



Station Features

Abbreviated/Speed Dialing
 Account Codes
 ACD Agent Logon Button
 ACD Agent Status Buttons
 ACD Group Service Button
 ACD Group Status Display
 Add-on Conference
 Alarm Clock
 Local
 Remote
 All Call Announce
 All Call Announce Pickup
 Answer
 Audible Call Indicators
 Automatic Call Transfer
 Automatic Hold Recall
 Background Music
 Break-In
 Broker's Hold
 Busy Extension Button Hunting
 Busy/No Answer Intercept
 Busy Override
 Busy Prime Line Indication
 Button Change
 Button Hunting
 Call Announce
 Call Announce Privacy
 Call Announce Transfer
 Call Duration Display
 Call Forward
 Busy/Don't Answer
 Don't Answer
 Follow Me
 Outside the System
 Local
 Remote
 Call History
 Answered
 Outgoing
 Missed
 Call Park, Answer & Identification
 Call Pickup
 Call Queue Query
 Call Transfer
 Called Party Identification
 Caller ID Blocking/Unblocking
 Calling Party
 Called Party
 Override
 Camp-on
 Cancel
 Class-of-Service Change
 Clear Active Features
 Conference
 Add-on
 Cancel
 Isolate
 Meet-Me
 Music-on-Hold
 Query
 Dial Access
 Dial Access for Remote Extensions
 Direct Extension Selection

Direct Ring Prime
 Directed Call Pickup
 All Call Announce
 Group Call
 Page
 Park to Station
 Disconnect Tone
 Display Wrap
 Do-Not-Disturb
 Feature Buttons
 Group Listen
 Ground Recall
 Headset/Handset Operation
 Hold
 AA Hold of Busy Tone
 Conference Hold
 System Hold
 Transfer Hold
 Intercom
 Hot Line
 Meet-Me Conference
 Secretarial
 Message Send/Message Retrieve
 Message Cancel
 Message Waiting
 Voice Mail
 Page Messaging
 Monitor
 Music
 Conference Music-on-Hold
 Music-on-Hold
 Telephone Background Music
 Night Service
 Night Answer
 Night Transfer
 Override
 Paging
 Park Display
 Parked Call Indication
 Park to Station
 Personal Preferences Setup
 Personal Speed Dialing Directory
 Privacy
 Problem Circuit Tagging
 Pushbutton Dial
 Redial
 Last Number Redial
 Stored Number Redial
 Release
 Remote Call Pickup
 General Remote Call Pickup
 Group Remote Call Pickup
 Repertory Dialing
 Personal
 System
 Session Initiation Protocol (SIP)
 Speakerphone
 System Alarms
 Transfer
 Visual Call Indicator
 Voice Mail Access
Trunk Features
 Analog Loop-Start Trunks
 Analog Nailed-Up Circuit

Analog Port Impedance Match
 ANI and DNIS Service
 Automatic Call Distribution
 Automatic Route Selection
 Auto-Transfer of Trunk Calls
 Caller ID Translation
 D-Channel Backup
 Digital Announcer Support
 Digital Direct Inward Dialing
 Digital E&M Tie Lines
 Digital Ground-Start Trunks
 Digital Loop-Start Trunks
 Digital ISDN Trunks
 Digital Off-Premises Stations
 Direct Department Calling
 Direct-In Line
 E1 Trunks
 Hookswitch Flash Pass Through
 Individual Trunk Access
 Information Digits on T1/E1 ANI
 ISDN PRI Integration
 IP-QSIG Trunks
 Least Cost Routing
 Loop-Start Trunk Disconnect
 Loop-Start Trunk Wink Seizure
 Message Send/Message Cancel
 Message Send Page Access
 MF Outdial on Analog Trunks
 Multiple Trunk Groups
 Nailed-up Data Connection
 Name Delivery on ISDN
 Network Redirection
 Non-Facility Associated Signaling
 Overlap Dialing
 PRI Call-by-Call Service Selection
 Priority Queues
 Public/Private Numbering Plan
 Remote Access (DISA)
 Senderized Dialing
 T1 Trunks
 T1/E1 DID Digit Collection
 T1 Multiple Channel Restart
 Tie Trunks (Digital)
 Toll Restriction
 Toll Restriction Override
 Traffic Measurement
 Trunk-to-Trunk Connect
 Trunk Route Advance
 Trunk Route Queuing
 Trunk Routes
 ISDN PRI Protocols
 DMS-100
 DMS-250
 4ESS
 National ISDN
 Euro-ISDN
 QSIG
System Features
 ACD Agent Pin Numbers
 ACD Group Status Display
 ACD Group Intercall Timing
 ACD Reports Language Choice
 Alarm Indicators
 Alphanumeric Page Messages

