# Samsung OfficeServ™ 7000 SIP Services Product Release
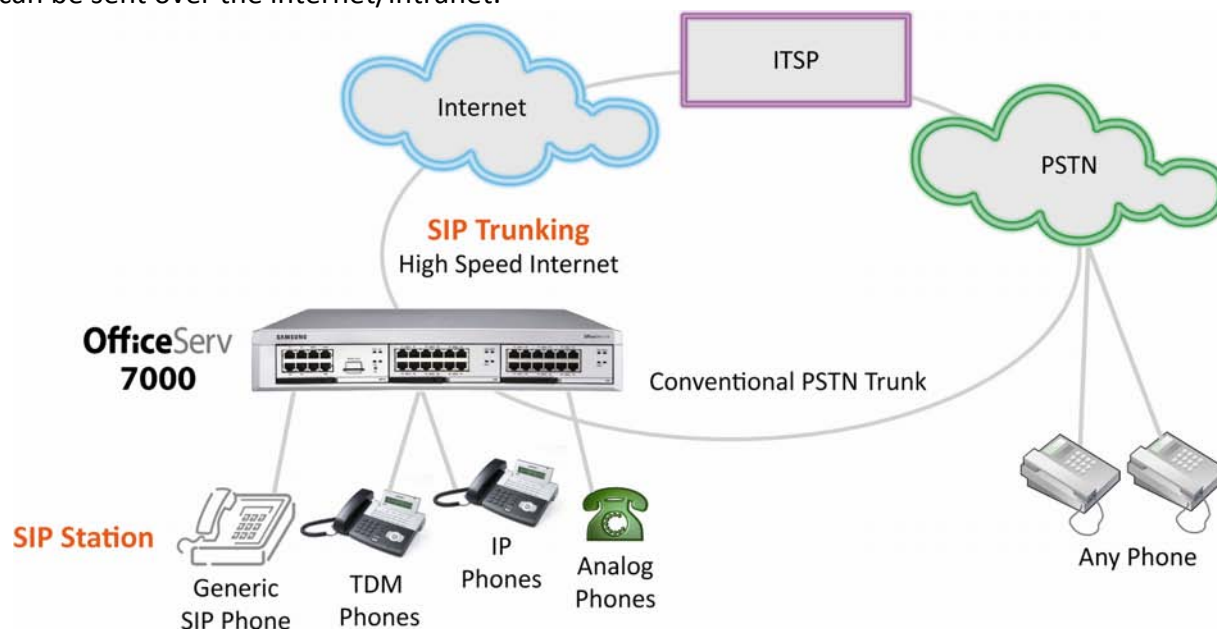
Samsung is pleased to announce the availability of SIP (Session Initiation Protocol) Services on the OfficeServ 7000 Series platform.  Upgrading to the latest software version 4.22 or higher will permit the OfficeServ system users to enable SIP services on all three platforms (7100/7200/7400). *Version 4.22 will start shipping on October 13, 2008*.

**Session Initiation Protocol** (SIP) is a signaling protocol, widely used for setting up and tearing down multimedia communication sessions such as voice and video calls over the Internet. SIP is an industry standard VoIP protocol that allows manufacturers to support an alternative method of trunking and station features in a non-proprietary environment.

SIP services also means that dial tone can be provided to a key system or PBX supporting SIP from any SIP Service provider. The voice conversation is converted to Voice over IP (VoIP) and can be sent over the internet/intranet.

# Samsung OfficeServ 7000 SIP Service Release

- **SIP Trunking** – The OfficeServ system can be configured as a SIP client and registered to sit behind an external SIP server, supporting SIP trunking to a SIP service provider or ITSP (Internet Telephony Service Provider) such as Excel, Voxitas, Broadvox, etc. SIP trunking can be a more cost effective alternative solution to traditional analog or digital trunking from the local telephone company.

- **SIP Station** – The OfficeServ system can be configured as the SIP server, permitting standard SIP terminals (Non-Samsung)  from third party manufacturers (eg; Cisco, Linksys, Astra) to register as internal stations and use the Samsung SIP supplementary feature set of the OfficeServ SIP server

- **SIP Peering** – The OfficeServ system can also be configured to support SIP peering which allows multiple OfficeServ systems to network and communicate with one another via the VoIP (SIP signaling protocol). This function will allow similar or dissimilar phone systems work communicate between each other on the same network.

