

EXPECT MORE.

**USE OF TECHNOLOGY AS A FORCE MULTIPLIER, TO FACILITATE ENHANCEMENT  
OF OPERATIONAL EFFICIENCY OF THE POLICE FORCE: INTEGRATION OF LEGACY  
COMMUNICATION SYSTEMS WITH RADIO INTERFACE AND DATA  
COMMUNICATION DEVICES.**

# Agenda

- Matrix ComSec Pvt Ltd.
- Challenges being faced by Police Force
- Measures envisaged to optimally counter these challenges
- Radio Gateways.
- Data gateway.
- Security solutions
- Welfare and safety of families of Police personnel



- Established in **1991**
- Products: **60+**  
Telecom and Security Solutions
- Global Presence: **40+ Countries**
- No. of Partners: **500+**
- No. of Employees: **400+**

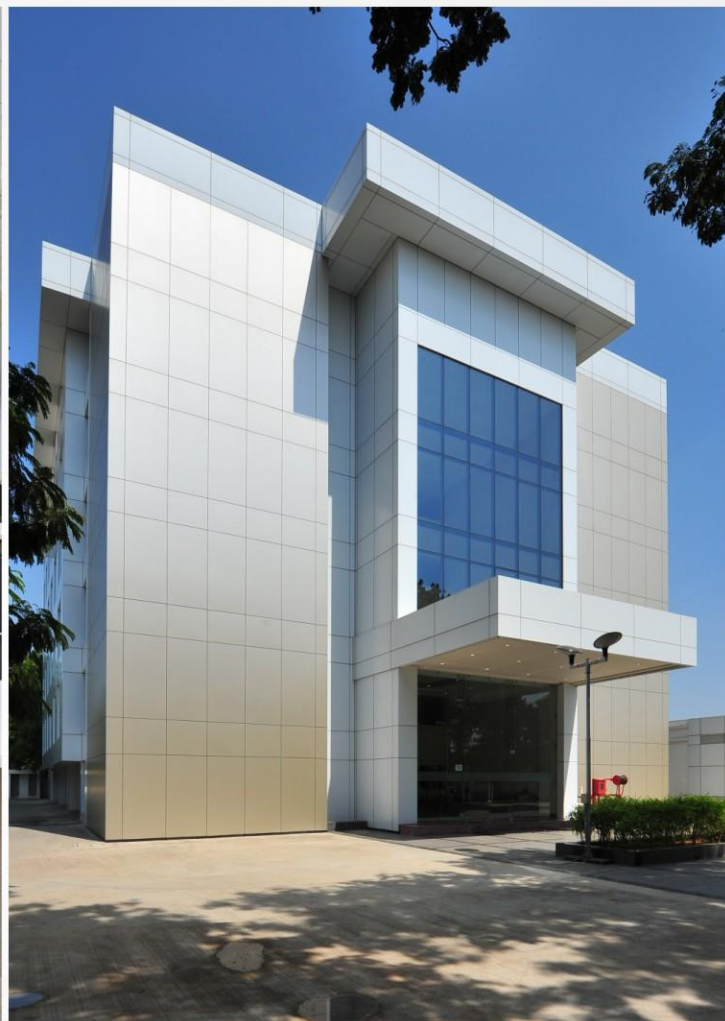
[www.MatrixComSec.com](http://www.MatrixComSec.com)





## CORPORATE OFFICE

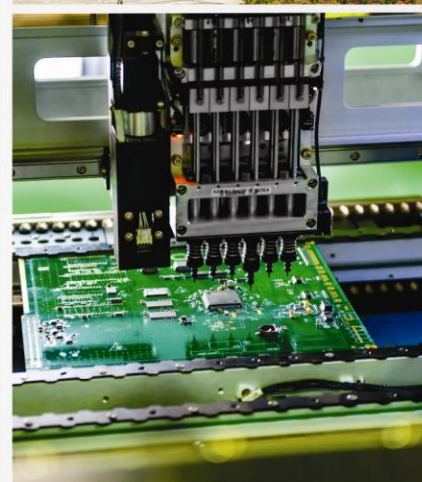
- Based at Vadodara, Gujarat, India
- Departments: Marketing, Sales, Product Management, Support, Finance, Customer Care, Purchase



## R&D CENTER

- 77,000 Sq.Ft
- More than 40% Manpower in R&D, 700+ Man-years of R&D Experience
- World-class Technology Platform and Processes





## MANUFACTURING UNIT

- 73,000 Sq.Ft
- 100+ Work Stations
- International Quality Systems and Processes

# Awards and Achievements



- 2012 **India Design Mark Award** for Matrix Time-Attendance and Access Control Solutions



reddot design award

- 2010 Internationally Acclaimed **RED DOT Design Award** for Matrix Security Solutions



product  
design award

- 2010 Germany based Internationally Acclaimed **IF Design Award** for Thoroughly Engineered and Innovative Matrix Security Solutions



- 2007 **IETE Corporate Award** for Excellence in Computer and Telecommunication Systems by the Institution of Electronics and Telecommunication Engineers, India



# ETERNITY IP-PBX Family



ETERNITY ME16S



ETERNITY GE12S



ETERNITY GE6S



ETERNITY PE3SS

ETERNITY PE3SP

ETERNITY PE6SP

**Matrix ETERNITY : The IP-PBX with  
Seamless Mobility and Universal  
Connectivity**



# **Matrix ETERNITY LE**

## **The Complete Communication System for Large Enterprises**

## Challenges being faced by Police Force

- Economic & commercial crime.
- Transnational crimes.
- Gender Based crimes.
- Traffic crimes.
- Organized crimes.
- Robbery, and stealing.
- Terrorism.
- Drug trafficking.
- Cyber Crimes.
- Illegal Immigration