Announcer Ports
 Audio Level Control
 Authorization Codes
 Auto Answer
 Automated Attendant
 Automatic Conference Teardown
 Automatic Station Hunt
 Backup Battery External Support
 Busy/Don't Answer Intercept
 Call Accounting System Support
 ACD Reports
 Call Duration Timer
 Call Handling Reports
 Call Announce
 Call Queue Query
 Call Queuing
 Call Routing Plans
 Call Screening
 Caller ID
 Classes of Service
 CTI Integration – CSTA, TAPI, TSAPI
 Database Backup
 Date/Time Set from External Time
 Server
 Daylight Savings Time
 Diagnostics
 DTMF Signaling
 Digit Collection & Processing
 Distinctive Ringing
 External Paging Interface
 Feature Grp. B & D Switched Access
 Flexible Numbering Plan
 Forced Disconnect On Termination
 GUI System Administration
 ICLID Delivery of DID/DNIS
 Intercom
 Intercept
 Monitor Zones
 Multiple Attendant Positions
 NANP Compatible
 National ISDN B-Channel Mgmt.
 Network Address Translation (NAT)
 Network Message Waiting Indication
 Night Service
 Display
 Zones
 Off-Premises ACD Agents
 Off-Premises Station*
 Originating Line Information
 Overlap Dialing
 Override/Busy Verification
 Page Tone
 Prime Extension Assignments
 Private Lines
 Programmable Line Selection Modes
 Programmable Tones
 Protected Stations
 Quality of Service (QoS)
 RPD Support for PC Interfaces
 Recall
 Receiver Off-Hook (ROH) Intercept
 Remote Programming & Diagnostics
 Remote System Extensions
 Resources Queuing

Result Codes
 Second Call Indication
 Session Initiation Protocol (SIP)
 Sigbus and Event Monitoring
 Simple Traversal of UDP thru NATs
 Station Hunting
 Station Message Detail Recording
 SMDR for Private Caller ID
 SMDR for Extensions
 System Clock
 System Repertory Mode Button
 System Security
 System Timers
 System Tones
 Translate Tables
 Unified Communications
 Messaging
 Unified Messaging
 Presence & Availability Tools
 Mobility Applications
 Used Digits Listing
 User Mnemonics
 Voice Mail IP Integration
eNterprise IP Telephones
 Audible Call Indicators
 Automatic Set Relocation
 Button Banks
 Button Expansion Module (BEM)
 Browser Configuration Tool
 Call Duration Display
 Incoming Call Indicator
 2 x 20 or 4 x 20 Backlit Display
 Handsfree Operation
 Headset Jack
 Hot Keypad
 Line Selection
 Message Waiting Lamp
 Optional AC Power Adapter
 Personal Preference Setup
 IEEE 802.3af Power over Ethernet
 Pushbutton Dial
 Dynamic (DHCP) or Static Address
 Assignment
 10/100 MB Switch Ethernet Ports
Single-Line Telephones
 Auto Attendant Ring Cadence
 Direct Trunk Access
 FLASH Button Option
 Line Selection
 Message Lamp Option (FSK)
 Message Notification Audible
 Multi-button Access
 Second Call Indication
 Second Station Monitoring
3rd-Party SIP Devices**
 Calling Party Name
 Calling Party Number
 Answer
 Hold
 Transfer
 Message Notification
 Conference
 System Dial Access Codes



eConn IP-PBX System Capacities

Ports	1500
Physical Locations	1500
Programmable Logical Locations	1500
Maximum Number of Simultaneous Calls	750
Maximum Number of IP Telephones	988
Maximum Number of IP-QSIG Trunks	988
Maximum Number of ACD Agents	576
Maximum Number of Analog Stations	260
Maximum Number of Analog Trunks	208
Maximum Number of T1 Spans	16
Maximum Number of E1 Spans	16
Conference Channels (IP and Analog Devices)	256
Maximum Echo Canceller Channels for TDM Calls	400
Tone Generators for G.711 Devices	1000
DTMF Receivers for Simultaneous Calls	400