*__SIP is a licensed service within the OfficeServ 7000 Systems.__*  Users interested in SIP services on the OfficeServ platforms are required to purchase SIP stack license keys for SIP trunks and/or Stations from Samsung Customer Service.

## SYSTEM CAPACITY TABLE

SIP services will require some programming and allocations on virtual ports within the OfficeServ system (SIP server).   The service technician will be required to make the programming changes required to support SIP services on a case by case basis. The following tables show the maximum virtual port capacities of each OfficeServ 7000 platform.

| SIP TRUNK CAPACITIES | | | |
|---|---|---|---|
| **System** | **OS 7100** | **OS 7200** | **OS 7400** |
| **Max Virtual Trunk Slots** | 3 | 4 | 4 |
| **Channels per slot** | 8 | 8 | 32 |
| **Maximum SIP Trunks** | 24 | 32 | 128 |
| SIP STATION CAPACITIES | | | |
| **System** | **OS 7100** | **OS 7200** | **OS 7400** |
| **Max Virtual Station Slots** | 4 | 4 | 4 |
| **Channels per slot** | 8 | 8 | 32 |
| **Maximum SIP Stations** | 32 | 32 | 128 |

# Samsung OfficeServ 7000 SIP Service Release

## SIP TRUNKING FEATURES

OfficeServ supports the following SIP trunking features. Not all ITSPs support all of the features listed below. The OfficeServ must be set to match the feature sets of the ITSP.

SIP trunking functionalities:

- RFC 3261
- Account Registration
    - Support 4 SIP carrier profiles. Only one can be activated at a time.
- OfficeServ 7100 and 7400 support domain name system (DNS) record
- Basic Call Setup
- Hold/Resume
- Music on Hold
    - Send re-invite message or
    - No re-invite message
- E.164 incoming caller ID format
- Transfer (Blind/Consultation)
    - Refer method or
    - Re-Invite method
- Call forward (All/Busy/No-Answer)
    - Support 302 response
- Conference
- Privacy for outbound calls
    - Privacy setting
    - Primary and alternate P-ASSERTED-ID
- SIP trunk fails over to PSTN trunk
- FAX over IP (both T.38 and G.711)
    - The reliability of the "FAX over IP" service is depended on the network quality and the service quality of the SIP service provider.

## SIP STATION FEATURES

OfficeServ 7100/7200/7400 systems support the following SIP station features. Most of the supplementary functions required one to use the access code. In every case, Samsung cannot guarantee the successful operation of 3rd party SIP phones. Samsung has tested and support the proper operation of the following supplementary feature set.

# Samsung OfficeServ 7000 SIP Service Release

| BASIC FUNCTIONS | SUPPLEMENTARY FUNCTIONS | |
|---|---|---|
| • Registration<br>• Basic Call Setup | • Hold/Resume<br>• Music on Hold<br>• Consultation Call<br>• Transfer (Consultation/Blind)<br>• Call Forward (All/Busy/No-Answer)<br>• DND | • MWI<br>• Conference<br>• Call Waiting<br>• Call Pickup<br>• Call Park |

## MGI CHANNEL REQUIREMENTS

***When using SIP trunks and stations, MGI channel resources are required*** on each OfficeServ platform to convert from analog TDM signaling to SIP signaling and vice-versa.   In some cases, no MGI channels are required.  In other cases, one or more MGI channels are required.  The below chart explains when and how many MGI resources are required to support audio conversations to SIP phones, SIP trunking and H.323 trunks.

| MGI CHANNEL USAGE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| | ITP Phone | Wi-Fi Phone | SIP Phone | TDM Phone | Analog Phone | Soft Phone |
| **ITP Phone** | 0 | 0 | 0 | 1 | 1 | 0 |
| **Wi-Fi Phone** | 0 | 0 | 0 | 1 | 1 | 0 |
| **SIP Phone** | 0 | 0 | 0 | 1 | 1 | 0 |
| **Soft Phone** | 0 | 0 | 0 | 1 | 1 | 0 |
| **TDM Phone** | 1 | 1 | 1 | 0 | 0 | 1 |
| **Analog Phone** | 1 | 1 | 1 | 0 | 0 | 1 |
| **SIP Trunking** | 2 | 2 | 2 | 1 | 1 | 2 |
| **SIP Peering** | 2 | 2 | 2 | 1 | 1 | 2 |
| **SPNet** | 2 | 2 | 2 | 1 | 1 | 2 |
| **H.323 Trunk** | 2 | 2 | 2 | 1 | 1 | 2 |

