



# IP Contact Center 5.0

## Datasheet

Built on a truly integrated architecture, FrontRange IP Contact Center (IPCC) was created to cost-effectively bring the world of the IP-based call center to the growing and distributed enterprise. It provides all the capabilities you need to promote efficiency, develop deep customer relationships, and keep customers coming back. And, it does so with an unprecedented time to benefit — offering features to fit your needs and budget now, with the flexibility to add more as you grow. It's the first contact center solution truly designed to change as you do.



IPCC's skill based and data-directed routing rules gets the customer's call to the right agent the first time based on the skills required or even service level that you have assigned that particular customer. This approach ensures that you improve your customer satisfaction and that the appropriate person is handling the call reducing the time to handle each call and your overall cost. Ultimately both you and your customers win. This is easily configured in the Application Builder scenarios.

- **Skills-Based Routing with Escalation** – system matches call to agent based on skills requested in call scenario. Multiple escalation/overflow intervals can be established, with skill and skill level criteria being relaxed the longer the call waits.
- **Call Segmentation** is performed in call scenario, requesting necessary skills based on caller input or back-end records.
- **Multiple Skill Routing** – multiple skill requirements can be used to select the right agent
- **Adjustable Skill Importance** – can be set to have one level of one skill make up for some of another or have them considered one by one

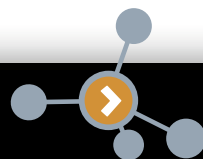
- **Agent State-Aware Routing** – the system always delivers a call to the best available ready agent
- **Overflow Handling** – a call can be processed differently by branching call flow based on Estimated Waiting Time even before the call is queued.
- **Queue Position is Kept** when re-queueing a call
- **Priority Routing** – call can have a priority value assigned to it that will affect the agent selection according to importance assigned to priority in routing rules
- **To specific agent** – call can wait in queue for specific agent
- **Estimated Waiting Time** announcement
- **Call diversion** based on Estimated Waiting Time
- **Escape key** – anytime during waiting in queue caller may be offered to leave the queue to access other services, such as input extension or leave voicemail
- **No available agents** call diversion
- **Queue limits** – limits can be set per type of call, how many calls can be queued for it. When the limit is reached, the Application Builder scenario can handle it in any way like playing some message, recording voicemail or scheduling call back
- **Up to 150 Concurrent Agents** on a single server

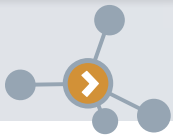
### Business Application Integration

FrontRange IP Contact Center is integrated with the award-winning HEAT Service & Support, GoldMine Corporate Edition (CE) and ITSM applications to provide your contact center team seamless access to information from either application, as well as streamlined work flow, so you can increase customer satisfaction and lower your costs.

#### ITSM 5.0.3+

- Desktop application screen pop driver:
  - **Create** new or open and display existing business object
  - **Display** a specific relations tab of the business object
  - Run a specific **Quick Action** (business object-related macro) on open
  - **Set selected fields** to values from interaction data
- IVR application blocks:
  - **Search Business Object** by one or combination of its (or child object's) fields, retrieve selected fields as interaction data
  - **Update Business Object's** fields from interaction data values
  - **Define Screen Pop** by specifying in call scenario what desktop application should do when call arrives (see screen pop driver capabilities above)





**HEAT® 8.0.3+**

- Desktop application screen pop driver:
  - **Display** Profile or Call Ticket
  - **Create** and display new Call Ticket
  - Run HEAT **Auto Task**
  - Save Call Ticket
  - **Set selected fields** to values from interaction data
- IVR application blocks:
  - **Search Call Ticket** or Customer by one or combination of its fields, retrieve selected fields as interaction data
  - **Update Call Ticket's** or Customer's fields from interaction data values
  - **Modify Call Ticket** by changing its state or updating journal record, or both.
  - **Define Screen Pop** by specifying in call scenario what desktop application should do when call arrives (see screen pop driver capabilities above)

