

Tornado M10

Digital Media Center

PRODUCT OVERVIEW

Tornado M10 Digital Media Center is an advanced IPTV set top box for delivery of streaming audio and video content directly to consumers' TV sets and/or Home Entertainment systems. Tornado M10 supports advanced MPEG4 video and MP3 audio compression algorithms which allow it to deliver high quality audio and video content even when bandwidth is limited. Tornado M10 also offers advanced Voice-over-IP capabilities, which enable consumers to make inexpensive phone calls over the Internet.

IPTV and Video-on-Demand Support

Tornado M10 Digital Media Center can deliver high quality video streams including online TV (IPTV) and Video-on-Demand (VoD) directly to consumer's TV sets. The device supports advanced MPEG4 compression technology which enables it to deliver optimal video quality even when bandwidth is limited. All video streams are encrypted for privacy and copyright protection.

Digital Music and Internet Radio Delivery

In addition to video capabilities, Tornado M10 Digital Media Center can also deliver streaming digital music and Internet radio directly to consumers' Home Entertainment systems. The device supports high compression MP3 algorithm for maximum quality of delivered audio streams.

SIP Protocol Support with FXS and FXO Interfaces

With its unique functionality, Tornado M10 can be used as a complete home telephony solution. With FXO, FXS and LAN interfaces, the device can transparently bridge calls between PSTN and VoIP networks. For example, Tornado M10 can route 911, Specialty (sub-frequency) calls, and 800/Toll-Free as well as Local calls via the local telephone company (FXO interface), but route Long Distance, Local-Toll, and International Calls via VoIP channels for extra savings.

Video Conferencing H.263 Support

Tornado M10 Digital Media Center features advanced Video Conferencing capabilities which enable subscribers to conduct high-quality video conversations with friends and family. To initiate a video conversation, the subscriber simply dials the phone number of another Tornado M10 subscriber and enters the video conferencing mode which utilizes the H.263 standard.

Media Extension Center Functionality

With Tornado M10, consumers can conveniently access content stored on their personal computers directly from their TV screens. The device can scan home PCs for different media files, like movies, videos, sound tracks, pictures etc. and can reproduce such content directly on consumers' TV screens and/or Home Entertainment systems.

Integrated Voicemail System with Unified Messaging

Tornado M10 Digital Media Center comes with 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 M10 stores messages locally and can make them available to users even in cases when the service provider's network is unavailable. The device 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.

Online Chat and Email Clients

Tornado M10 enables consumers to chat with friends while watching their favorite TV shows or movies. The device offers a universal chat client that can communicate directly with the popular ICQ, AOL, and MSN clients. In addition, Tornado M10 enables users to send emails directly from their TV screens.

Optional PVR and Program Scheduling

With optional hard disk connected via USB port, Tornado M10 enables users to record their favorite TV shows and/or movies. Tornado M10's program scheduling functionality enables users to program the device to record video content at specific times of day, week or month so that they never miss their favorite TV shows.



Key Features

- IPTV and Video-on-Demand Support
- Digital Music and Internet Radio Delivery
- SIP Protocol Support with FXS and FXO Interfaces
- Video Conferencing H.263 Support
- Media Extension Center Functionality
- Integrated Voicemail System with Unified Messaging
- Online Chat and Email Clients
- News and Weather Reports Delivery
- Optional PVR and Program Scheduling
- Peer Auto Discovery
- Automated Device Provisioning
- Device Management via Phone, Web or Remote Control

Tornado M10

Digital Media Center

DATASHEET

Features

Video and Audio Features:

- IPTV Streaming Support
- H.263 Videoconferencing Support
- Video on Demand (VOD) Support
- Pay-per-View (PPV) Support
- Digital Audio Streaming (Online Radio)
- Trick Play Support (Pause, Replay, Rewind, etc.)
- Picture Slide Show Support
- Parental Control
- Optional Personal Video Recorder (PVR)
- Optional Time Scheduling of the PVR
- Content Library Support for Remote PC
- Low Bit Rates Support
- Interface to Local PC Content

Value-Added Features:

- Chat Client Compatible with ICQ, AOL, and MSN
- Email Reader
- News Reader
- Weather Interface
- Calculator
- Currency Converter

VoIP Telephony Features:

- Four VoIP Phone Lines
- SIP Protocol with NAT Traversal
- Peer Auto Discovery
- Standalone IP Centrex/PBX Functionality
- Call Waiting, Call Forward, Call Hunting
- Automated Call Forwarding to Multiple Numbers
- FXS and IP Origination/Termination
- Advanced IVR Support and Management
- Auto Attendant Support
- Voice Encryption
- Wake-Up Phone Service

IP Centrex/PBX 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

Provisioning, Administration, Configuration:

- Web Browser or Phone Keypad Administration and Configuration
- Features Selection and Management via Remote Control
- 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

Technical Specifications

Connectors/Interfaces:

- One FXS Port (RJ-11)
- One FXO Port (RJ-11)
- One Ethernet Port (RJ-45)
- One USB 1.1 Port (Type A)
- One SD (Secure Digital) Card Interface
- One Video RCA Analog Port
- One Stereo Audio RCA Analog Port
- Infra Red (IR) Remote Control Interface
- Optional WiFi/Wireless 2.4 802.11b Interface
- Optional Three FXO Ports (RJ-11)

Voice and Video Codecs:

- MPEG4/SP
- MP3
- G.711 (A-law and Mu-law)
- G.726 (16/24/32/40 kbps)
- G.729

Data Networking:

- MAC address (IEEE 802.3)
- IPx4 - Internet Protocol Version 4 (RFC 791) Upgradeable to Version 6 (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)
- SIP Proxy Redundancy - Dynamic via DNS SRV, A Records
- Re-registration with Primary SIP Proxy Server
- SIP Support in Network Address Translation Networks incl. STUN
- 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 Inter-digit 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)

Power:

- 5V, 2A, External

Dimensions:

- 6" (W) x 1.5" (H) x 3" (D)



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