's Clock format was changed in MMC 109 the Clock format was not actually changed.

ITP-5112L Keysets Only:

- 1. Forward Setting Error Display:** Forward setting error was not distinguished between "not allow" or "wrong number".

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- 2. Ping Ring Tone:** ITP5112L generated a different ping ring tone than other ITP models.
- 3. Long Pressed Key Input Value in Enblock Mode:** Normal digit input value is different than long digit key in enblock mode. The long digit key was changed to ASCII value. This fix was related to SPD (speed dial) block in OfficeServ system not DS (STN) keys.

TRAINING AND CERTIFICATIONS

If you are already certified on the OfficeServ ITP your certification is valid for this new software version. No new certification is required.

DOCUMENTATION

Keypad User Guides, Quick Reference Guides and Sales Brochures are available for the ITP-5100 Series Keypads.

These updated documents are available for download from Global Samsung Business network (GSBN) website, www.samsunggsbn.com.

| Documentation | Location on GSBN |
|---|---|
| <ul style="list-style-type: none">ITP-5112L Keypad User Guide | Communication → Sales and Marketing → Downloads → User Guides |
| <ul style="list-style-type: none">ITP-5121D Keypad User Guide | |
| <ul style="list-style-type: none">ITP-5107S Keypad User Guide | |

Sales brochures and Quick Reference Guides are available for purchase through the normal order processing. Keypad User Guides can be purchased online using the Samsung-Fedex/Kinkos Print-on-Demand website (<http://docstore.kinkos.com/samsung>).

AVAILABILITY

Effective June 8th 2009, version 3.35 and 3.46 IP keypad software will be available for download from GSBN (Communication → Technical Support → Downloads → Released Software). Follow the ITP keypad upgrade instructions provided in the ITP online course and/or user guide. ITP keypads manufactured beginning July 1st, 2009 will include v.3.35 and v.3.46.

If you have any questions regarding this notice, please contact your Regional Sales Manager, your Customer Service Representative at the number provided below, or via email at BCS.Sales@samsung.com.

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SERVICE TIPS

Idle Mode (Hot Desking) Feature

Set Up:

1. OfficeServ 7000:
 - a. V4.30
 - b. Set feature code for idle mode LOGOUT in MMC 724.
 - i. For example: LOGOUT: *7
2. ITP phone:
 - a. Enable Idle Mode in the set up menu before registration.

Usage Guide:

1. ITP phone login
 - a. Follow screen instructions to enter USER ID (normally is extension number) and PASSCODE (default 1234) for the ITP phone.
 - i. USER ID and PASSCODE can be changed in MMC 840.
2. ITP phone logout
 - a. Enter the LOGOUT feature code on the ITP phone, for example *7. The ITP phone will display the login screen.
3. ITP phone restarts
 - a. When ITP phone restarts with the idle mode is enabled, the ITP phone will return to the standby state that shows the login screen.

Plug and Play (PnP) Feature

Set Up:

