



## VISION

The Office Communicator

Modern offices require a completely integrated communication solution. Presenting: Matrix Vision, a premium feature packed PBX specially designed for modern offices. It is packed with unique features that are powered by microcontroller based design. Designed after a study of the ways in which modern businesses operate, Matrix Vision offers integrated solutions to your office communication problems.

Its SMT hardware design ensures a very compact design and low power consumption. SLIC used for extension interface ensures robust, reliable and maintenance free performance. The unique features provided in the system not only ensure smooth communication but also efficient call management. Special features are provided that give professional response to the callers enhancing the image of the organization. Matrix Vision is "The PBX for Office" designed for people who don't compromise.

Get the power of Matrix Vision for your office, because those who compromise cannot accelerate their growth.

Matrix Vision is available in two variants: Vision standard and Vision premium. Vision standard has two models while Vision premium has one model to offer with fixed configuration.

- (I) Vision206S: PBX with 2 Trunk Lines and 6 Extension Lines with Standard Features
- (II) Vision308S: PBX with 3 Trunk Lines and 8 Extension Lines with Standard Features
- (III) Vision309P: PBX with 3 Trunk Lines and 9 Extension Lines with Premium Features

This provides the options for selecting the right model that suits the exact requirement of any organization.

Matrix Vision offers intelligent features like Auto Redial, Auto Call back, Call Follow me, Conference, Abbreviated Dialing, Hotline, etc. that enhance the convenience in the organization. It also offers efficient call management by way of Alternate Number Dialing, Auto Attendant, CLI based routing, Direct Inward Dialing and Dial by name. The features like Allowed and Denied list, Automatic Call Disconnect, Call Budgeting, Dynamic Lock, Least Cost Routing etc. ensure tight control over the cost of communication.

Facilities like RS232C Port for PC connectivity, Printer Port, Digital Input Port for sensors, Digital Output Port for control applications, Analog Input Port for playing external music, Analog Output Port for paging application, Door Phone Port, PMS Interface etc. are built into the Premium Model at no extra cost. These normally warrant additional investments in most other brands. There are no hidden costs, simply a comprehensive solution for your business. Additional features like Auto Attendant, Inbound Call Analysis, Security Dialer, SMDR etc. are also available in the Premium models of the Matrix Vision.

Matrix Vision is built around microcontroller based architecture and utilizes state-of-the-art SMT Technology thus offering robust, reliable and maintenance free operation and performance. All in all, a feature packed and futuristic PBX!

Bring that winning difference to your organization by switching to Matrix Vision. Because only those grow faster who don't compromise.

## KEY FEATURES

### Allowed and Denied Lists

This function prevents misuse of long distance and international dialing to control telephone cost. It allows dialing of a few fixed numbers and restricts dialing of other numbers in the same area. For example, an extension can dial only '22-2626-8573' but not any other number starting with '22'. A comprehensive list of numbers can be included in the Allowed and Denied Lists.

### Alternate Number Dialing

Whenever redial or auto redial is used, the Vision dials out the next alternative number instead of the same number that is found engaged.

### Auto Redial Multiple Numbers

This feature redials a busy number till it gets through. The user is free to concentrate on his work while the system is trying a busy number. As soon as the number is connected, the extension gets a special ring, and the number connected is also displayed on the telephone when the call goes through. Each user can submit up to 3 busy numbers for auto redial.



### Auto Attendant

This feature allows the caller to directly reach an extension without the help of an operator. The system has an Auto Attendant that can play different messages like Welcome Message, Dial by Name, Dial Extension, Busy, No Reply, Wrong Number Dialed, Transferring to Operator etc. These messages can be recorded in a 4-minute voice module. It also allows the caller to reach a desired extension by dialing the name of the extension user.

### Auto Call Back

When the user dials an extension, and does not get a reply, or if the extension is busy, the user can activate the Auto Call Back feature. As soon as the called extension is free or available, the dialed extension rings and gives a call back to the user, whereby the user extension rings and the call is established.

### External Music Port

The external music port allows an external music source to be connected to the Matrix Vision. The desired music or jingle can be played while a person is kept on hold.

### Battery Charger

The system has a built-in battery charger circuit. A single battery of 12 V, 7 A.h. can be connected to it. It allows a back-up time of up to 3 hours. In case of power failure, the system automatically transfers to battery and is transferred back when the power supply resumes.

