



## General Information

The @COM Business Manager 5400N-v2 is a high performance industrial telephony appliance build especially for medium sized businesses. Made of heavy duty industrial steel and high grade hardware components in combination with specially tweaked open source software, this appliance is optimally configured for high reliability and security. Well renowned software, such as Linux and the Asterisk OpenSource PBX®, form the basis for this appliance and the specially designed webbased Local Management Tool allows of full management without the need for any knowledge of Linux or the Asterisk OpenSource PBX®. Additional applications add CTI integration and desktop applications for improved working conditions. The @COM Business Manager includes nearly every telephony feature available in the market today creating an all-in-one solution for your business. However, you do not need to pay for features you don't need, just dimension the system to your personal needs and pay for what you use!

## @COM Business Manager v1.3.5

### Global Features

- SIP v2.0 based telephony server
- Up to 250 concurrent calls (configuration dependent)
- Up to 1500 SIP based phones and trunks (configuration dependent)
- Hunt groups; linear, cyclic and ring all
- Virtual extensions
- Abbreviated numbers (2)
- Personal address book (Only Snom 3xx phones)
- Global address book (LDAP based) (2)
- Announcement recording
- Music On Hold service (MOH)
- Call Distribution Lists (CDL)
- Least Cost Routing (LCR)
- Calendar controlled call routing
- Mobile phone integration (mobility extender) (1)
- Call authorizations per extension or predefined group
- Connection groups to prevent overload of DSL lines
- Emergency call prioritization
- Video Call support
- Lock system for outbound calling
- Integrated DNS, DHCP & NTP server and Firewall
- 4 Network interfaces with VLAN support and QoS.
- Integrated routing functionality with static routes
- Custom scripts
- Multiple Location Support (1)

### Extra Features (Optional)

- Automated Attendant (AA) (1,2)
- Automatic Call Distribution (ACD) (1,2)
- Flex-working (1,2)
- Voicemail system (1,2)
  - Voicemail to email service (SMTP based)
  - Voicemail Directory service
- Call Detail Recording (CDR) (1,2)
- Active Directory/LDAP synchronization (1)
- Global address book synchronization (1)

### @COM Applications (Optional)

- Local Management Tool (1)
- Personal Call Manager (1,2)
- ACD Wallboard application (1,2)
- ACD Client application (1,2)
- Presence board (1,2)
- Reporting application for ACD & CDR (1)
- Billing application for post or pre-paid billing (1)
- CTI integration via the @COM Connect (CSTA/XML based) (1,2)
- PC Based Attendant;
  - peterConnects Attendant System (1,2)

(1) Separate datasheets are available

(2) System limits apply!, see system limits

### Basic Call Features

- Make call
- Receive call
- Put call on hold
- Blind & Attended call transfer
- Automatic recall of blind transferred calls on no-answer
- Call waiting
- Call parking (2)
- Caller ID presentation (CLIP)
- Caller ID suppression (CLIR)
- Directed call pickup
- Group call pickup (2)
- Abbreviated number dialing (speed dial) (2)
- Call forwarding Unconditional
- Call forwarding on No Answer
- Call forwarding if Busy
- Call forwarding if Unreachable
- Call forwarding to Predefined number (Mobile forwarding)
- Do not disturb
- Last number redial (performed by phone, thus dependant on phone model)

### Extra Call Features

- Intercom call (two-way speech, single extension only)
- Paging call (2) (one-way speech)
- Alternative call pickup
- Easy logon/logoff hunt groups
- Conference call (2)
- Assign extra assisting extensions for incoming calls
- Silent monitoring of trunks
- Silent monitoring of extensions

### Supported phones & gateways (provisioning)

- Basic Support for many SIP Based phones
- Partial support for AudioCodes gateways
- Partial support for 2N GSM gateways
- Full Support for Snom 3xx phones (version 7)
- Full Support for SwissVoice IP10S phones
- Check [www.at-com.nl](http://www.at-com.nl) for all supported phones

#### Basic Support:

Basic call features support\*, no coverage possible via Service Level Agreements and no automatic provisioning. (Manual programming of phones is needed)

#### Partial Support:

Basic & Extra call features support, full coverage via Service Level Agreements possible, but no automatic provisioning. (Manual programming of phones is needed)

#### Full Support:

Basic & Extra call features support, full coverage via Service Level Agreements possible and automatic provisioning of devices by the @COM Business Manager.