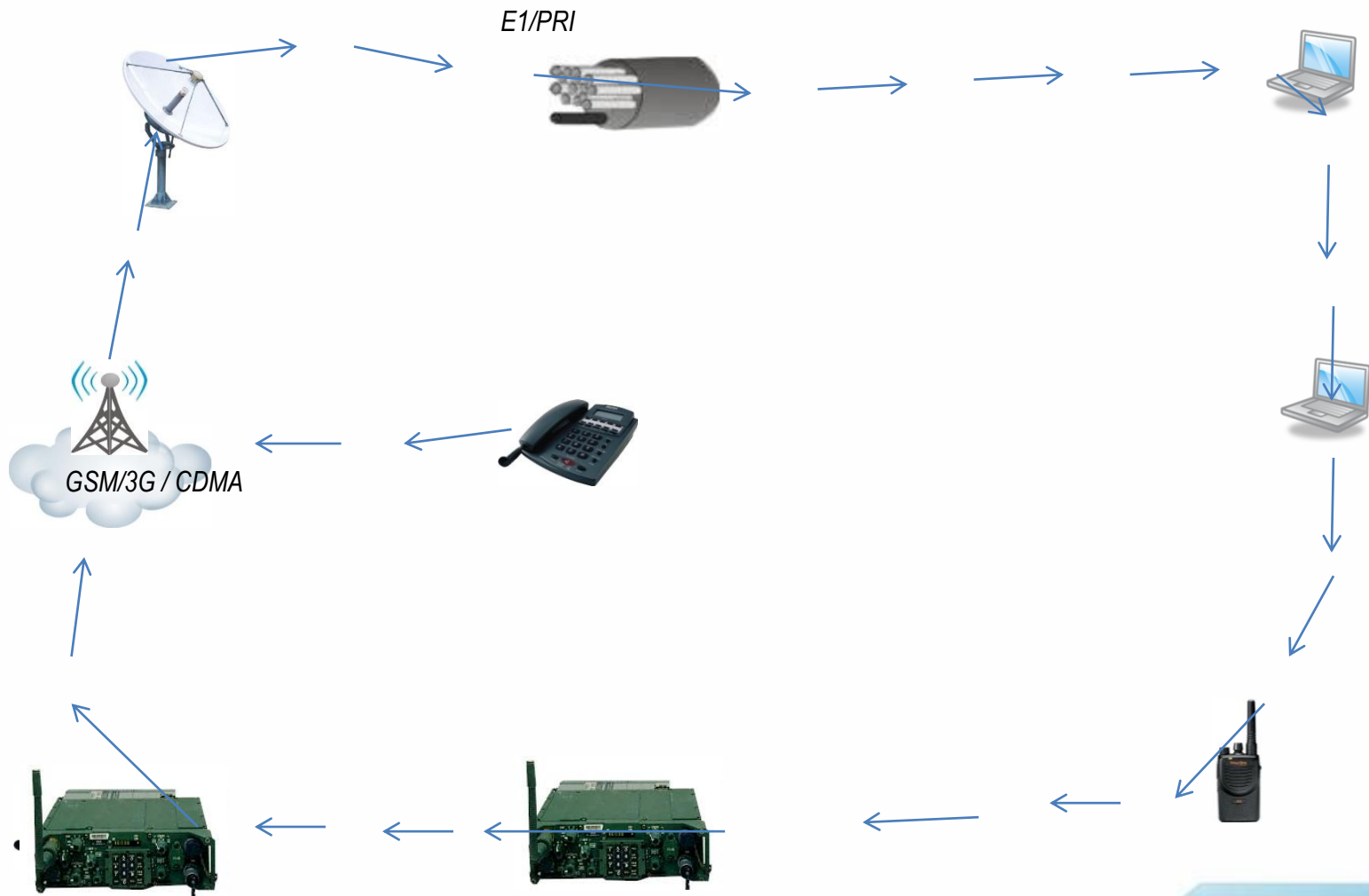


# Measures Envisaged to counter these challenges

- Training of Police personnel.
- Technological advancement.
  - Telephone Line, Tape recording, GSM, CDMA, Satellite, IP , E 1/ PRI, Radios - HF, VHF, UHF freq.
  - Photography, CCTV.
  - Finger printing., RFID
  - DNA profiling.
  - New networked computers, linked to telecommunications -laptops, hand held computers.
  - Internet, e-mails, Real time Information Access

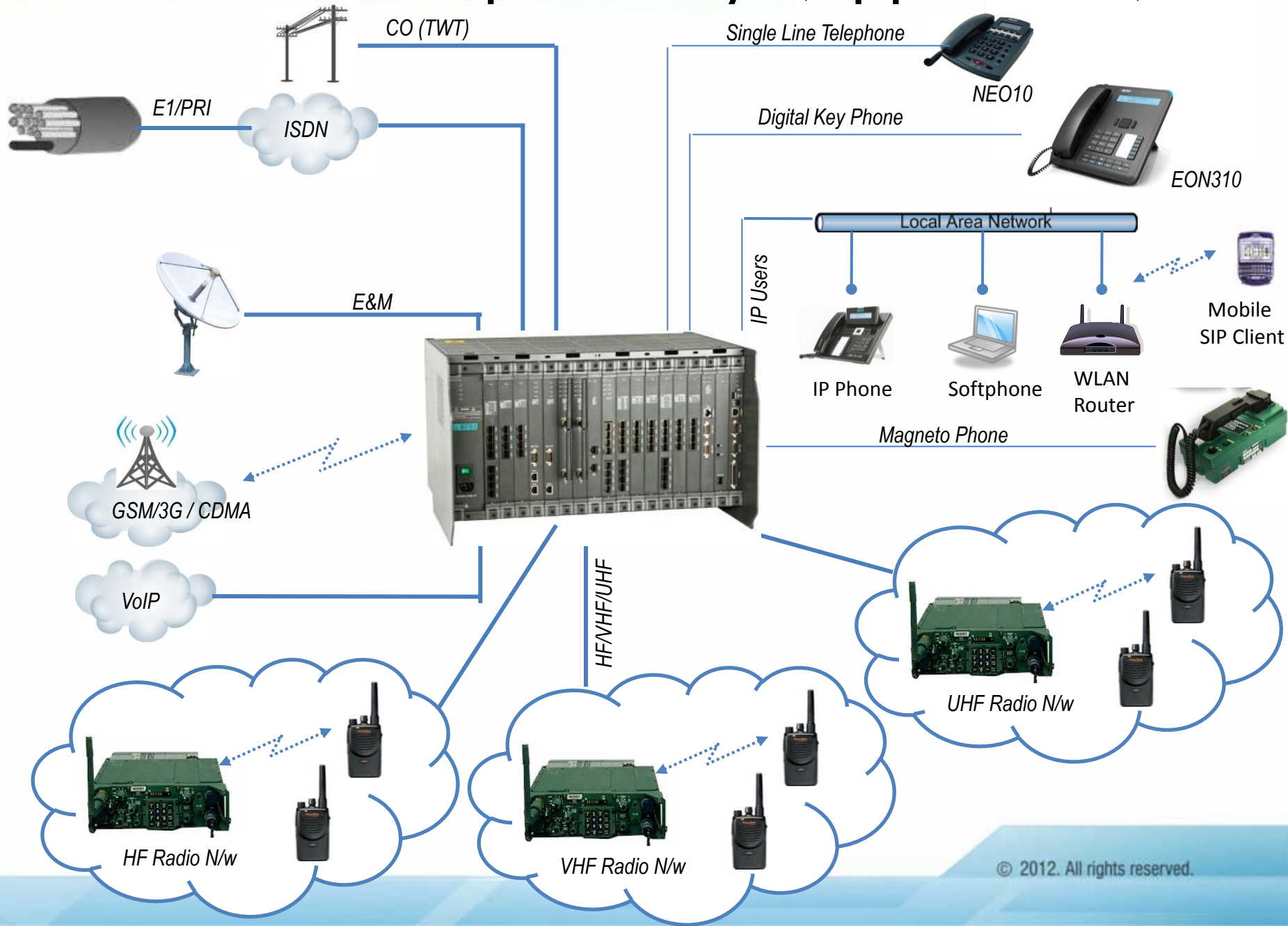
# Radio Gateway

- Requirement to develop Radio Gateway.
- Market Research prior to development.
- Testing and trials.
- Currently deployed ?



