

# NORDUnet Centralized MCU

## NORDUnet Video Conferencing - Equipment & Capabilities

The NORDUnet Video Conferencing Service is based on a Centralized MCUs and a number of distributed Terminals:

### Centralized MCU:

	<b><i>Radvision ELITE 5230</i></b>	<b><i>Radvision ELITE 5230</i></b>
<i>Maximum Continuous Presence Video Participants in HD Quality</i>	120	120
<i>Maximum Continuous Presence Video Participants in SD Quality</i>	120	120
<i>Maximum Continuous Presence NORDUnet Desktop Participants up to 384Kbps</i>	120	120
<i>maximum Continuous Presence NORDUnet Desktop Participants up to 1024Kbps</i>	120	120
<i>Maximum Additional Streaming Users</i>	600	600
<i>Maximum Audio Participants</i>	120	120
<i>Managements Ports - iVIEW Suite (H.323 &amp; SIP, Scheduler, Management, Accounting)</i>	100	100
<i>ECS Gatekeeper</i>	<i>500 Concurrent Calls - 1250 Registrations</i>	<i>500 Concurrent Calls - 1250 Registrations</i>
<i>Maximum Concurrent Conference Room Recording</i>	<i>3 (1TB Space available for meeting recordings)</i>	<i>3 (1TB Space available for meeting recordings)</i>

*(The 1000 Mbit transmission Capacity of the MCUs can be used as a combination of the above sketched capabilities)*

#### Conferencing Solution Components

- Multipoint Conferencing Units (MCUs) - with full HD video and audio transcoding, SIP and H.323 support
- iVIEW™ Suite with internal Gatekeeper - for conference scheduling and management
- SCOPIA Desktop - extends the reach of video networks to desktop and remote users

#### Capacity

- Optimized capacity provides optimized capacity and port cost to each conferencing application working point (High Definition, Standard Definition, Desktop)

#### Signaling Protocols

- H.323, SIP, H.320, H.324M

#### Audio Support

- Codecs - G.711, G.722, G.722.1, G.723.1, G.728, G.729AB, MPEG4 AAC-LC, Polycom® Siren14™/G.722.1 Annex C
- Custom participant entry / exit tones
- DTMF tone detection (in-band, H.245 tones, and RFC2833)

#### Video Support

- High Definition Continuous Presence - H.264 @ 720p up to 30fps
- Codecs - H.261, H.263, H.263+, H.264 SVC
- Live video resolutions - QCIF, CIF/SIF, 4CIF, 288p, 384p, 400p, 448p, 480p, 576p, VGA, SVGA, SXGA, 720p, 1080p
- Presentation video resolutions - VGA, SVGA, XGA, 720p
- Video bandwidth - up to 12Mbps

#### Advanced Video Processing

- Video transcoding, rate matching, text overlay, 28 layout options, dynamic layout according to number of conference participants, lecture mode
- Consistent video quality and frame rate regardless of the number of participants connected to the meeting
- Automatic adjustment of the video aspect ratio to 4:3 or 16:9
- 22 different layout options with up to 28 conference participants displayed on one screen using Continuous Presence
- Individual / personal layouts per conference participant
- Fully customizable personal layout controlled using DTMF
- Automatic image size adjustment to match TV display
- Text overlay (e.g. conference participant's name)
- Dynamic layout according to the number of conference participants

#### Data Collaboration and Presentation Sharing

- H.239 and DuoVideo for presentation sharing

#### **On-screen Information Overlay**

- User joined / left meeting
- Number of audio only participants
- Audio only active speaker name
- Encrypted meeting
- Meeting being recorded

#### **Security**

- H.235 AES encryption
- Password protected web GUI user access with multiple levels: Administrator, Operator, User
- PIN protected conferences
- HTTPS for secured management

#### **Web-Based Monitoring and Control**

- User-friendly web interface for MCU configuration and conference operation Video Auto-Attendant
- Leading number
- IP dialing
- Multi language

#### **Video Auto-Attendant**

- Leading number
- IP dialing
- Multi language
- Distributed auto-attendant support (using iVIEW)
- Fully customizable auto-attendant audio prompts

#### **Endpoint Conference Control**

- H.243
- DTMF

#### **QoS**

- DiffServ, TOS, IP Precedence

#### **Desktop Connectivity via SCOPIA Desktop4 (Windows/IE and MAC OS-X Client)**

- Live connection (Audio, Video, Data)
- Streaming mode
- Built-in NAT and Firewall traversal
- Virtual room support
- Easy scheduling via Microsoft Outlook or Lotus Notes
- Web-based scheduling

#### **Management via iVIEW™ Suite with Internal Gatekeeper5**

- Gatekeeper (H.323 support)
  - B2BUA - Back-to-Back User Agent (SIP support)
  - Supports multiple devices for load balancing and failover
  - User configurable dial-plan
  - Full H.245 routing and control for call monitoring and authorization
  - Network status and statistics
  - Network-wide view of calls and conferences
  - Central terminal configuration
  - Display of events and errors received from elements
  - Easy Web based scheduling and ad hoc video conferencing
  - Complete Microsoft Outlook and IBM Lotus Notes integration
  - Accounting for Organization Cost Allocation
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