**GoldMine® 6.7+ Corporate Edition**

- Desktop application screen pop driver:
  - **Goto** contact in existing contact window
  - **Open** new contact window
  - **Ignore** (no screen pop)
  - **Display** dialog with contact's name and choice of Open/Goto/Ignore
- IVR application blocks:
  - **Search Contacts** via CONTACT1, CONTACT2 or CONTSUPP tables, by phone or account, retrieve selected fields as interaction data
  - **Add to Contact History** block allows to update call history with call-related data such as call time and disconnect cause, along with selected interaction data values.
  - **Define Screen Pop** by specifying in call scenario what desktop application should do when call arrives (see screen pop driver capabilities above)

IPCC has an **open API** for integration of third-party backend systems

**Agent/Supervisor Dashboard**

The agent dashboard enables the user to control their presence management states as well as view all interactions in queue. Through powerful business application integration, meaningful business data can be displayed as columns in queued interactions list; interactions can trigger visible and audible alerts. The dashboard also incorporates a software based SIP phone making it easier to deploy, support, and change in any environment. Features include Click to Dial, Dial from Directory and Desktop conferencing which allows your agents to be more effective and drive higher volume of calls per agent all without leaving their desktop.



- **Agent Presence Management** – login, logout, set agent to ready or not ready, with a specific reason – tells the call queue whether agent is ready to take calls. Reasons are configurable.
- **Built-in IP softphone**
  - o **Multiple lines** (simultaneous calls)
  - o Transfer/Blind Transfer/Hold/Conference
  - o Directory
    - **Multiple address books**
      - **Dynamic directory** of logged in agents
      - **Personal and Global**
      - **Active Directory** (Windows Domain)
      - **Local Windows Directory**
    - **Dial from Directory**
    - **Transfer from Directory**
  - o Message waiting indicator
  - o RFC-2833 DTMF generation
  - o Proxy Registration (allows using DHCP)
  - o **Fax T.38** send/receive support, including print to fax (fax printer) \*additionally priced option
  - o **Call lists** – dialed, answered, missed
  - o **COM API** – softphone can be fully controlled via this API from automation programs or scripts running as a result of toolbar actions, for example
  - o **Automatic Answer** – when requested in call scenario, softphone will answer call automatically.
  - o **Call Recording** – an agent can record conversation on local disk.
    - **Buffered Full Call Recording** – no matter when record button is clicked, call will be recorded from the beginning
  - o **Customizable Sounds** – ring and call process sounds can be customized
  - o **Automatic Softphone Configuration** (extension, proxy, etc) for contact center agents on login. This allows for zero dashboard configuration when using with softphone.
- **Desktop phone deployment option** – Desktop phone can be used and softphone can be disabled.
- **Queue Monitor** – a window showing calls in queue
  - o **Multiple folders** – multiple views/ with calls filtered based on a number of configurable criteria.
  - o **Configurable columns** – for each view, specific set of call attached data can be displayed
  - o **Audible and Visual Queue Notifications** on:
    - New Call Arrival
    - Waiting Time Limit
    - VIP / property match
  - o **Pull capability** – an agent can pull the call from queue, provided sufficient privileges
- **Agent-to-Agent messaging** – agents and supervisors can chat between each other. All conversations are logged on the server
  - o Agents can seek chat assistance from supervisors while talking



on the phone.

- o **Emergency Assistance Request** - agent may request an emergency chat session with supervisor. The session has highlighted window that catches attention.
- **Wrap time countdown**
- **Personal Queue** – special folder where calls waiting that specific agent can be seen
- **Park call to agent** – an agent on a call may put the call into other agent’s personal queue
- **Assign call to agent** – a supervisor may assign call into an agent’s personal queue even before it is answered – right from the Queue Monitoring console
- **ITSM/GoldMine CE/HEAT Desktop Integration**
  - o With screen pop transfer – when transferring call from one agent to another, current screen can be sent along
  - o Send screen
  - o ‘Click to dial’
- **Remote agent support** – remote agent needs IP connection to call center for dashboard (1 TCP connection), IP Phone (2 UDP connections, 100Kbps full duplex per each voice channel) and backend application such as HEAT/GoldMine/ITSM
- **Automatic Contact Center Server Discovery** – dashboard gets contact center connection information automatically and allows selection of server from a drop-down list.
- **Hotkeys** – most of dashboard functions have hot keys defined