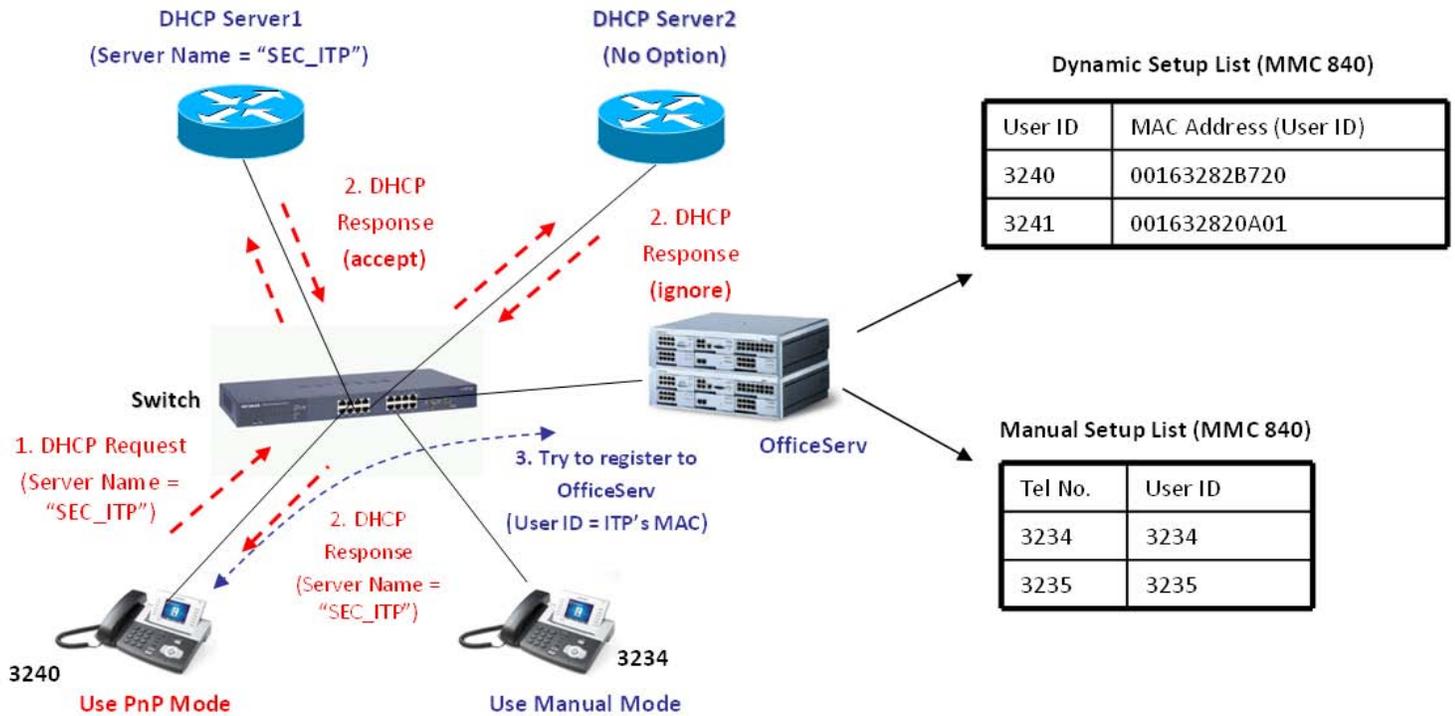
1. OfficeServ 7000
 - a. V4.22 or up
 - b. Enter the ITP MAC address in the user ID section of the MMC 840.
 - i. Alphabet character of MAC address has to be capital letter.
2. DHCP Server
 - a. Need to set up two options in the DHCP server.
 - i. TFTP_Server_Name(66): "SEC_ITP"
 1. 66 is the option number for the DHCP server
 - ii. TFTP_Server_IP(128): IP address of the OfficeServ 7000
 1. 128 is the option number for the DHCP server.
 - iii. Due to many different types of DHCP servers in the market, it is suggested to check with the manufacturer's configuration guide for the correct option number.

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3. ITP phone
 - a. Must be in factory reset state.
 - b. Must use "Plug and Play (DHCP)" feature to register the phone.

Usage Guide:

1. It is possible to have some ITP phones using PnP mode and some using manual IP mode simultaneously.



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Multiple Server Support Feature

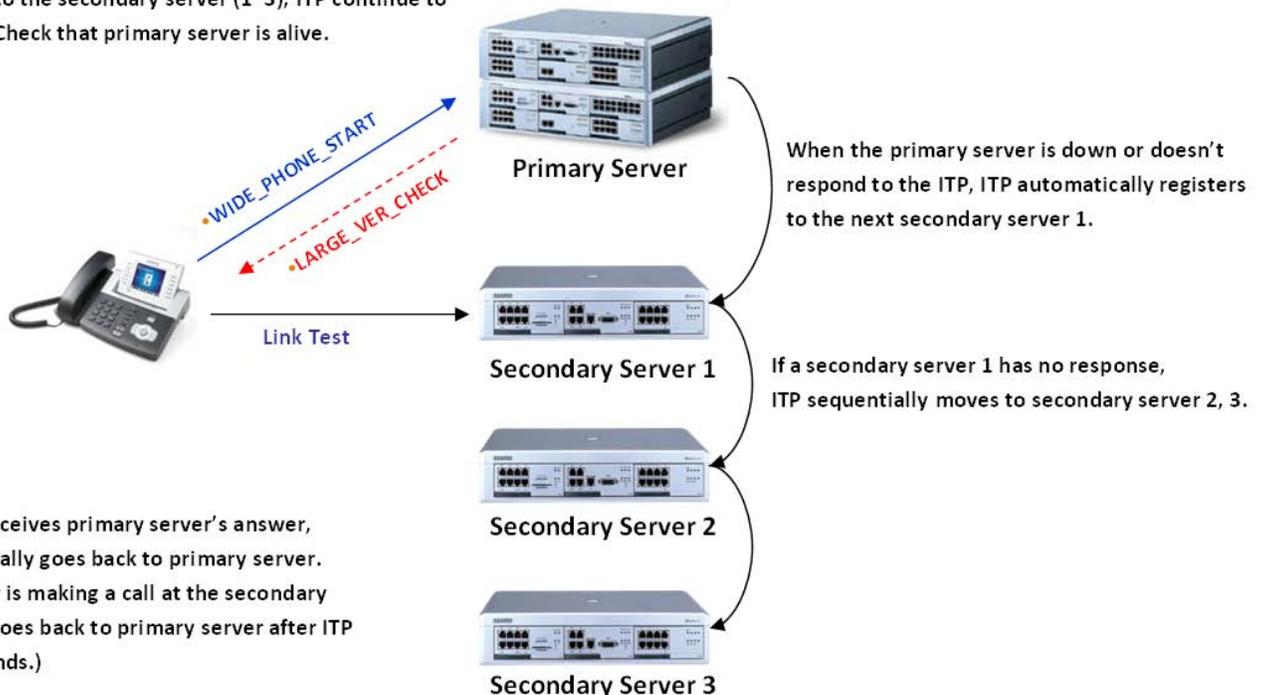
Set Up:

