

VOIP SOFTSWITCH (TIMOK.VOIP): OVERVIEW

The *Timok.VoIP Softswitch* is a comprehensive and highly scalable VoIP platform with support for Wholesale and Retail services. The Timok platform is available either for purchase as a licensed product or for contracting as a hosted service. In addition to native support for VoIP protocols (SIP and H323), connecting to TDM customers and carriers is possible by utilizing VoIP gateways. Timok's cost-effective **Softswitch** solutions have numerous built-in functionalities, including:

<i>Easy management & control</i>	<i>Dynamic call routing</i>	<i>Integrated firewall & security</i>
<i>Call authorization & authentication</i>	<i>Real-time rating & billing</i>	<i>Integrated in-memory database</i>
<i>Pre-installed applications, including prepaid solutions.</i>	<i>Call origination and termination via VoIP and/or TDM networks</i>	<i>Web-based Reports and Customer Service</i>

- . *Timok.VoIP Softswitch* comes loaded on a 1U rack mount server chassis for immediate deployment on your network. Once installed, it is easily manageable through a fast, user-friendly interface that allows network administrators the easy control, administration and management of calls, routes, rates and accounts/customers. Moreover, Timok's in-memory database engine and built-in IVR capabilities enable robust prepaid functionalities at significant savings: *no other third-party databases, software, hardware or licenses are needed.*

- . *Platform scalability* is accomplished utilizing replication between an Administration node and Call-Processing nodes, allowing the platform to scale on demand by simply adding call-processing servers as traffic increases.

- . *Built-in firewall means greater security.* The *Timok.VoIP Softswitch* is secured by an integrated firewall and provides comprehensive access control. The integrated security system operates independently of your own firewall, requiring no additional software or hardware and reducing the burden on your network administrators: you can freely change your own LAN firewall configuration without affecting the VoIP service.

- . *Built-in IVR capability means easier administration and lower cost.* The Timok Retail **Softswitch** uses Prosody X high-density voice-processing boards from Aculab, a leader in the hardware industry. These combined systems allow *up to 1,500 concurrent calls per 1U server.*



Additional benefit: now a new Service Bureau option!

TIMOK has formed a partnership with our preferred telecommunications service provider, MundeTel Communications Inc., a licensed US long distance carrier. This partnership allows Timok to offer hosted VoIP-based calling services and provide customers with an additional easy and cost-effective means of entering the Prepaid industry.

VOIP SOFTSWITCH (TIMOK.VOIP): FEATURES & FUNCTIONALITIES

Authentication & Authorization. Real-time authentication & authorization can be performed for both Wholesale and Retail customers: for Wholesale traffic, authentication policies for controlling access are defined by IP Address, Endpoint Alias or Prefix; for Retail, authentication is by DNIS, ANI, PIN number or UserID/Password. The Timok platform also authorizes authenticated calls, and can monitor balance usage: once a balance is depleted, the system will terminate the call.

Routing. Best cost routing functionality automatically routes calls to the best available termination based on pre-defined criteria, including cost, quality of service and resource availability. The system allows for the creation of different Routing rules per customer.

Billing. Both prepaid and postpaid billing is supported. For Prepaid, a list of ongoing calls is maintained and they are rated in real time upon completion. Alternatively, postpaid billing can be activated in which case the system produces billing invoices periodically.

Rating. Options include:

- Rounding: 1/1, 6/6, 30/6, 60/60, custom.
- Bonus Minutes, one time or periodic, per Route.
- Rate entries per: Time of Day, Holiday, and Weekend.
- Per call progressive rating and per call/minute surcharge fees.

Prepaid Retail. TIMOK has recently introduced functionality enabling the following services: Prepaid Calling Cards, Prepaid (and Postpaid) Residential (ANI), or Prepaid Wireless and SIP.

Prepaid Wholesale. Pre-paid functionality is available for Wholesale customers too. The Timok system allows for call limiting based on available account balances. You can define a warning limit,

and receive email notifications when an account approaches a zero balance.

Web Reports. A secure Web Portal provides access to system reports. There are multiple standard reports available showing total calls, minutes, ASR and ACD in various formats:

- Inbound by Endpoint, Customer, DNIS, Route
- Outbound by Endpoint, Carrier, Route
- Daily call history
- Individual End User Accounts call history
- Customer reports broken by Carrier
- Carrier Report broken by Service

Load Balancing. The *Timok.VoIP Softswitch* automatically uses *load balancing* if more than one Timok server is deployed across a network, optimizing efficiency and performance.

Reliability. The TIMOK team has deliberately designed a sophisticated but user-friendly application and installed it on fault-tolerant hardware to maximize reliability and customer satisfaction. In the case of faults, *Timok.VoIP Softswitch* nodes continually monitor themselves and send messages to notify your system administrator of real or possible service failures.

Fraud Control. We endeavor to control for popular instances of fraud. The Timok system prevents concurrent calls on end-user accounts. Attempts to authorize PINs belonging to batches that have not been sold also flag PIN leaks. Within a predefined interval, if more than a predefined number of different PIN authorization attempts are made from a single ANI, all further calls from that ANI are blocked.

VoIP/TDM Compatibility & Supported Protocols.

The *Timok.VoIP Softswitch* integrate well with H.323 v.2+ or SIP compliant VoIP networks and can also allow origination & termination with traditional TDM networks.