- o **Agent state is visible** in the list of agents in Quality Management tab in Agent Dashboard
- o **Notifications** – agent or caller or both (selectable) can be audibly notified about monitoring.

## Reporting

FrontRange IPCC provides an in-depth set of historical reports and real-time views that address the challenges associated with managing multi-channel and multi-site contact centers. View real-time data and historical reporting through an easy-to-use graphical dashboard. Dashboards can be tailored to meet a user’s specific needs to see the health and performance of your contact center by providing performance data to benchmark against colleagues which promotes competition among agents. Real-time reporting includes remote console and multiple connections, enabling you to keep your finger on the pulse whether you at your desk or out of the office. The web-based Historical Reporting includes over 80 pre-built reports enabling you to gain benefit from day one.



## Quality Management

The optional Quality Management module allows consistent service quality by monitoring and recording live calls. Monitoring provides supervisors with the option of one-way listening, coaching an agent without the customer hearing. Recording can be activated by schedule, call scenario or upon supervisor request. Recordings can be rated to provide information for agent performance reviews and agent training.

- **Recording**
  - o **On demand** – via selection from supervisor’s dashboard
  - o **Scheduled** – by agent or percentage of calls, (date, time and other call properties using call scenario logic)
  - o **Application-initiated** – application scenario may decide to start call recording based on results of DB query, for example
  - o **Agent to Agent Message Logging** – message streams are time-stamped and logged in database
- **Recording Browsing / Listening**
  - o **Web-based** - runs on server, accessed via internet browser, web server is not required
  - o **Search** – by date, time, agent or other call data
  - o **Agent Recording Rating** – listening interface allows the rating of agents and use the data in performance reviews
- **Monitoring**
  - o **Listening only** – supervisor can conference into calls in listen-only mode
  - o **Whisper / coaching** – supervisor can conference into calls and listen to both parties while talking only to agent
  - o **Message Coaching** - supervisors can also coach agents while monitoring the call.
  - o **Participation/Conference** - supervisor can fully conference into conversation

### Real-Time Reporting

- **Over 100 statistics** implemented out of the box
- Per **Agent, Agent Group, Service** or **Contact Center**
- **Real-Time Reporting** – statistics monitored using Statistics Console connected to server over TCP/IP
  - o Current numbers and states
  - o aggregated over a day and
  - o for last 60 minutes (configurable)
  - o It is possible to track multiple Contact Center Servers in one console

### Historical Reporting

- **Web-based** - runs on server, accessed via internet browser, web server is not required
- **Real-Time statistics** aggregated and saved in 15-minute intervals (configurable)
- **Click-through graphs** navigate report objects, timescales or date and time
- **MS SQL DB**
- **Not Ready Reasons** – it is possible to see not only statistics per state but also per specific not ready reason
- **Agent Audit table** – historical reporting can keep a table of all agent state transitions, this can be turned on and off per agent
- **Custom reports** can be created by using 3-rd party reporting tools, based upon the IPCC historical reporting SQL database.



