# **Tornado M5**

IP Phone

## **PRODUCT OVERVIEW**

Tornado M5 is a low cost, feature rich SIP IP phone designed to meet the growing communication needs of consumers and small to middle-size businesses. With complete set of IP Centrex/PBX features, Tornado M5 offers a cost-effective alternative to expensive PBX systems. Because Tornado M5 utilizes advanced Voice-over-IP and Auto Peer Discovery technologies, it enables businesses to substantially reduce the cost of long distance/international calls and to cost-effectively scale their telephone systems as their communication needs grow.

#### Standalone IP Centrex/PBX Functionality

Tornado M5 IP Phone fully supports IP Centrex/PBX features without the need to interact with a central server (i.e. such features are supported internally). The device offers DID, Caller ID, Speed 2-digit Dialing, Anonymous Call Rejection, Call Forward, Call Return, 3-way Conferencing and other IP Centrex/PBX features.

## **Integrated Voicemail System**

Tornado M5 IP Phone comes with an integrated voicemail system which can accept and record up to 80 calls/messages. Unlike traditional PBX systems which store voicemails in a central server, Tornado M5 stores messages locally and can make them available to users even in cases when the service provider's network is unavailable. The IP Phone supports advanced Voicemail menu system to guide callers during the process of leaving a voicemail, and to allow remote retrieval and administration of voicemail messages.

#### Two VoIP Lines and Advanced SIP Support

Tornado M5 IP Phone supports up to two VoIP lines, each with standalone IP Centrex/PBX functionality. The IP Phone also offers advanced SIP support and can seamlessly interoperate with any SIP Registrar, Proxy or Outbound Proxy server. For improved interoperability with any VoIP infrastructure, Tornado M5 can use either regular or secure authentication.

# **Auto Peer Discovery**

Tornado M5 IP Phone automatically discovers its peers located within the same local area network (LAN). Such functionality allows LAN users to talk directly with each other without the need to use third party servers such as registrars, proxies, or gateways. For outbound calls, Tornado M5 supports multiple routes to allow calls to be terminated to alternative proxies or gateways.

## **Calling Card IVR Support**

Tornado M5 IP Phone can function as a standalone calling card platform via its built-in support for calling card IVR. When such functionality is enabled, the IP Phone will ask each user for his/her PIN number and will request a call authorization from a third party RADIUS AAA/Billing server. Upon receiving such authorization, Tornado M5 will prompt the user to enter a destination number and will connect the call.

# **Automated Device Provisioning**

As an alternative to manual setup, Tornado M5 IP phone allows automated provisioning through a TFTP server. Such feature enables service providers to perform large scale remote configuration from a central location. For increased security during device provisioning, Tornado M5 supports MD5 encryption.

# **Unified Messaging and Call Forwarding**

Tornado M5 IP Phone offers improved user reach via its Unified Messaging and Call Forwarding capabilities. Upon receiving a voicemail, Tornado M5 can be configured to forward it to a preset email address. The IP Phone can also be configured to forward calls to alternative numbers, so that users never miss calls.

# **Multiple Call Routes and Route Failover**

Tornado M5 IP Phone can route calls to multiple end points depending on the prefix of the dialed number. Such functionality enables users to additionally lower call costs by sending calls to providers that offer the lowest rates for a given area/country code. For improved call completion rates, Tornado M5 also offers a route failover feature. That functionality allows calls to be rerouted to alternative registrars and outbound proxies when the servers of the primary provider are temporarily unavailable.