### Caller Line Identification (CLI-DTMF)

The function identifies the phone number of the caller and displays it on the telephone. The CLI is displayed for both internal and external callers. Even in case of a call being transferred from one extension to another, the system informs both the numbers. For functioning of CLI, the trunk line should support DTMF CLI.

### CLI Based External Call Forwarding (ECF)

The system offers the facility of forwarding selected incoming calls to a desired external number. Selective call forwarding is possible by defining a string of numbers. For example, the system could be programmed such that all numbers with the prefix '22' are forwarded to the residence number, however a very important number '22-2626-8573' is forwarded to the mobile number.

### CLI Based Routing

The system can be programmed such that particular numbers land at specified extensions directly without the assistance of an operator, thus saving time and cost of the callers.

### Class of Service

Matrix Vision allows the supervisor to decide upon the access rights to features for each extension. Thus allowing you to configure the system as per your requirements. For example, Extension 201 (middle management executive) can have features like Conference, Auto Redial, Access to Abbreviated Dialing Group-1 of Global Directory, Alarms, Do Not Disturb and Call Transfer Only, whereas Extension 501 (Pantry) can be configured to dial intercom numbers only.

### Direct Inward System Access (DISA)

Direct Inward System Access (DISA) allows a user to access the system's resources from a remote location. Thus a user can make calls to and from any of the stations, activate/deactivate features of any station and even program or administer the system.

### Direct Outward System Access (DOSA)

Direct Outward System Access (DOSA) allows a user to access the system's resources from a remote location. Thus a user can make calls to any external number, from a remote location, using the trunk lines connected to the system. This is a password protected access to ensure security.

### Door Phone Port<sup>#</sup>

Available in the premium model, this port gives the option of connecting a 2-wire door phone. If this port is not used for the door phone, then it can be used as a normal extension port, thus providing an additional extension.

### Hot Outward Dial

This function is of great use for those stations which make more trunk calls than internal calls. As soon as the station user picks up the receiver, he/she gets access to the desired trunk line, saving time and effort. This function also offers a variant whereby a specified telephone number may be dialed as soon as the handset is picked up, or after a pre-defined delay.

### 3-Party Conference

It allows 3 people to converse in a single conference. A useful feature to consult or conduct a meeting with colleagues over the phone, saving time and increasing productivity.

### Flexible Numbering

This function allows you to define the extension numbers as per your convenience. You can have 1, 2, 3 or 4 digit extension numbers. Not only that but within the same system, you can also have combinations of 1, 2, 3 and 4 digit extension numbers. You can even have conflicting extension numbers defined like 2, 22, 222 and 2222 in the same system.

### Inbound Call Analysis<sup>#</sup>

Incoming calls can be stored in the memory with details like Caller Number, Trunk, Extension, Date and Time of the Call, Duration of the Speech, etc. These calls can be analysed on the basis of filters like Caller Number, Extension, Missed Calls, Duration, etc. Result of the analysis can be sent to a computer through the RS232C port.

### Internet Ready Port (e-Port)

A special port is provided to connect the modem to the Matrix Vision. This port connects the modem directly to the trunk line eliminating noise and thus increasing data transfer speed. Further, this e-port is an extra port leaving all regular extensions ports for voice calls.

### Least Cost Routing

The system can be programmed to ensure that least cost is incurred for each call by choosing specific trunk lines on the basis of their prevailing tariffs. This function has great utility today with the presence of multiple basic service providers offering different tariffs for different destinations during different hours.

### Live Call Supervision

A security feature. The supervisor can know the phone number with whom an extension user is talking.

### Security Dialer

A highly effective security feature that dials 3 different numbers and plays a pre-recorded message in case of an emergency. For example, it could dial the police station and play an emergency message giving the address to the office. The Matrix Vision can be connected to any emergency switch like movement detector, smoke detector, magnetic contact, glass break sensor etc. The system can also be used to activate a hooter in case of an emergency.

### Scheduled Dialing

The system can be programmed to dial a number at a predefined time. This facility is of great utility and can be used to lock long distance calls lines at fixed timings thereby preventing misuse. If desired, the Matrix Vision can lock the long distance or international calling facility everyday after working hours. This would prevent misuse, even if the facility has been left open accidentally.

### Programmable Access Codes

This function allows you to define feature access codes as per your convenience. This feature offers the users great convenience as they do not have to remember the new codes in case of change of the system.