### Call Scenario Reporting (menupick reports)

- **Call Scenarios (Applications)** – how often applications are used
- **Application Block** – how often a particular block is executed in application
- **Application Branches** – how often a condition is selected
- **Disconnects per block** – how often callers disconnect in a particular block

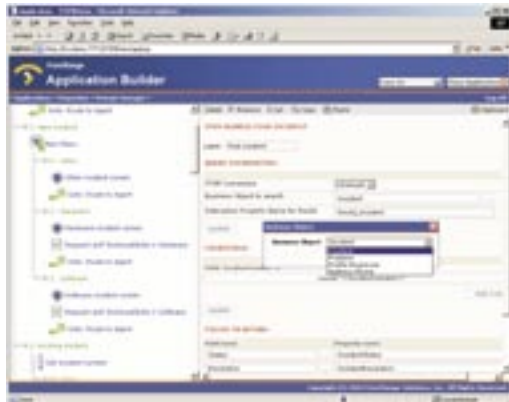
### Interactions Reporting

- **Complete history** for each call, from cradle to grave
- **Linked to recording**
- **Linked from Historical reporting** – clicking on a bar in Historical reporting displays actual interactions
- **Web-based** - runs on server, accessed via internet browser, web server is not required
- **Searchable** – by date, time, agent or other call data
- Can be used to create **new stats in the field**, by Professional Services

### Web-based Application Builder

This easy to use GUI reduces call scenario development and maintenance to a system administration task. Within Application Builder web pages, just a few mouse clicks are needed to combine the functionality of high-level blocks into applications. Application Builder scenarios describe the call life from beginning to the end, covering both IVR and call distribution.

With help from built-in Business Application Integration capabilities (blocks), mundane tasks such as allowing a customer to check the status of an issue, or perform a query could be completely carried by Application Builder call scenarios without having to talk to one of your live agents. However, the customer has the option at any time to elect to speak to an agent and have their call and data transferred to the person who can deliver the appropriate service.



- **Voice Response and Call Routing in single scenario**, as opposed to the usual industry approach is to have a separate IVR and agent call routing UIs that provide to complete view on a call scenario
- **Branching the flow on :**
  - o DNIS / ANI
  - o Back-end data
  - o Date / Time
  - o Day type (holidays, DST changes, etc)
  - o Estimated Waiting Time, even before the call is queued

- **Web-based** - runs on server, accessed via Internet Explorer. Web Server is not required.
- **Send e-mail, with attachment** – call attached data can be used anywhere in a message, attachment can be any file, including a recording
- **Record to File** allows the e-mailing of recordings as well as the modification of application prompts over the phone
- **Call transfer to point in call flow** not only allows agents to send caller to specific point in call scenario, it also enables routing parameters to be changed and re-queue the call, i.e. transfer to another queue
- **SQL DB Access** - OLEDB/ADO/ODBC compatible sources, both read and insert/update
- **Prompts can be generated automatically** by Text-to-Speech (Third party licence required) during application development, which saves time over usual IVR application development where time is spent on recording, re-recording and editing prompts. For production, the final version of prompts can be replaced with prompts recorded by voice talent.
- **Multilingual applications support** – AppBuilder prompts may have different segments for different languages – language switch is performed just by telling interpreter to play prompts in another language “from now on”
- **Full ITSM/GoldMine/HEAT back-end data access**, with complete search, retrieve and update capabilities
- **Streaming Audio music in queue/on hold** – allows the playing of streaming audio from websites, (or CDs) in Windows Media Services format (Windows Media Services is a part of Windows 2003 server). WMS can also be used to play marketing messages or music to callers on hold.

### Technologies

FrontRange IP Contact Center solution provides you the features that you need to provide superior customer service that leads to better customer retention and loyalty. With a single point of entry for administration IPCC reduces the complexity required to support heavyweight telephony functionality including IP based PBX.