1. OfficeServ 7000
 - a. V4.22 or up
2. ITP phone
 - a. SERVER IP is OfficeServ system IP address.
 - b. SERVER ID is ITP phone user ID (normally is extension number).
 - c. SERVER PASS is ITP phone passcode.

Usage Guide:

1. ITP phone can register to one of the 4 OfficeServ systems from the list.
2. When the primary OfficeServ system is down or doesn't respond to the phone, ITP phone automatically registers to the next system. It will follow the order in the list.
3. When the ITP phone is connected and running off a secondary server and the primary server comes back online, the ITP phone will automatically re-registers to the primary server.
4. This feature works well providing all OfficeServ systems are in the same subnet range.
5. The ITP phone will acquire IP address from the DHCP server only during power up. The administrator needs to design and plan the networks carefully if OfficeServ systems are in different subnet range.

After primary server is dead and ITP moves to the secondary server (1~3), ITP continue to Check that primary server is alive.



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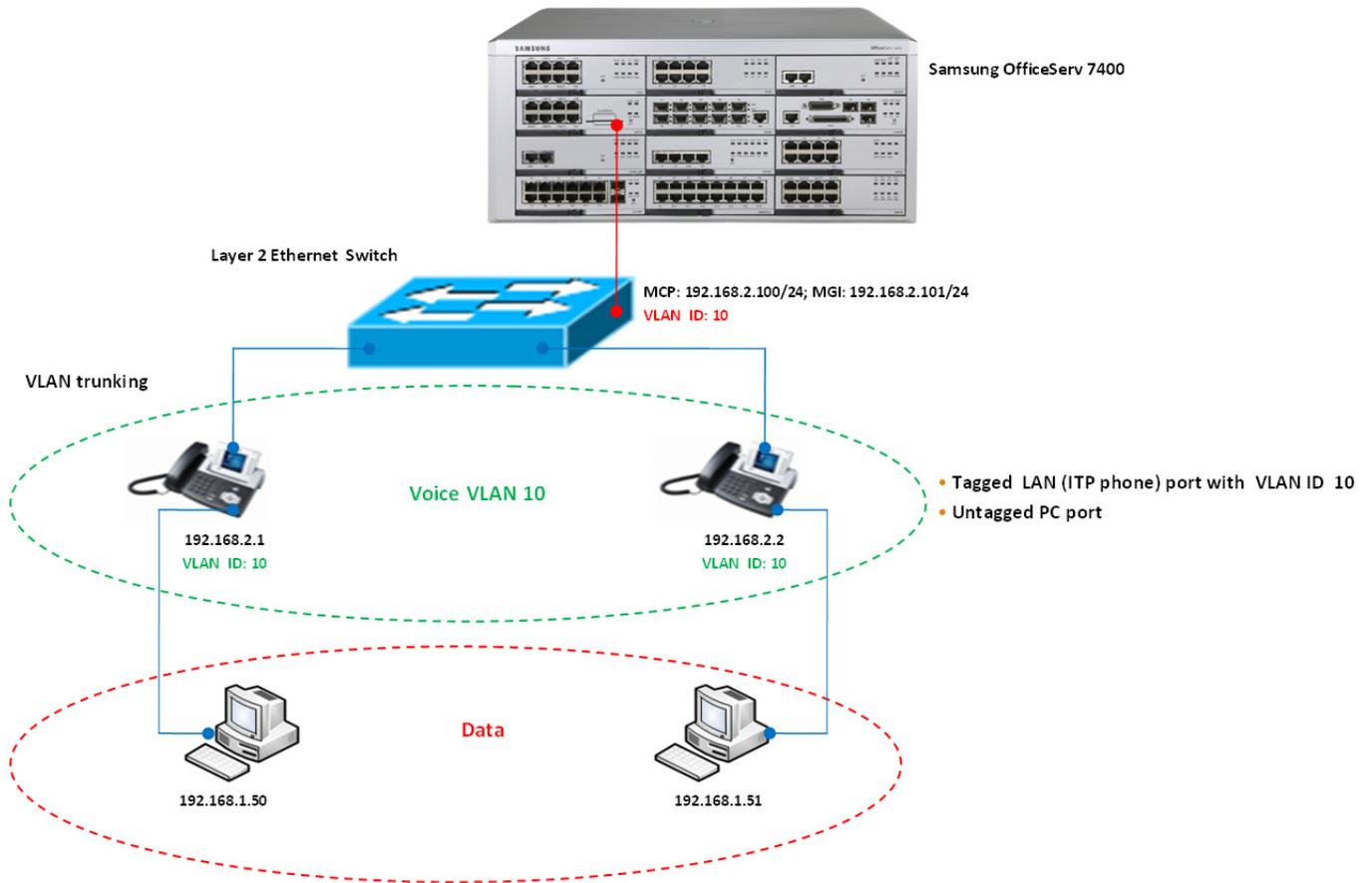
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VLAN (Virtual Local Area Network) 802.1p/q Feature