Traffic and Performance Specifications

Criteria	Result
Busy Hour Call Completions ¹	40,000 BHCC
Response Time Specifications	Delay to Dial Tone <1 s Dial Tone Cut Off Delay <500 ms Post Dialing Delay <1.5 s Connecting Delay <400 ms
Data Blocking Possibilities ²	Software <0.0001 Blocking Possibility

Hardware Specifications eConn Server Expansion Cabinet

Dimensions	eConn Server	Expansion Cabinet
Height	4U	4U
Width	19"	19"
Depth	22"	22"
Weight	42.8 lbs	40 lbs

System Input Power Requirements

	eConn Server	Expansion Cabinet
Input/Disconnect	IEC320-C14 Class 1 AC Receptacle	IEC320-C14 Class 1 AC Receptacle
Input Voltage	100 - 240 VAC	100 - 240 VAC
Frequency Range	50 / 60 Hz	50 / 60 Hz
Input Power	650W	450W
AC Source	90 - 264 VAC	90 - 264 VAC
Frequency Range	47 - 63 Hz	47 - 63 Hz

Operational Environment

	eConn Server	Expansion Cabinet
Temperature	50° to 95° F	50° to 95° F
Humidity, non-condensing	8% to 90%	8% to 90%

Configuration

	eConn Server	Expansion Cabinet
Universal PCIe Slots	7	7
Processor, minimum	Intel Quad Core Xeon 1336	
Hard Drive, minimum	2 160 GB SATA Raid Drives	
Memory, minimum	3 GB RAM	
Operating System	Linux 2.6; CentOS Linux 5 Distribution	

TDM Interface PCIe Cards

All signal processing applications such as conferencing and echo cancellation are performed on the host processor, rather than on-board DSPs.

Analog Station/FXS PCIe Board (HMP)

- Available in densities 4, 8, 12, 16 and 20 analog station circuits; software license enabled.
- Superior host-based echo cancellation and RTP packetization for analog to IP gateway applications.
- Software programmable to interface with North American or European telecom standards.
- Ringer equivalence number (REN): 1

Analog Trunk/FXO PCIe Board (HMP)

- Available in densities 4, 8, 12 and 16 analog trunk circuits; software license enabled.
- Capable of providing combinations of loop start and passive/high impedance logging of analog line circuits.
- Board enables voice and fax services by way of connectivity to TDM and IP networks.
- Software programmable to interface with North American or European telecom standards.
- Ringer equivalence number (REN): 0.1B

T1/E1 Digital Trunk PCIe Board (HMP)

- Each card provides a solution for voice and data applications with 1 to 4 spans available for use with T1 or E1 connectivity; software license enabled.
- Each span can be configured with individual T1/E1 framing and line coding, ISDN PRI protocol type, and non-facility associated signaling (NFAS) group assignments.
- Supports total bandwidth of up to 6.176 Mb/s in T1 mode and up to 8.192 Mb/s in E1 mode; 8.192 MHz span-multiplexed local TDM bus (128 timeslots).
- Dual reference phase-locked loop (PLL) for line clock referencing, control and monitoring.
- Maximum number of T1/E1 clock sources per board is two; each T1/E1 board derives its clock source(s) independently.