#### Administration

- **Web-based configuration** – digest password-protected web-based configuration interface allows remote access and does not require HTTP server installed.
- **Management Console** – operator control over TCP/IP
  - o **Multiple Contact Center servers** – can be managed with one console
- **Log console**

#### Role-based access rights

The concept of role-based access rights is based upon privileges that are combined into roles, which can then be assigned to users. There is a number of predefined roles such as agent, administrator, supervisor, and new roles could be added or existing modified. Examples of privileges by group are:

- Edit various parts of system configuration (telephony, agents, etc)
- Control the system (start/stop parts of the system, view runtime state)
- Quality Management (monitor, whisper/coach, record, etc)
- Agent (change agent status, browse call queue, pull calls, park calls, etc)



- Supervisor (view statistics, run reports, assign calls, etc)
- Build call scenarios in Application Builder

#### Basic SIP Proxy PBX is built-in

- Transfer/Hold/Conference supported on the phone
- NAT – supports NAT for both local and remote endpoints
- **Loop prevention**
- **Registrations** – allows endpoint to specify its IP address and port, useful for DHCP phones. Can be secured with digest username/password authentication to prevent impostors.
- **Digest-md5 authentication** – if an endpoint is protected with username and password, an impostor cannot make or receive calls on behalf of it
- **Trusted IP address authentication** – IP address can be used instead of digest-md5 for endpoints that do not support it
- **Response security check** – a response to request that did not go through this particular proxy will be rejected. This implies that original request must be authenticated and also effectively shields from “crafted responses” that allow to address any host in the network using crafted Via path.
- **Can perform number transformations** – can remove X characters from beginning of SIP URL user part or prefix it with XYZ or both (ex: remove 9 from 91415... before sending to gateway)
- **Supports forwards** – switches to stateful operation during forward, isolating legs, sending cancel to one direction and redirect to another. Forwards use transformations also; so original DNIS information is retained (for voicemail, for example). The following types of forwards are supported:
  - o **On failure** – can be used to switch traffic from failed proxy or endpoint to the one in standby
  - o **On busy** – can be used to create hunting groups or trunk groups from multiple gateways, or for voicemail
  - o **On no answer** – usually used for voicemail
  - o **On not registered** – usually used for voicemail, means the phone is down or not connected

#### IP Based Solution

It doesn't make sense to run your business using dated technology. IPCC works with VoIP gateways thus eliminating the need for PBX and separate voice infrastructure with associated maintenance and staff expenses. (There is also no need for expensive PBX CTI link option needed to get regular contact centers working)

- **Standard hardware** – standards-based gateway, IP phone and PC hardware from various vendors can be utilized allowing for “best of breed” components to be used; components are reusable and there is no “lock-in.”
- **Ease of change** – because no special telephony hardware resources are allocated for an IP phone station (except for the IP phone itself, that is), most changes in the switch are performed by logical reconfiguration.

#### IP Telephony server subsystem

Provides IPCC with voice processing and call switching capabilities.

- **Automatic Speech Recognition** \* (Third party licence required)
  - o Scansoft SpeechPearl integration
  - o Multilingual over 40 languages
  - o Available as Application Builder block or full COM API for complex ASR applications

- o Host-based (on separate dedicated server)

- **Text to Speech**

- o Microsoft SAPI5 interface
- o Multilingual, dependent on TTS engines installed
- o Can be used in Application Builder to play dynamic data, from DB, for example

- **Common Data Speaker** – for playing common data such as dates, times, money and other amounts using pre-recorded prompt vocabulary. Superior voice equality and lower processing resource requirements than TTS.

- **Open COM API** – Most of system components export COM APIs that can be used from other programs (in fact, Application Builder blocks use that API)

- **Conferencing Capability API** – unlimited number of conference parties, with one-way connection capability via the API

- **Conference Recording Capability API** – conferences can be recorded into files, available via the API

- **Application Selector** - allows to select from a number of configured applications on:
  - o DNIS / ANI
  - o Date / Time (useful for after-hours call processing)
  - o Day type (holidays, DST changes, etc)
  - o Number of busy channels (could be used to keep some lines free for overload situations, asking callers to call later and hanging up)

#### Open Standards Compliant

- o RFC-3261 – SIP: Session Initiation Protocol
- o RFC-2833 – DTMF tones generation and recognition
- o RFC-1889 – RTP: Real-Time Transfer Protocol
- o RFC-2327 – SDP: Session Description Protocol
- o RFC-3515 – REFER Method
- o draft-ietf-sip-replaces-04.txt – consult transfer method
- o draft-ietf-sipping-mwi-03.txt – unsolicited NOTIFY used for Message Waiting
- o draft-ietf-sip-privacy-04.txt – CLIP/CLIR in the softphone layer only

#### Localization

Application Builder applications support multilingual applications in all languages. IPCC Version 5.0 includes CDS and Unified Messaging prompts, Reporting and Statistics and Agent Dashboard localization in following languages:

- English US and UK
- Russian
- German

More to follow



From the creators of award-winning GoldMine® and HEAT® software.