### Public Address System (PAS)

The Public Address System Port allows any station user to make announcements on external speakers.

### Remote Programming

Matrix Vision can be programmed from a remote location. This does not require a PC or any other specialised device at the site.

## FEATURES LIST

- Abbreviated Dialing (Global, Personal)
- Alarms (Duration, Remote, Daily, Time)
- Allowed and Denied Lists
- Alternate Number Dialing
- Analog Input Port (AIP- External Music Port)\*
- Analog Output Port (AOP- PAS Port) #
- Auto Attendant\*
- Auto Call Back (Busy, No reply)
- Auto Redial (Multiple Numbers)
- Auto Shut Dynamic Lock
- Barge-In
- Battery Charger
- Call Follow Me
- Call Forward (All, Busy, No reply)
- Call Park
- Call Pick Up (Group, Selective)
- Call Privacy
- Call Splitting
- Call Transfer (On Ringing, Busy, Screened, Trunk to Trunk)
- Class of Service
- CLI (Caller Line Identification)
- CLI base ECF
- CLI Based Routing
- Communication Port (RS232C)
- Conference (3 Party, Unsupervised)
- Continued Dialing
- Day Night Mode (Auto, Manual)
- Dialed By Name\*
- Digital Input Port (DIP Sensors)
- Digital Output Port (DOP-Control Applications)\*
- Direct Inward Dialing (DID)
- Direct Inward System Access (DISA)
- Distinctive Rings
- Do Not Disturb (DND)
- Door Lock#
- Door Phone\*
- Executive/Secretary
- Extension Groups
- External Call Forward (ECF)
- External Music Port #
- Flash Timer
- Flexible Numbering
- Group Call (Pilot Number)
- Hot Outward Dialing (With Delay, With Number)
- Hotline
- Hunting Schemes
- Inbound Call Analysis
- Interrupt Request
- Internet Ready Port
- Least Cost Routing
- Live Call Supervision
- Live System Programming
- Programmable Feature Access
- Programmable Timers
- Public Address System Port\*
- Raid
- Redial
- Relay Port (Inteeswitch) #
- Remote Programming
- Scheduled Dialing
- Security Dialer\*
- Selective Trunk Access
- Toll Restriction
- Trunk Groups
- Trunk Reservation
- Voice based External Music (Music on Hold) \*
- Voice Greetings for Alarms\*
- Voice Guided help for DOSA and DID \*
- Voice Message for Auto Redial \*
- Voice Message for Night Services \*
- Voice Message for Security \*
- Walk-in Class of Service

# Available in Premium Models

\* Available using Voice Module (Optional)

Features marked "\*" are dependent on the Service Provider.

## ■ TECHNICAL SPECIFICATIONS

**Switching** : Space Division CMOS Crosspoint Switch

### CO Lines (FXO)

Off Hook Line Impedance : 600Ω  
Loop Limit : 1500Ω  
Pulse Dialing : 10 PPS +/- 5%, Make/Break =33:67, 40:60, 50:50  
DTMF Dialing and Reception : As per ITU-T Q.23 & Q.24  
CLI Reception : DTMF  
Call Maturity : Delay  
Protection : Solid State (Over Voltage and Over Current)  
Connections : Push-type (Single Pair Wire, 0.5mm/0.019inch)  
Power Fail Transfer : All CO lines to fixed stations

### Station Lines (FXS)

Loop Limit : 250Ω Max. (Excluding Telephone)  
Loop Current : 35 mA Max.  
Ring Voltage : 50 Vrms, 25 Hz  
Off Hook Line Impedance : 600Ω  
Pulse Detection : 10 PPS +/- 5%, Make/Break = 33:67  
DTMF Detection : As per ITU-T Q.24  
CLI Presentation : DTMF  
Protection : Solid State (Over Voltage and Over Current)  
Connections : Push-type (Single Pair Wire, 0.5mm/0.019inch)

### Additional Ports

Analog Input Port : 0.7 Vrms, Isolated, 1K $\Omega$ , Push-Type Connector  
Analog Output Port : 0.7 Vrms, Isolated, Push-Type Connector  
Digital Input Port : Loop Sensing-Open/Close, 5mA, Push-Type Connector  
Digital Output Port : 0.2A at 125AC, 0.7A at 30VDC, Push-Type Connector