IEEE 802.1Q (also known as VLAN Tagging) was a project in the IEEE 802 standards process to develop a mechanism to allow multiple bridged networks to transparently share the same physical network link without leakage of information between networks.

802.1p defines eight different classes of service which are available, usually expressed through the 3-bit user_priority field in an IEEE 802.1Q header added to the frame.

This feature provides the ability to separate VoIP traffic from data traffic in the network. This can reduce the data traffic impact to the VoIP quality. All ITP phones can be placed to a VoIP VLAN which will not content with other data VLAN.



Set Up:

1. OfficeServ 7000
 - a. V4.22 or up
 - b. Connect MP and MGI to the VoIP VLAN ports on the Ethernet switch.
2. Plan VLAN networks with the IT administrator and set the appropriate VLANs to the Ethernet switches.

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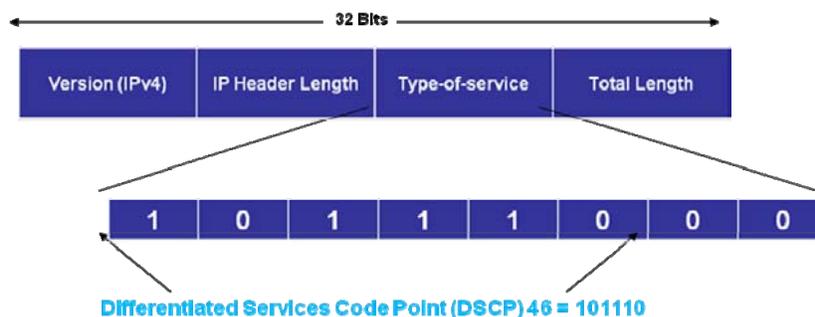
3. ITP phone
 - a. Set up LAN port of ITP phone to the VoIP VLAN ID, for example VLAN ID 10
 - i. ITP5107/5121
 1. Configuration menu -> 3. Network Setup -> 1. Network Mode Setup -> 4. VLAN (LAN ↔ Phone)
 - ii. ITP5112L
 1. Configuration menu -> 3. Network Setup -> 4. VLAN Setup -> 1. VLAN (LAN ↔ Phone)
 - b. PC port of ITP phone cannot be tagged.

Usage Guide:

1. The VLAN ID can be set between 2 to 4094. VLAN 1 is reserved for management.
2. The priority field can be set between 0 to 7. The lowest priority level is 0 and the highest priority level is 7.
3. The tagged is to apply the VLAN ID to the transmit packet.
4. The untagged is not to apply the VLAN ID to the transmit packet.
5. The VLAN feature can only be applied to the LAN (ITP phone) port.
6. The PC port must be left untagged.

ToS (Type of Service)

ToS field is a 8-bit byte that is part of the IP header. It was rarely used until the introduction of Differentiated Services (Diff-Serv). Diff-Serv is a CoS (class of service) model that defines the services within the ToS bit. The ToS/Diff-Serv bits specified how the network should make trade-offs between throughput, delay, reliability, and cost.



Set Up:

1. TOS setting in the ITP phone is used only for the test purpose.
2. To use the TOS feature in the OfficeServ, one should set the TOS/DiffSrv field in MMC 841. The RTP packets to the router will include this value.

Usage Guide:

1. If used, it is recommended to set it as "10110000" in the MMC 841 for the voice application.