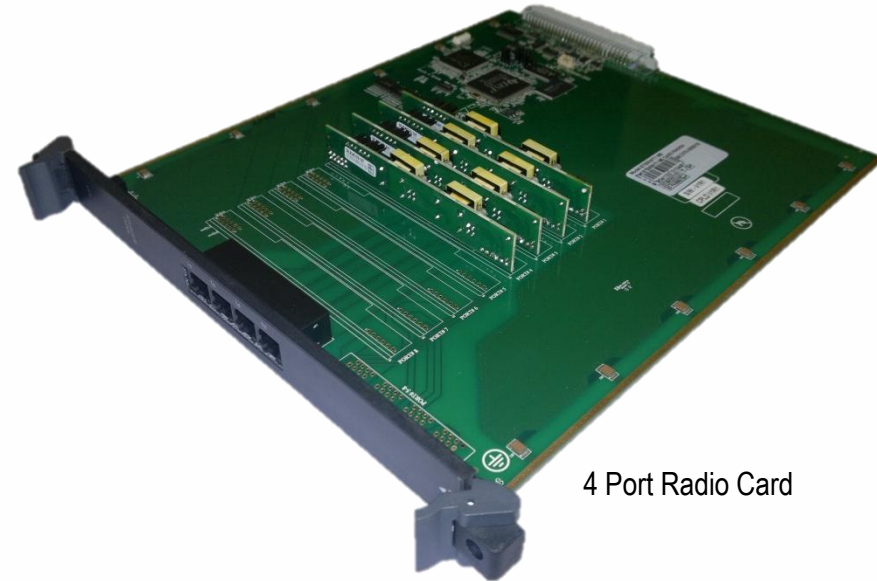


# Radio Interoperability (Application)

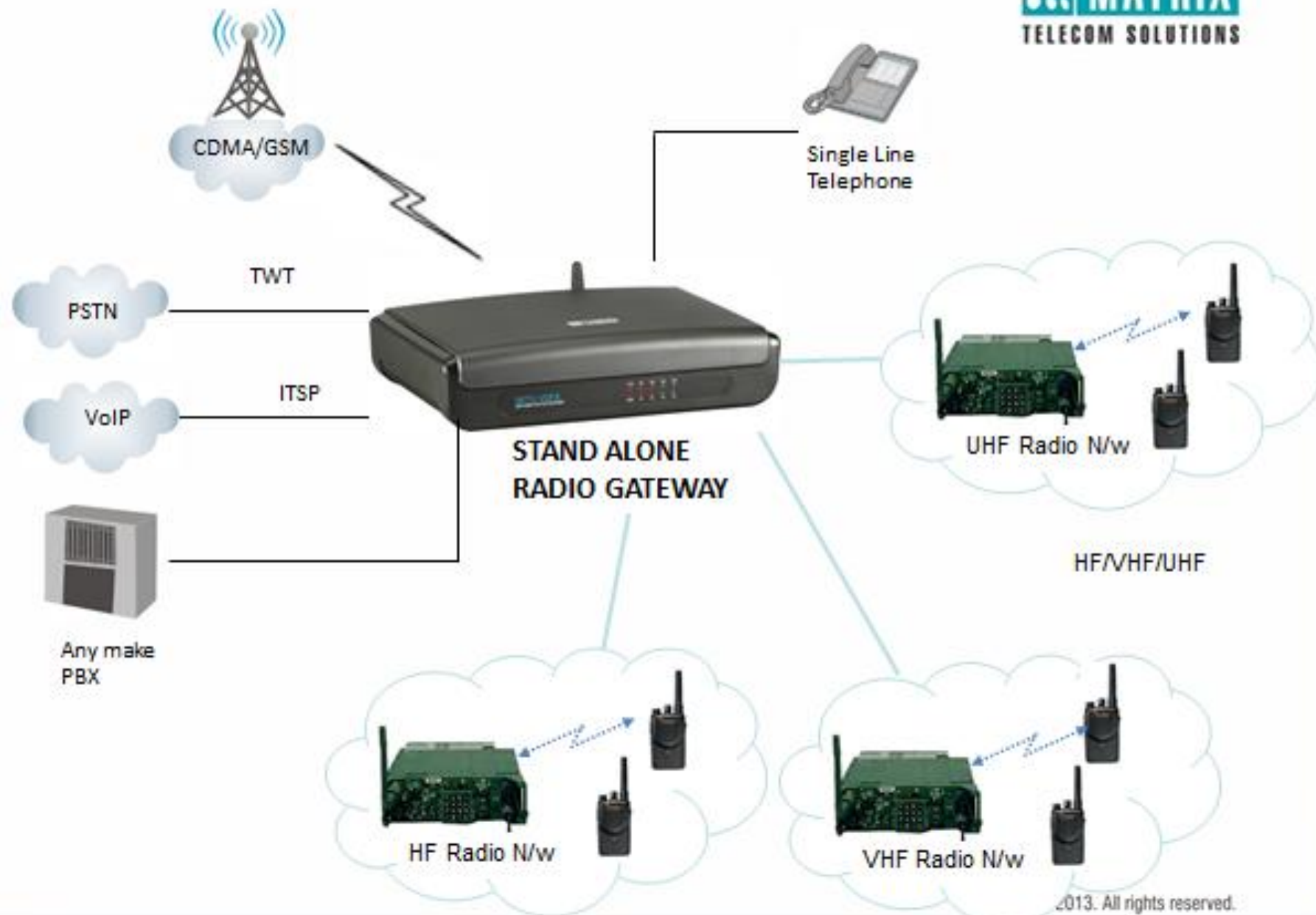


# Interoperable with Radios

- *MOTOROLA GM338*
- *TADIRAN RT 6001/PRC 6020 (HF)*
- *TADIRAN RT-7330M (VHF)*
- *STARS V MKII 25W*
- *LUP 322 (UHF)*
- *HYT TM-610*
- *ICOMM*
- *CODAN*