## QoS

Both telephony server and dashboard support IP TOS field setting for RTP voice data packets. This allows configuration of state of the art QoS on gateways and switches as well as provides voice traffic with priority handling in fair-queues commonly found on low-end devices.

## 3COM VCX switch support

FrontRange Solutions is the 3com partner. When sold with VCX, VCX takes place of the proxy.

- **Auto Answer** – call scenario can request 3com phone to answer call automatically
- **Subject header** – 3com phones can display additional call info when ringing, can be set from call scenario

## Unified Messaging

With this optional module you have centralized media center functionality where you can answer your voicemail via email or hear your email over the phone. This allows you to have all your communication in one place, which is especially important to your high value third level workers and your mobile staff.

- **Unified Messaging** - sends standard compressed wave messages via SMTP to any mailbox
  - o **E-mail From:** address insertion by sender's PIN, if entered
- **Dial-in Access** to IMAP/POP3 Mailbox
  - o **Reads e-mails** using any SAPI5-compliant text-to-speech
  - o **Reply by e-mail** with Voice message
  - o **Send e-mail** with Voice Message
  - o **MS Exchange Super User** mailbox access support for frequently-changed e-mail password cases
- **Attendant** – dial extension or dial by name
- **Message Waiting Indication** on compliant IP Phones and gateways

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SOLUTIONS

## Hardware Requirements

- RFC-3261 SIP/2.0 UDP-compliant endpoints such as gateways or phones
- RFC-2833 Telephony Signals compliance is necessary if DTMF recognition is used

## Contact Center Server host machine

### Hardware Requirements

- 2 GHz Pentium IV or equivalent for simple audiotex-like applications on 96 channels; scaling is fairly linear
- 512 MB RAM
- 2GB HDD, RAID 10 (preferred), or RAID 5
- Quality Management (QM) - 28.8MB per hour of recording, per agent
- Dedicated server is recommended for Reporting and QM deployment
- XGA Monitor 16-bit color 1024x768 (for Management Console)
- 100-MBit LAN card and 100MBit switched LAN or vLAN with TCP/IP network participation

### Software Requirements

- Windows 2000 Server w/Service Pack 3, or Windows 2003 Server
- TCP/IP configuration (domain membership is recommended, but is not required)
- Internet Explorer 6.0 or higher
- \*Optional Software
  - o SAPI5-compliant Text-to-Speech (TTS) engine(s)
  - o ScanSoft SpeechPearl 8.0 Automatic Speech Recognition (ASR) engine

## Agent Dashboard host machine

### Hardware Requirements

- Pentium III 1 GHz
- 128 MB RAM
- 1 GB HDD
- Video 16-bit 1024x768
- A high-quality soundcard for softphone users. Motherboard soundcards may not be sufficient for high-quality telephone audio because of shielding issues.
- LAN card and TCP/IP network participation

### Software Requirements

- Windows 2000 Professional w/SP3 or Windows XP
- TCP/IP configuration
- Internet Explorer 6.0 or higher

## Remote Management Tools host machine

### Hardware Requirements

- Pentium III 1 GHz
- 128 MB RAM
- XGA Monitor 16-bit color 1024x768 (for Management Console)
- LAN card and TCP/IP network participation

### Software Requirements

- Windows 2000 Professional w/SP3 or Windows XP
- TCP/IP configuration
- Internet Explorer 6.0 or higher