# Samsung OfficeServ 7000 SIP Service Release

## SOFTWARE VERSION

SIP Services are supported with version 4.22 software (or higher) on all OfficeServ 7000 series platforms.  You can download this software from the Samsung GSBN (www.samsunggsbn.com) website under Communication->Technical Support->Downloads->Released Software.

| SYSTEM | SOFTWARE | DATE CODE |
|---|---|---|
| Installation Tool | V1.22 | 08'.08.20 |
| OfficeServ 7100 | V4.22 | 08'.08.20 |
| OfficeServ 7200 | V4.22 | 08'.08.20 |
| OfficeServ 7400 | V4.22 | 08'.08.20 |

## INTEROPERABILITY

OfficeServ 7000 has been tested with numerous ITSPs during the field trial period. All of the field trial sites report no interoperability issues with ITSPs. Samsung has taken extra efforts to go through the certification process with some ITSPs to ensure 100% feature compatibility. Samsung will gladly support dealers who are willing to certify OfficeServ 7000 with the ITSP of their choice.

Samsung is member of the SIP Forum, http://www.sipforum.org/. The SIP Forum is not a standard-setting body but is the organization that sponsored SIPit interoperability test events. Members of the SIP Forum participate the interoperability test events to ensure equipment providers and service providers can interoperable.

| OFFICIALLY CERTIFIED | INTEROPERABILITY TEST | |
|---|---|---|
| ▪ Brodvox<br>▪ Excel<br>▪ Voxitas | ▪ Bandtel<br>▪ Broad-Connect<br>▪ Cbeyond<br>▪ CommPartners Connect | ▪ Bandwith<br>▪ Hunt Brothers<br>▪ IP1 Network<br>▪ Nexvortex<br>▪ Reigmaker |

# Samsung OfficeServ 7000 SIP Service Release

## RELATED MMCs

The following MMCs are required to support SIP trunking and stations on the OfficeServ 7000 series platforms. These are included in the SIP Technical Manual and on the OfficeServ 7100/7200/7400 Programming Manual.

| SIP TRUNKING | SIP STATIONS |
|---|---|
| • MMC 841 SYS IP OPTN<br>• MMC 837 SIP OPTIONS<br>• MMC 321 SEND CLI NO<br>• MMC 714 DID DIGIT<br>• MMC 857 VIRTUAL CABINETS<br>• MMC 832 VOIP OUT DGT<br>• MMC 835 MGI DSP OPT<br>• MMC 839 SIP USER | • MMC 841 SYSTEM IP OPTION<br>• MMC 842 SIP STATION INFO<br>• MMC 857 VIRTUAL CABINETS<br>• MMC 724 DIAL NUMBERING PLAN |

## PRICING AND ORDERING

In addition to supporting and licensing SIP trunks and stations, version V4.22 also requires licenses for H.323 trunks. The table below shows the list price for each service. These now appear on the revised Samsung Systems Order Form (this electronic pricing sheet is availble for download from GSBN, under Communication➜Sales and Marketing➜Downloads➜Order Form) dated 10/10/2008.

| Order No. | STA Short Code | Item | Qty | Price | Cost |
|---|---|---|---|---|---|
| 3rd Pty SIP KP-AP9-W3P/XAR | 3rd Pty SIP | Per seat license for 3rd Party SIP Phone | | $250.00 | |
| SIP TRK KP-AP9-WSS/XAR | SIP TRK | SIP per TRK License ( OS-7000 System to ITSP) | | $5.00 | |
| H.323 TRK KP-AP9-WHS/XAR | H.323 TRK | H.323 per TRK License between PBX systems | | $10.00 | |

Note that while the order form indicates a unit price for each item, the licenses can only be generated in specific increments as listed in the table below. So license counts past 10 are ordered in 10 packs and larger. One of the advantages of SIP trunking is the ability to quickly turn up additional trunks without of the traditional long lead time from the telco. So selling,