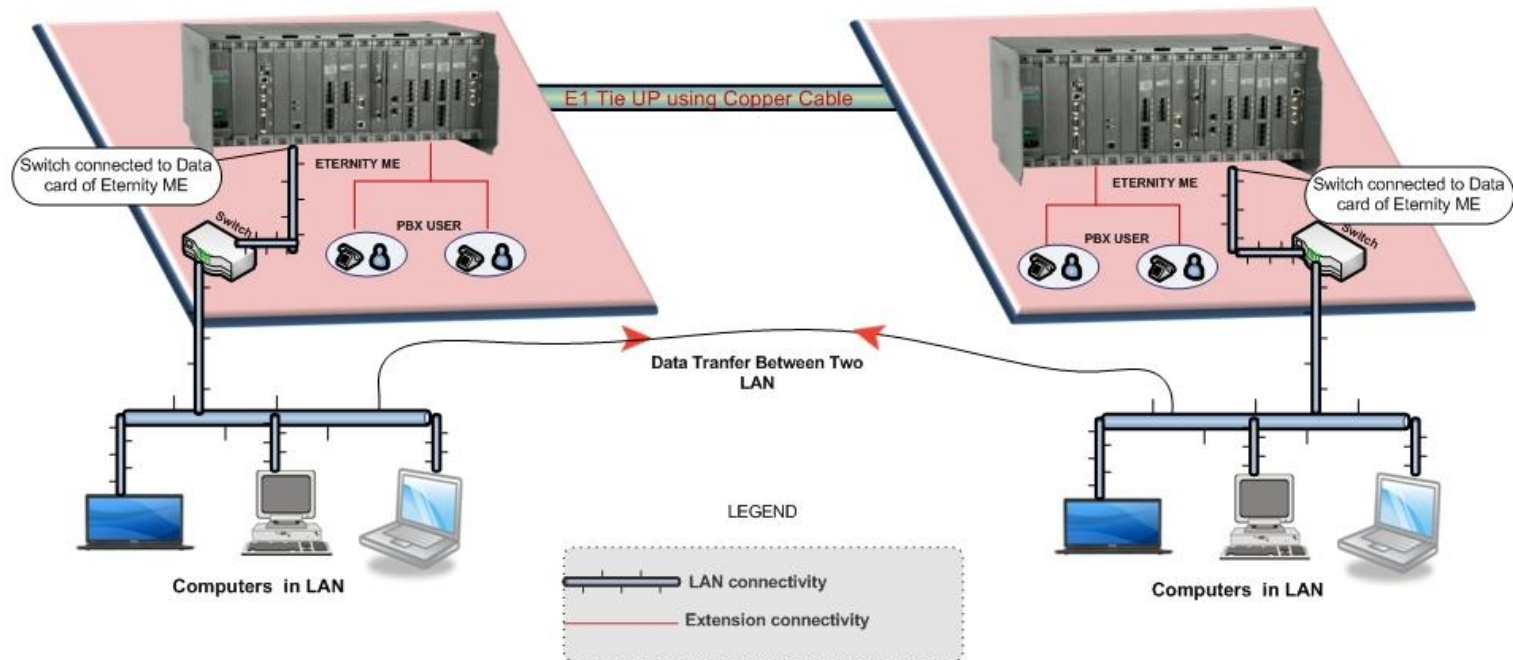


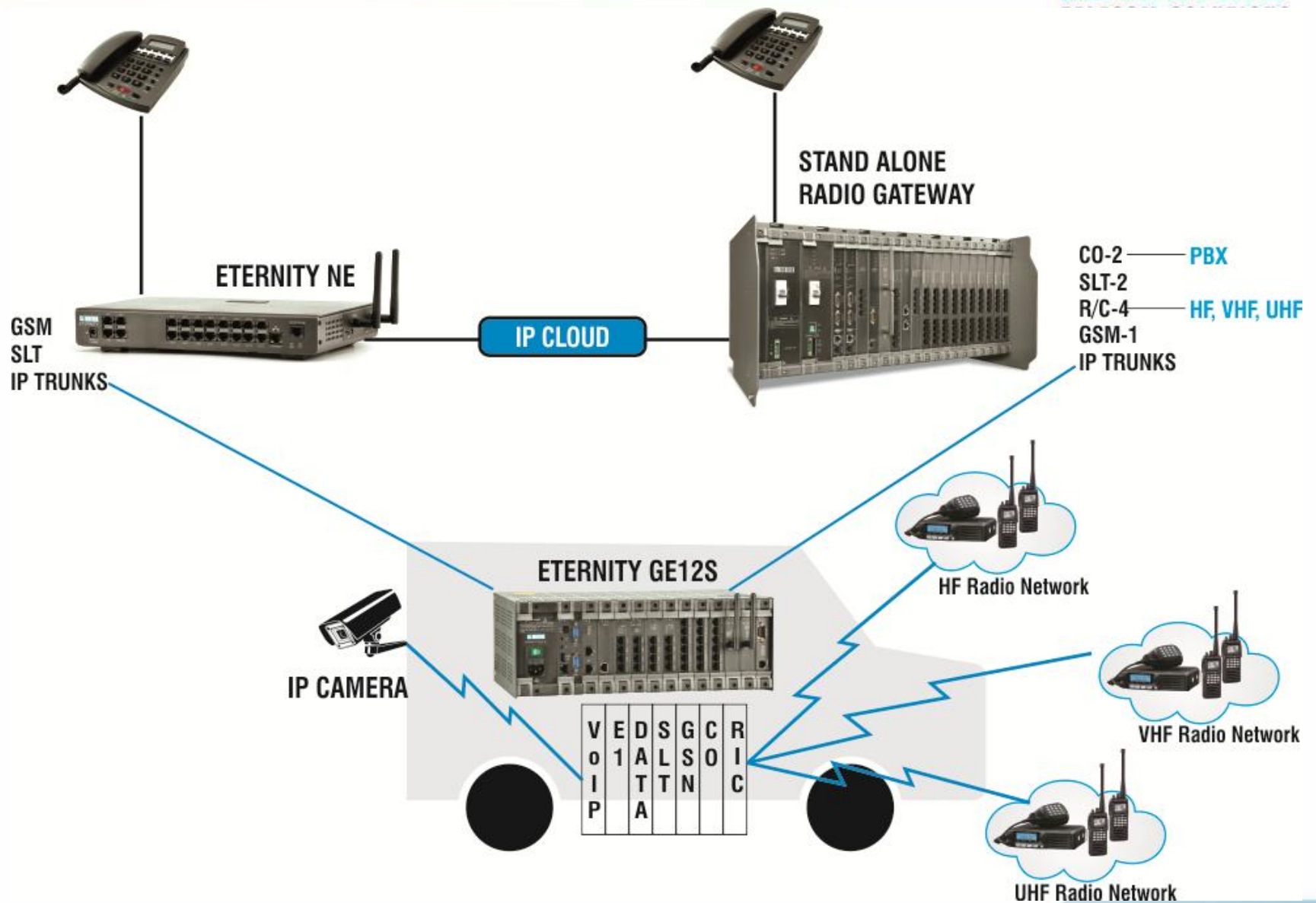
4 Port Radio Card

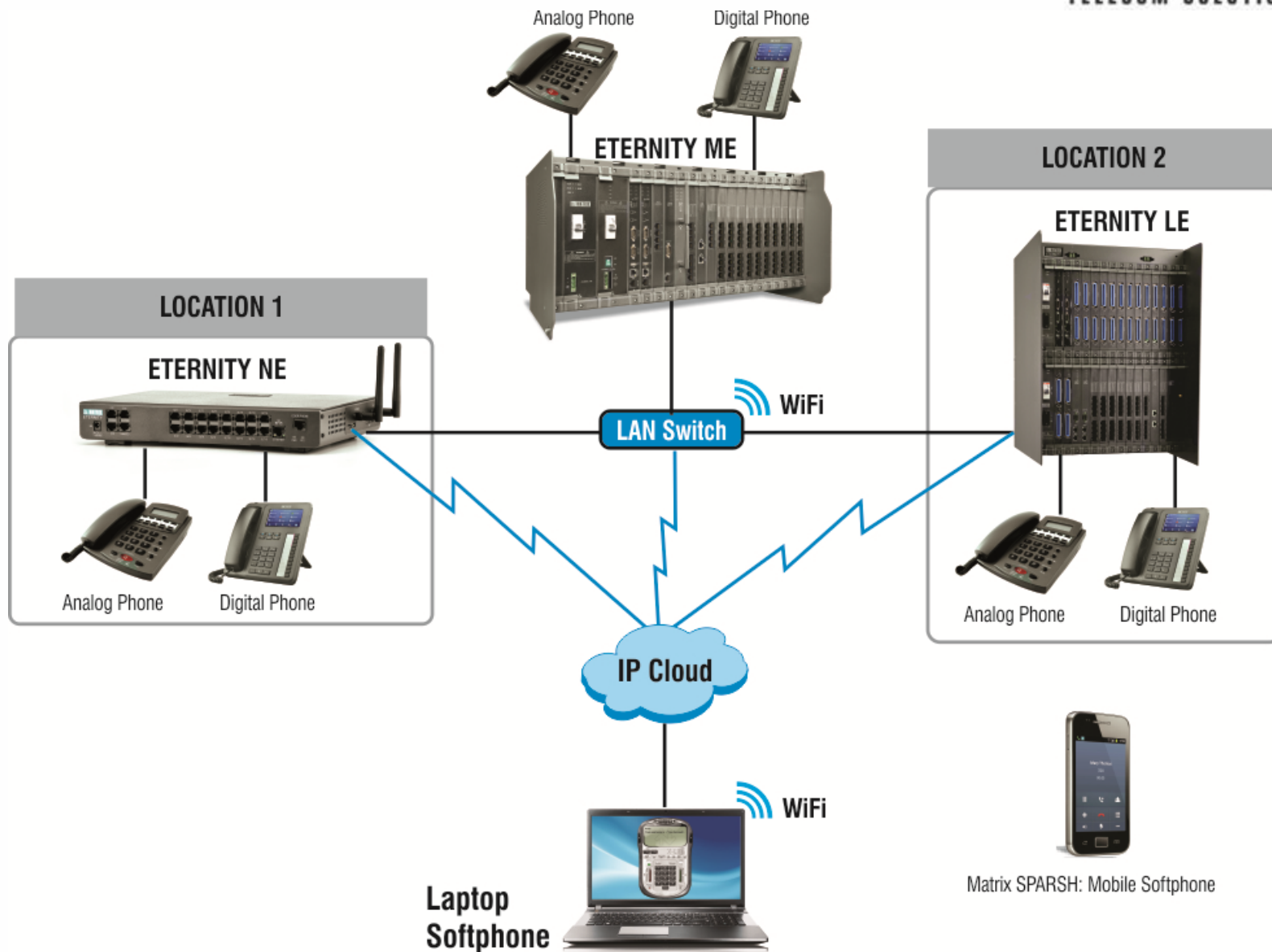




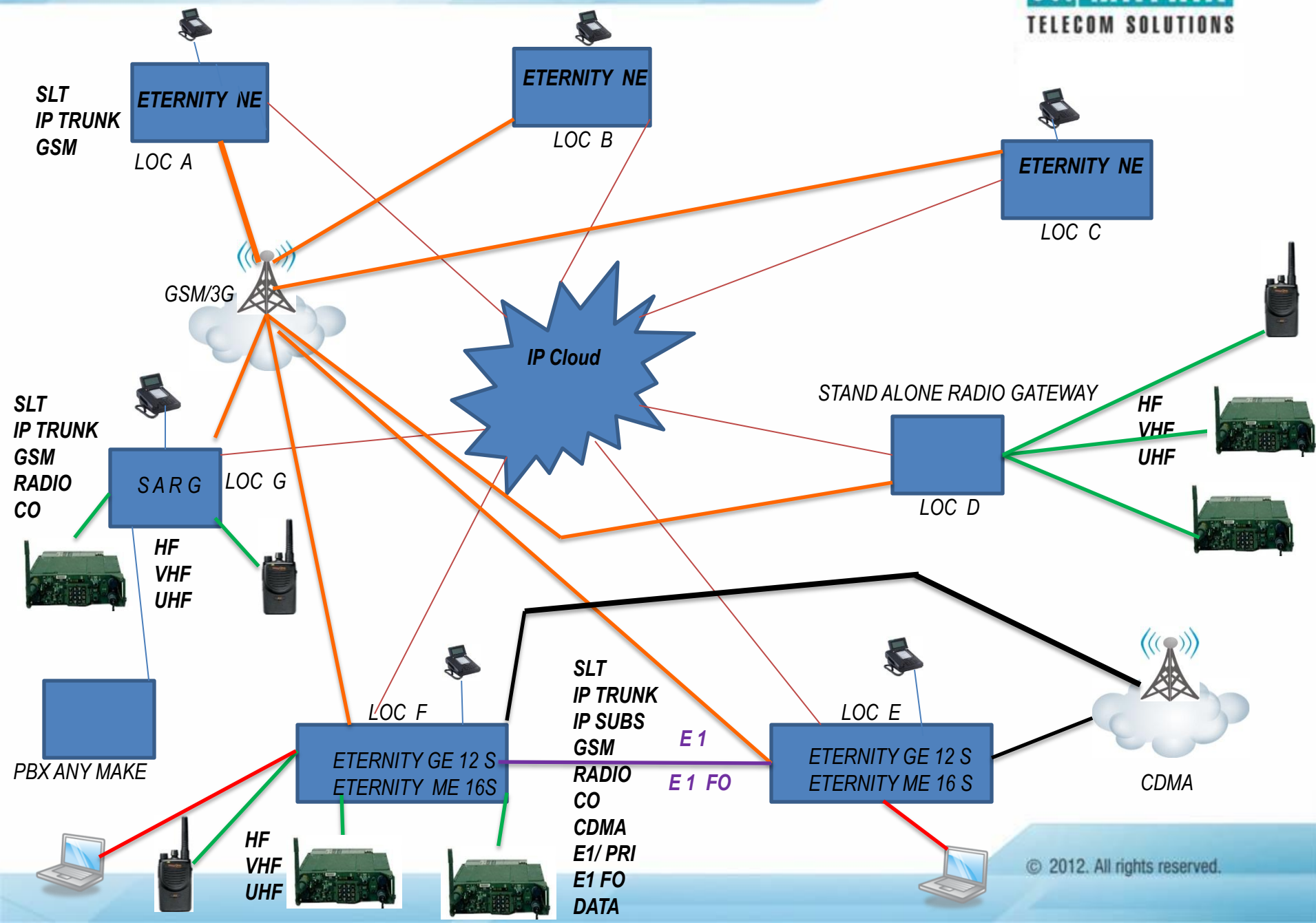
# DATA CARD







# SCENARIO



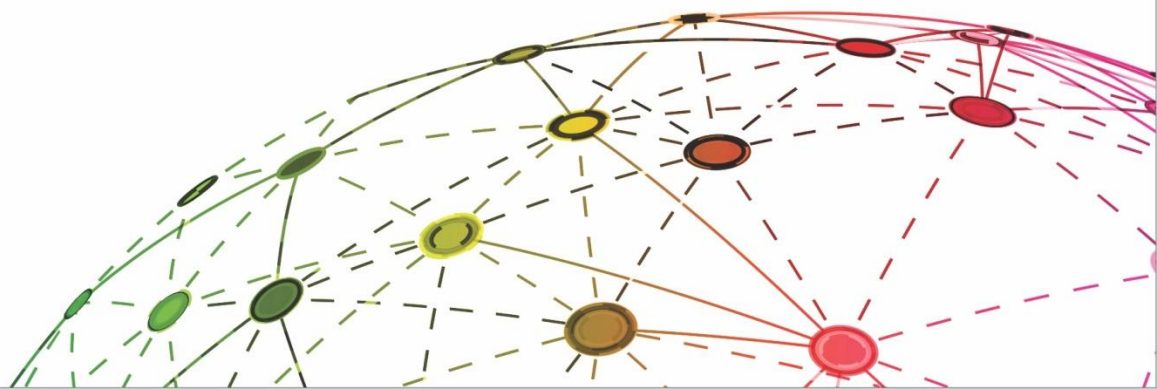


# SECURITY

# SECURITY SOLUTIONS



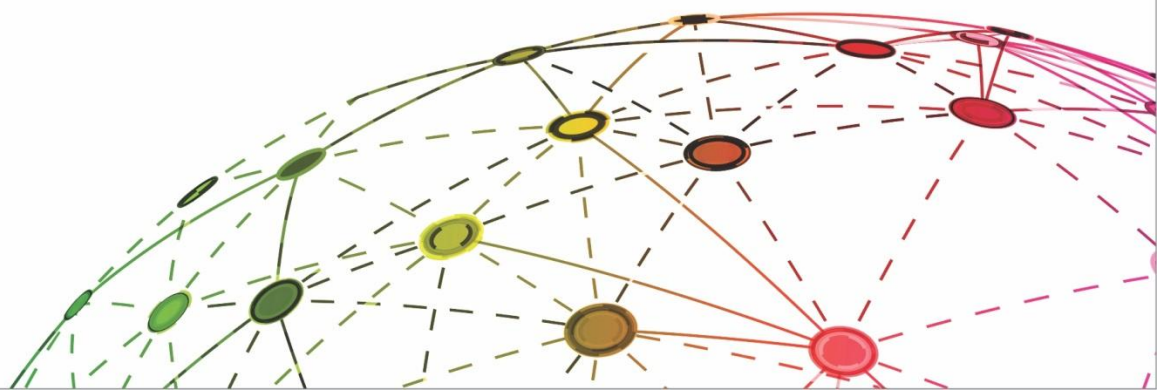
- Matrix IP Video Surveillance
- Matrix SAMAS
- COSEC ACTA
- Boom-Barriers
- Seamless Integration of IPVS and ACAT





## **COSEC ACCESS CONTROL**

**SINGLE DOOR IP PANEL  
WITH PoE**



# CENTRALIZED VIDEO MANAGEMENT SOFTWARE





# VIDEO SURVEILLANCE



VMS • NVRs • HVRs • IP CAMERAS • ANALOG CAMERAS • CMS • WEB CLIENT • MOBILE APPLICATIONS

# Welfare and Safety of Families

- Stress factors.
- Communication.
- Relief from Stress.

# Benefits for the Police Force

- Track movement of criminals.
- Locate victims of crime.
- Corroboration of evidence.