# Key Features

- Standalone IP Centrex/PBX Functionality
- Integrated Voicemail System
- Two VoIP Lines and Advanced SIP Support
- Auto Peer Discovery
- Calling Card IVR Support
- Automated Device Provisioning
- Multiple Call Routes and Route Failover
- Unified Messaging and Call Forwarding
- Customizable Distinctive Ring Tones
- Configuration and Management via Phone or Web

# **DATASHEET**

#### **Features**

#### IP Centrex/PRX Features

- Inbound Call Filtering
- Direct Inward Dial (DID)
- Speed 2-digit Dialing
- Anonymous Call Rejection
- Call Forward All Calls
- Call Forward Busy
- Call Forward No Answer
- Managed Call Forward
- Blind Call Forward
- Call Return
- Caller ID
- Caller ID Block
- Caller Name
- Call Waiting
- Caller ID for Call Waiting
- Last Call Redial
- Last Inbound Call Return
- Distinctive Ring
- Do Not Disturb (DND)
- Forward to Voicemail
- Hold Call
- 3-way Conference
- Permanent Caller Block
- Priority Call
- Call Screening
- Urgent Call
- Virtual Ring
- Music-on-Hold

## Voicemail (IVR) Features:

- Calling Card IVR Support
- Up to 80 Messages Stored Locally
- IVR System Management
- Voicemail Auto Attendant - Voicemail to Email Support
- Voicemail HTTP Download
- Unified Messaging
- Voicemail Notification
- Remote HTTP Web Management

## **Technical Specifications**

# Data Networking:

- One Ethernet Port (RI-45)
- MAC address (IFFF 802.3)
- IPx4 Internet Protocol Version 4 (RFC 791) upgradeable to v6 (RFC 1883)
- ARP Address Resolution Protocol (RFC 826)
- DNS A Record (RFC1706), SRV Record (RFC 2782)
- DHCP Dynamic Host Configuration Protocol (RFC 2131)
- ICMP Internet Control Message Protocol (RFC 792)
- TCP Transmission Control Protocol (RFC 793)
- UDP User Datagram Protocol (RFC 798)
- RTP Real Time Protocol (RFC 1889)
- DiffServ (RFC 2475), Type of Service TOS (RFC 791/1349)
- SNTP Simple Network Time Protocol (RFC 2030)

# Voice Gateway:

- SIP v2 Session Initiation Protocol Version 2 (RFC 3261, 3262, 3263, 3264, 3265, 3842)
- SIP Proxy Redundancy Dynamic via DNS SRV, A Records
- Re-registration with Primary SIP Proxy Server
- Secure (Encrypted) Calling via Pre-Standard Implementation of Secure RTP
- Codec Name Assignment
- Dynamic Payload
- Adjustable Audio Frames per Packet
- DTMF: In-band and Out-band (RFC 2833)
- Flexible Dial Plan Support with Interdigit Timers and IP Dialing
- Call Progress Tone Generation
- Adaptive Jitter Buffer
- Frame Loss Concealment
- Full Duplex Audio
- Echo Cancellation (G. 165/G.168) up to 128ms
- VAD Voice Activity Detection with Silence Suppression
- Attenuation / Gain Adjustments
- Flash Hook Timer
- MWI Message Waiting Indicator Tones
- VMWI Via FSK
- Polarity Control
- Hook Flash Event Signaling
- Caller ID Generation (Name and Number) Bellcore, DTMF, ETSI
- Music on Hold Client (Downloadable MOH Content)

#### Voice Codecs:

- G.711 (A-law and  $\mu$ -law)
- G.711 Annex I
- G.726 (16/24/32/40 kbps)
- G.729, G.729A
- G.726-32

## Provisioning, Administration and Maintenance:

- Web Browser Administration and Configuration (via integrated web server)
- Telephone Keypad Configuration with Interactive LCD Text
- Automated Secure Provisioning and Upgrades via HTTP
- Asynchronous Notification of Upgrade Availability
- Automated Firmware Upgrade
- Automated Clock Synchronization
- Non-Intrusive, In-Service Upgrades
- Report Generation and Event Logging
- Per Line and Purpose Configurable System Log and Debug Options
- HTTPS with Factory Installed Client Certificate
- HTTP Digest Encrypted Authentication via MD5 (RFC 1321)
- Password Protected Admin and User Access
- Up to 256 bit RCS or RC4 Encryption
- Device Locking



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