# Samsung OfficeServ 7000 SIP Service Release

ordering and installing SIP trunk licenses in larger increments then the ITSP is actually providing make it possible to turn up more trunks quickly.  For example; site requires 25 SIP trunks and 42 SIP phones.  Price in and order a 30 pack SIP Trunk License plus a 50 pack SIP Third Party SIP telephone seat license.

| ORDER SIP STACK LICENSES IN THESE QUANTITIES | | | | | | |
|---|---|---|---|---|---|---|
| **No.** | **SIP Trunks** | | **No.** | **3rd Party SIP Stations** | **No.** | **H.323 Trunks** |
| 1 | TRK | | 1 | SEAT | 1 | TRK |
| 2 | TRK | | 2 | SEAT | 2 | TRK |
| 3 | TRK | | 3 | SEAT | 3 | TRK |
| 4 | TRK | | 4 | SEAT | 4 | TRK |
| 5 | TRK | | 5 | SEAT | 5 | TRK |
| 6 | TRK | | 6 | SEAT | 6 | TRK |
| 7 | TRK | | 7 | SEAT | 7 | TRK |
| 8 | TRK | | 8 | SEAT | 8 | TRK |
| 9 | TRK | | 9 | SEAT | 9 | TRK |
| 10 | TRK | | 10 | SEAT | 10 | TRK |
| 20 | TRK | | 20 | SEAT | 12 | TRK |
| 30 | TRK | | 30 | SEAT | 14 | TRK |
| 40 | TRK | | 40 | SEAT | 16 | TRK |
| 50 | TRK | | 50 | SEAT | 18 | TRK |
| 60 | TRK | | 60 | SEAT | 20 | TRK |
| 70 | TRK | | 70 | SEAT | 24 | TRK |
| 80 | TRK | | 80 | SEAT | 28 | TRK |
| 90 | TRK | | 90 | SEAT | 32 | TRK |
| 100 | TRK | | 100 | SEAT | 36 | TRK |
| 150 | TRK | | 150 | SEAT | 40 | TRK |
| | | | | | 44 | TRK |
| | | | | | 48 | TRK |
| | | | | | 52 | TRK |
| | | | | | 56 | TRK |
| | | | | | 64 | TRK |

NOTE:  Regardless of what license quantity is ordered each system will only support the maximum of each device type as indicated in the SYSTEM CAPACITY TABLE shown in this document.

# Samsung OfficeServ 7000 SIP Service Release

## UPGRADE NOTICE

To begin using SIP services the OfficeServ 7000 system must be running V4.22, main system software, with date code 08.08.20. See separate Product Bulletin No. 181: Software Version 4.22 Software for upgrade procedures.

## LITERATURE AND DOCUMENTATION

The following OfficeServ 7000 SIP Services documentation is available for download from the Samsung GSBN (www.samsunggsbn.com) website under Communication->Technical Support->Downloads->Technical Manual:

- OfficeServ 7000 SIP Services Technical Manual
- OfficeServ 7000 SIP Trunking Quick Reference Document
- OfficeServ 7000 SIP Station Quick Reference Document
- OfficeServ 7000 SIP Services Related MMCs

The OfficeServ 7100, 7200, and 7400 General Description booklets have been revised to reflect SIP. You can download these booklets from the Samsung GSBN ([www.samsunggsbn.com](www.samsunggsbn.com)) website under Communication->Sales and Marketing->Downloads->General Description.

The OfficeServ 7100, 7200, and 7400 Installation and Programming Manuals are in the process of being updated and will be available for download on GSBN in 30 days.

## TRAINING AND CERTIFICATION

Dealers do not require certification to sell the Samsung SIP Services. However, technicians require technical training certification in order to receive technical support.

An online OfficeServ 7000 SIP Services (Course # 3050-01-OL) is now available. The course fee is $100. For more information about the course content, prerequisites, and how to purchase this course, please refer to Training Bulletin TRB#101008.

If you have any questions regarding this product Bulletin, please contact your Regional Sales Manager, or Sales Engineers at the number provided below, or send an email to [BCS.Sales@samsung.com](mailto:BCS.Sales@samsung.com).