- Surveillance of critical locations.

# Conclusion



We put  
**more**  
**in the box**

so your  
business  
can think  
**more**  
**out of**  
**the box.**



Thank You.

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		SYSTEM CAPACITY							
System Resources	Description	Maximum Ports							ETERNITY LE
		ETERNITY PE			ETERNITY GE		ETERNITY ME		
		3SS	3SP	6SP	6S	12S	10S	16S	
Universal Slots	For Expansion Cards	3	3	6	6	12	10	16	28
SLT Ports	Single Line Analog Telephones	24	24	48	120	240	320	320 or 512*	1344
DKP/DSS Ports	Proprietary Digital Key Phones or DSS Consoles	24	24	32	48	48	64 or 128*	64 or 128*	128
CO (TWT) Ports	Two Wire Trunk (CO) Lines	8	8	16	96	128	128	128	128
BRI Ports	ISDN BRI Network or ISDN Compatible Devices	-	6	12	24	32	32	32	32
T1/E1/PRI Ports	T1 or E1 or ISDN PRI Network or Compatible Device	-	3	6	6	8	8	8	24
GSM/3G Ports	GSM/3G Network	8	8	8	24	40	64	64	128
VoIP Cards	VoIP Phones, Softphones, Mobile SIP Clients	3	3	6	6	12	10	16	16
VoIP Users	Registration of VoIP Phones, Softphones and Mobile SIP Clients	50	50	50	500	500	999	999	999
VoIP Trunks	SIP Trunks (Clients) for ITSP or Peer-to-Peer	16	16	16	16	16	32	32	32
VoIP Channels per Card	Simultaneous VoIP Calls per Card	8/16	8/16	8/16	16/32	16/32	16/32	16/32	16/32
E&M Ports	E&M Network	-	-	-	24	48	80	128	128
Voice Mail System (Number of Ports)	Voice Mail System with Auto-Attendant and with dedicated Mailbox for each type of extension (Analog, Digital, IP)	16	16	16	16	16	16	16	16
Magneto Phone Ports	To Connect to Magneto Phones	-	-	-	-	-	80	128	128
Hot Standby	Hot Redundancy for DC Power Supply and Control Cards	-	-	-	-	-	Yes <sup>#</sup>	Yes <sup>#</sup>	Yes <sup>#</sup>
Hot Swap	Insertion and Removal of Cards in Power-On Condition	-	-	-	-	-	Yes	Yes	Yes