#### Unsupported phones:

Make call and Receive call support, no coverage possible via Service Level Agreements and no automatic provisioning. (Manual programming of phones is needed)



## Technical Specifications

### General

- Dimensions : 1U rack mount chassis (heavy duty steel)  
(W x D x H) 426 x 365 x 44mm (16,8 x 14,3 x 1,73")
- Weight : approx. 10Kg
- 19" Mounting : Mounted via front panel
- Certifications : FCC Class A  
CE Approval  
RoHS Compliant
- Power ratings : 90 ~ 264 AC/DC 50/60 Hz  
60W (normal operation)  
250W (max consumption)  
500W (peak consumption)
- Operating temp. : 0 to 40°C
- Storage temp. : -20 to 80°C
- Relative Humidity: 10% to 90% (non-condensing)
- Uptime : 99,99% (excludes planned maintenance)
- Processor : Intel® I3-2120 3.3GHz
- Memory : 2Gb 1333Mhz DDR3 (PC3-10600)
- Storage : 1x 500Gb 3.5" SATA-II HDD  
or 2x 320Gb 2.5" SATA-III (RAID model)
- Ethernet ports : 4 x 10/100/1000 Mbps (Intel 82583V)
- OS Software : CentOS 4.4 Linux (fully stripped)
- PBX Software : Asterisk OpenSource PBX v1.4 (modified)

### Connectors

- Ethernet Ports (RJ-45):
  - Voice LAN (port ETH0)
  - Data LAN (port ETH1)
  - WAN (port ETH2)
  - Service LAN (port ETH3) (for service use only)
- 1x RJ45 RS-232 serial interface (for service use only)
- 2x USB port (not in use)
- Power connector 110-220V DC

### Quality of Service methods

- IP precedence / ToS
- DiffServe
- VLAN (802.1 pq)

### SIP

- RFC3261 compliant
- SIP via UDP
- Security via MD5 digest authentication
- Route optimization support
- Early media support
- Busy lamp field indications (BLF)
- Message Waiting Indication (RFC3842)
- Subscription for MWI events (RFC3265)
- Out-of-band DTMF (RFC2833)
- NAT Traversal

### Supported Audio Codecs

- G.711 A-law
- G.711 μ-law
- G.729a
- G.726
- GSM 6.10 (full rate)
- G.723.1 (pass-through only)
- G.722 16kHz (HD audio, pass-through only)

### Supported Video Codecs

- H.261 (176 x 144 pixels, pass-through only)
- H.263 (352 x 288 pixels, pass-through only)
- H.263+ (704 x 576 pixels, pass-through only)
- H.264 (High Definition, pass-through only)

## System Limits

### Maximum amounts

• Phones + Trunks (Combined amount)	1500
• Flex-working extensions	1500
• Concurrent calls	250
• Concurrent g.729 codec conversions	250
• Max. extensions in a hunt group	50
• Call Pickup groups	63
• Call Parking slots	99
• Global address book entries	50.000
• Voicemail boxes	150
• Automated Attendant menus	75
• ACD Groups	30
• ACD Agents	75
• ACD Agent clients	75
• ACD Wallboard application	5
• Personal Call Manager clients	75
• Presence board clients	75
• Max. extension per paging group	50
• Max. callers in conference (Snom 3xx phones)	3
• Max. calls waiting per phone (Snom 3xx phones)	12
• @COM Connect attendants	20
• @COM Connect users	1500
• Custom reports	50

#### Note:

Please contact your vendor if you plan to use many of these features in combination with each other, to prevent possible overload off the system!

## Management Interfaces (optional)

### Command Line Interface

There are two separate command line interfaces for the @COM Business Manager available for trained system administrators:

- Serial Command Line Access (v.24)  
This interface allows for programming basic network settings and rescue features such as factory reset, tracing options and password recovery.  
This feature is password protected and for use by experienced administrators.
- Remote Access via Secure Shell (SSH v2 + 1024bit RSA Key)  
This interface allows for programming basic network settings and rescue features such as factory reset, tracing options and password recovery. Additionally it allows to proxy HTTP request enabling remote access to webbased management of the @COM Business Manager and devices. This feature is only available for service engineers and expert administrators!

### Webbased Local Management Tool <sup>(1)</sup>

A webbased management tool is available for the @COM Business Manager enabling administrators to change the programming of the @COM Business Manager. There are 3 different access levels determined by the type of administrator

- Standard Administrator  
Used by administrators who only need to apply small changes to the programming of the system every now and then.  
A Four hour training is provided if this access level is used.
- Advanced Administrator  
Used by administrators who only need to apply a bit more than just small changes to the programming of the system. By default it allows access to three extra additional menus by choice.  
An eight hour training is provided by the vendor if this access level is used.
- Expert Administrator  
Used by administrators who need full control over the programming of the system. It allows to the programming of every item of the system.  
A three day training is provided by the vendor if this access level is used.

<sup>(1)</sup> Separate datasheets are available