Frame Mode

- T1: Extended Superframe, D4
- E1: Double Frame, CRC Multiframe

Line Coding

- T1: B8ZS or AMI ZCS
- E1: HDB3

Signaling

- T1: Robbed-Bit
- E1: Channel Associated

Protocol Variants

- 4ESS, DMS-100, DMS-250, National ISDN, Euro-ISDN, QSIG



Feature Capacities⁴

ACD Agents	576
ACD Groups	100
Alarm Clock Messages	10
All Call Announce Zones	12
Announcer Ports	128
Messages	32
Profiles	64
Business Department Numbers	16
Call Duration Display	999:59
Call Park Zones	32
Call Routing Plans	64
Digit Translation Tables	50
DND Messages	10
General User Mnemonics	10,000
IP Codecs	3
G.711 Mu-Law/A-Law	
G.729 A/B	
IP-QSIG Nodes	512
LCR Class Marks	16
Manual Intercom Buttons	4095
Mobile Twinning	19 Devices ⁵
MOH Messages	10
Music Source Input Sources	2 Audio Files
Personal Speed Dial Numbers	255
Maximum Digits Each	48
PRI spans in NFAS group	5
Recall Destinations	6
Remote Call Pickup Groups	64
Remote System Extension Groups	50
Special Day Call Routing Plans	32
Station Class-of-Service Tables	100
Station Hunt Groups	64
Members Each Group	128
Total Members	576
Station Profiles	
IP Telephones	100
Single-Line Telephones	100
T1/E1 Stations	100
Trunk Class-of-Service Tables	50
Trunk Groups (Trunk Routes)	64
Trunk Profiles	
Loop-Start Trunks	100
DID Trunks	25
T1/E1 Trunks	100
System Speed Dial Numbers	1024
Max. Digits Each Number	46
Station Programmable Buttons	
Single-Line Telephone	254
eNterprise IP 22-Button Telephone	22
Plus 1 BEM	70
Plus 2 BEMs	118
Plus 3 BEMs	166
Plus 4 BEMs	214
eNterprise IP 32-Button Telephone	32
Plus 1 BEM	80
Plus 2 BEMs	128
Plus 3 BEMs	176
Plus 4 BEMs	224

Telephone Loop Limits

Single Line Telephones

- 4,000 ft (1219 meters); based on #24 AWG station wire. System is AC powered and telephone is line powered. This includes commercial AC power and UPS backup power.

eNterprise IP Telephones

- IP telephones can be located anywhere there is an IP network connection. CAT 5 supports a single run of 100M without additional equipment.

eNterprise IP Telephone Dimensions

eNterprise 22-Button IP Telephone	8" W x 7 1/2" D x 2 1/2" H
eNterprise 32-Button IP Telephone	8" W x 7 1/2" D x 2 1/2" H
eNterprise Button Expansion Module	8" W x 7 1/2" D x 2 1/2" H

Recommended 3rd-Party SIP Devices³

Desktop Phones

- Yealink SIP-T22
- Yealink SIP-T20

Softphones

- SJ Labs SJphone
- CounterPath X-Lite & eyeBeam

Analog Terminal Adapter

- Cortelco ATA821121

Wireless Phones

- Ascom i75 VoWiFi
- Snom m3 DECT
- Linksys WIP330 WiFi
- UniData WPU-7700

Product Regulatory Certifications

4U Server and Expansion Cabinet

FCC, CE, EIA-RS310D, RoHS

Equipped with Power Supply

cUL, CD, FCC, RoHS

Hard Drive

UL, CSA, CE, MIC

DVD Drive

cUL, CE, MIC

Analog Station/FXS PCIe Board (HMP)

CSA/NRTL, FCC Part 15, RoHS

Analog Trunk/FXO PCIe Board (HMP)

CSA/NRTL, FCC Part 15, FCC Part 68, CS-03, RoHS

T1/E1 Digital PCIe Board (HMP)

CSA/NRTL, FCC Part 15, FCC Part 68, CS-03, RoHS

Notes:

* Analog set lines extending outside the building in which the system is installed must be protected on both PBX and analog telephone ends by a primary and secondary protector.

** 3rd-Party SIP device refers to a SIP-compliant softphone, desktop phone, wireless phone, terminal adapter or other device. Although SIP is a standard, various manufacturers have chosen SIP implementations that are not always fully compatible. Please refer to the manufacturer's user guide for features supported locally on the device.

¹ The BHCC will vary according to individual customer configuration and usage.

² Licensing and trunks provisioning dependent.

³ Additional SIP devices are supported and can be found online. If you wish to use a 3rd-party SIP device not listed here, then we recommend contacting eOn Technical Support at 1-877-CALLTECH to verify compatibility and thoroughly testing the device with the system before committing to its use.

⁴ Some eConn IP-PBX features have maximum capacities that are dependent on system software, configuration or equipment installed.

⁵ For mobile twinning, the system can simultaneously ring up to 19 mobile devices or landline phones (PSTN) per desktop phone, in addition to a chain of extension appearances on other internal devices.



info@eoncc.com | www.eoncommunications.com | 800.955.5321

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