# Built-in 4 CPU DKP ports are non redundant \* With PS48VDC - 500W

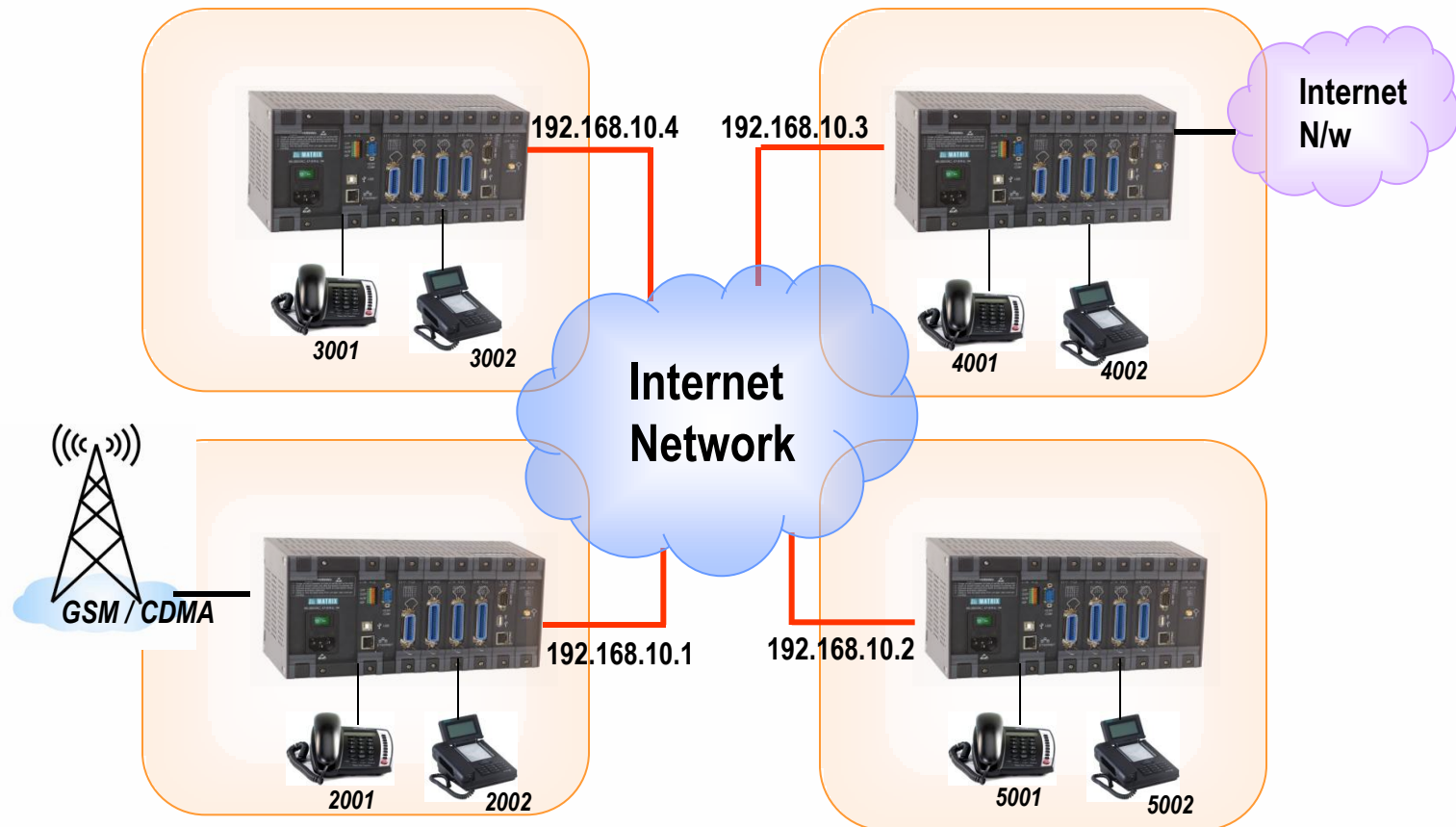


		SYSTEM CAPACITY							
System Resources	Description	Maximum Ports							ETERNITY LE
		ETERNITY PE			ETERNITY GE		ETERNITY ME		
		3SS	3SP	6SP	6S	12S	10S	16S	
CDMA	CDMA Network	---	--	--	16	16	16	16	16
Direct Optical termination	E1 –FO	---	--	----	6	6	8	8	24
DATA	DATA CRAD 4 PORT	--	---	-----	16	16	16	16	16
# Built-in 4 CPU DKP ports are non redundant * With PS48VDC - 500W									

# Platform Highlights

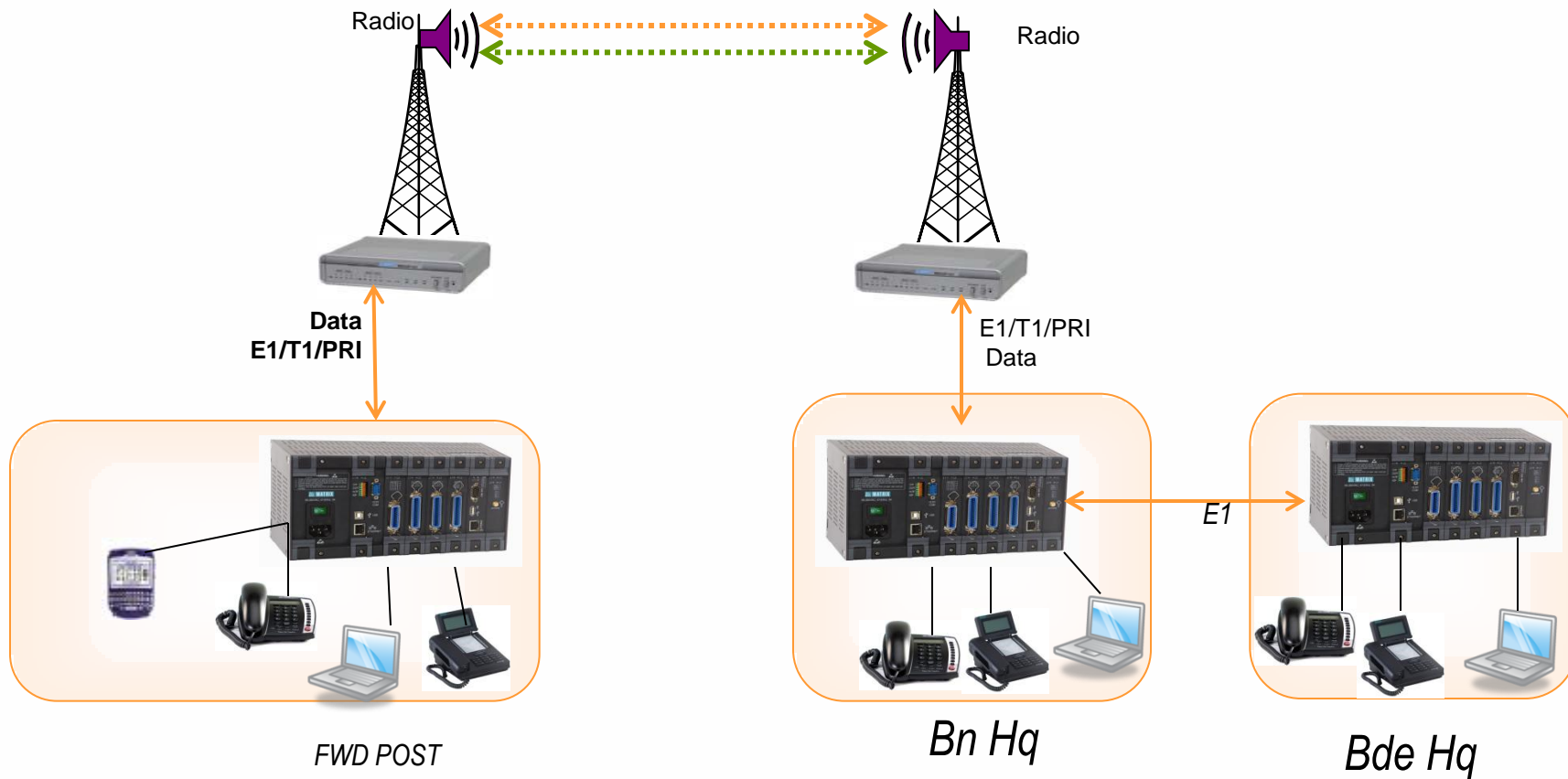
- IP switching technology .
- IP v 6 complaint and ready from day 1.
- Direct Optical Termination on the card for E1.
- GSM and CDMA Connectivity.
- Radio Gateway ( HF, VHF, UHF).
- Passive Back-Plane.
- Sturdy Assembly (Fully Loaded Transportation).
- Interchangeable User Terminals (ETERNITY PE/GE/ME / LE )
- Redundancy (ETERNITY ME / LE) for CPU and PSU.
- Hot-Swappable Expansion Cards.
- Multiple Mounting Options
- 21 party conf call for ME and 45 party conf call for LE.