### Transmission Parameter (Between FXS-FXO)

Return Loss : More than 18 dB  
Insertion Loss : Less than 2 dB  
Inter-Channel Cross-Talk : Less than -65 dBm  
Idle Channel Noise : Less than -65 dBmOp  
Longitudinal Balance : Better than 40 dB

### Power Supply

Input : 90-265 V AC, 47-65 Hz  
Power Consumption (Typical) : 15W  
Battery Backup : 12 V DC, 7-10 A.h

### Mechanical

Dimensions (W x H x D) : 26.0 x 39.0 x 8.0 cm (10.2 " x 11.4 " x 3.1 ")  
Unit Weight : 2.0 kg (4.4 lb)  
Shipping Weight : 3.5 kg (7.7 lb)  
Installation : Wall Mount

### Environment

Operating Temperature : 0 °C to 55 °C (32°F to 131 °F)  
Operating Humidity : 5-95% RH, Non-Condensing  
Storage Temperature : -40 °C to 85 °C (-40 °F to 185 °F)  
Storage Humidity : 0-95% RH, Non-Condensing

## ■ ACCESSORY

### Door Phone

Housed in an aesthetic and stylish package, it provides the much desired security and convenience for any SOHO user. It resembles a normal door bell and serves dual purpose of a phone and a bell.



## ■ SYSTEM CAPACITY AND RESOURCES

Hardware	Application	Vision Standard		Vision Premium
		Vision 206S	Vision 308S	Vision 309P
Total Ports	User Ports	8	11	12
TWT Trunks (FXO)	Analog PSTN/CO Line Connectivity	2	3	3
Analog Extension (FXS)	Phone, Fax, Modem Connectivity	6	8	9
Analog Input Port (AIP)	Eternal Music Connectivity	---	---	Yes
Analog Output Port (AOP)	Public Address System (PAS) Connectivity	---	---	Yes
Digital Input Port (DIP)	Sensors, Panic Switch Connectivity	---	---	Yes
Digital Output Port (DOP)	Door Lock, Relay Based Device Connectivity	---	---	Yes
RS 232C COMM Ports	Computer Connectivity	---	---	Yes
Internet Ready Port	Internet Connectivity	Yes	Yes	Yes
Door Phone Port (2W/4W)	Door Phone Connectivity, which can be used at extension if not used as Door phone	---	---	Yes
Security Dialer	Emergency Dialing	---	---	Yes
Voice Module	Voice Based Applications	---	---	240 sec
DTMF Decoders	DTMF Circuitry	2	2	2
DTMF Encoders	DTMF Circuitry	2	2	2
Speech Path	Simultaneous Calling	7	7	7
Real Time Clock (RTC)	LCR, Scheduled Dialing, Alarm, Day/Night Mode	Yes	Yes	Yes

## ■ MATRIX SMB PBX PRODUCTS

Proton103	1 Trunk Line and 3 Extension Line PBX
Proton205	2 Trunk Line and 5 Extension Line PBX
Proton206	2 Trunk Line and 6 Extension Line PBX
Proton308	3 Trunk Line and 8 Extension Line PBX
Vision206S	2 Trunk Line and 6 Extension Line PBX with Standard Features
Vision308S	3 Trunk Line and 8 Extension Line PBX with Standard Features
Vision309P	3 Trunk Line and 9 Extension Line PBX with Premium Features
VisionUltra206P	2 Trunk Line and 6 Extension Line PBX with Premium Features
VisionUltra308P	3 Trunk Line and 8 Extension Line PBX with Premium Features
VisionUltra412P	4 Trunk Line and 12 Extension Line PBX with Premium Features
VisionUltra616P	6 Trunk Line and 16 Extension Line PBX with Premium Features

## ■ ABOUT MATRIX



An ISO 9001 Company, Matrix is a leader in the Key Phone System and PBX market. An innovative, technology driven and customer focused organization; the company is committed to keep pace with revolutions in the telecom industry. This has resulted in bringing forth cutting edge products like Digital and ISDN Key Phone Systems, Digital PBXs, Voice Messaging Products, GSM Products, VoIP Products, Intercom Security Products and PLCC EPAXs. With over 1,000,000 line units installed and growing by over 1000 line units per day, the installed base of Matrix connects over 10,000,000 calls everyday. Thus, Matrix has gained the trust and admiration from users representing the entire spectrum of industries. No wonder, Matrix has won awards for the Best PBX and Key Phone System Company.

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*Due to continuous technology upgradations, product specifications are subject to change without notice.*