# ETERNITY-Inter Networking



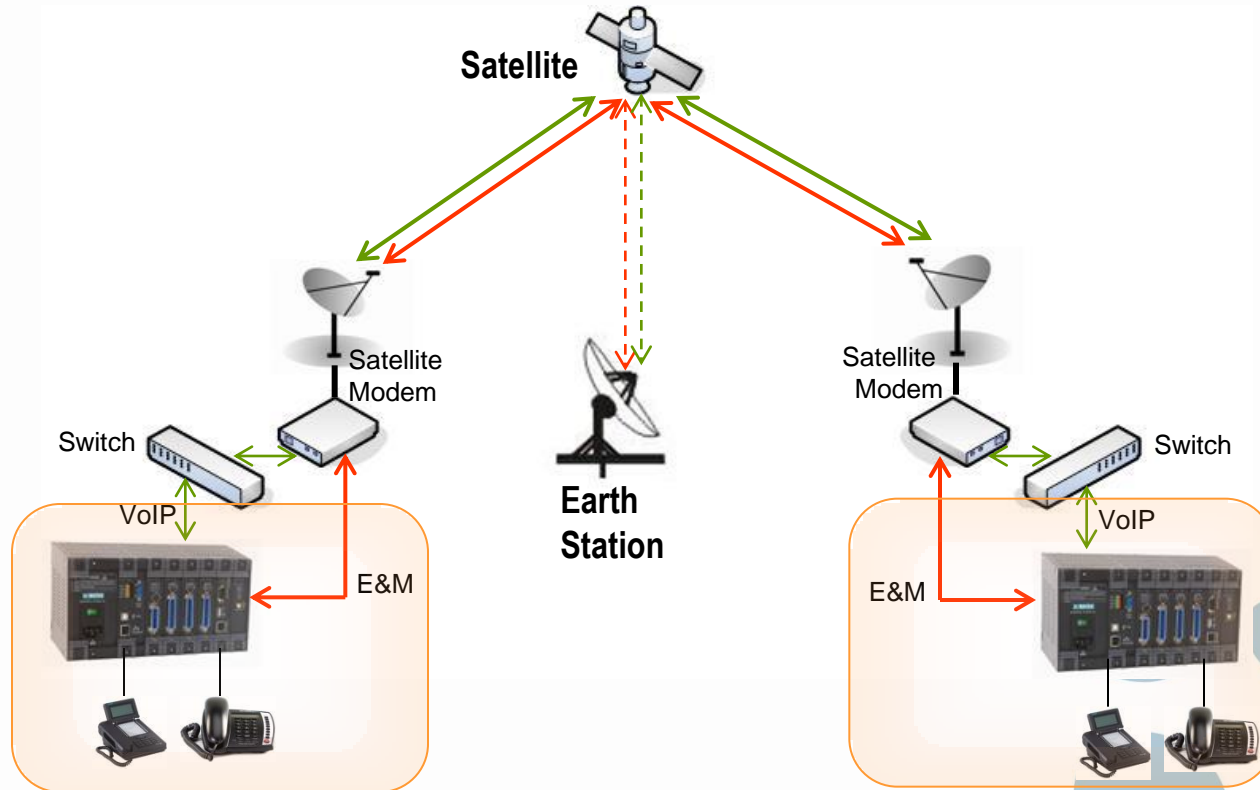
Inter Networking using VoIP Card or VoIP Gateway Device

# ETERNITY-Inter Networking Using Radio Link





# ETERNITY-Inter Networking Using VSAT



## User Terminal Flexibility

End User can be

a. Analog telephone:



b. Digital telephone:



c. Sip Enable IP Phones



## User Terminal Flexibility

End User can be

d. Matrix Extended IP Phone:



e. Android Mobile Phones:



f. Sip Supported Softphones is PC/Laptop/Tablet:



## User Terminal Flexibility

h. Third Party Video phones:



i. Third Party Radio Handset:



:



## Other Features -VoIP Connectivity

- SIP based VoIP Card
- Up to 32 SIP Trunks
- Up to 1000 IP User Registration
- ETERNITY ME/LE : 32 Simultaneous Calls per Card
- Up to 32 SIP Accounts
- Supports Peer-to-Peer Calls (Inter-Branch Office Communication)
- 999 Peer-to-Peer Table Entries
- Multiple Gateways



- IP-PBXs
- Office-in-a-Box
- VoIP and GSM Gateways
- Hotel IP-PBX
- PLCC EPAX
- IP, Digital and Analog Phones

[www.MatrixTeleSol.com](http://www.MatrixTeleSol.com)



- Time Attendances
- Access Controls
- Video Surveillance Solutions

[www.MatrixSecuSol.com](http://www.MatrixSecuSol.com)

## TELECOM SOLUTIONS

- Hospitality Solution
  - Call Center Solution
  - Healthcare Solution
  - VoIP Carriers (ITSPs)
  - Internet Service Providers (ISPs)
  - Cellular/Mixed Service Providers
- 
- IP-Telephony for Enterprises
  - Mobility for Enterprises
  - Teleworking Solution
  - Wireless Communication
  - Convergence
  - Multi-site Connectivity

## TELECOM PRODUCT RANGE

### IP-PBXs

SOHO IP-PBX  
SMB IP-PBX  
SME IP-PBX  
Large Enterprise IP-PBX

### GATEWAYS

VoIP Gateways  
GSM Gateways  
Universal Gateways  
CDMA Gateways

### TERMINALS

ATAs  
GSM FCTs  
Digital Key Phones(DKP)  
IP Phones  
SIP Phones

### CONVERGENCE

Office-in-a-Box Solution  
for Small Businesses

# QUALITY CERTIFICATIONS





# Matrix Quality Policy



## Quality Policy

*The Goal of Matrix Team is to deliver world-class telecom and security products and services to its customers through continual improvements in technology and processes.*



### QUALITY POLICY

The goal of Matrix team is to deliver world-class telecom and security products and services to its customers through continual improvements in technology and processes.

May 1, 2010

  
Ganesh Jivani  
Managing Director

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[www.MatrixComSec.com](http://www.MatrixComSec.com)

## STAND ALONE RADIO GATEWAY

- Interoperability with up to 4 radios (VHF/UHF/HF)
- Other interfaces:
- Up to 8 port VoIP
- Up to 2 port GSM
- FXO-FXS combination ( 2+2)
- Power Over Ethernet
- Seamless integration with PBX (any make)

## STAND ALONE RADIO GATEWAY

- Interoperability with up to 4 radios (VHF/UHF/HF)
- Other interfaces:
- Up to 8 port VoIP
- Up to 2 port GSM
- FXO-FXS combination ( 2+2)
- Power Over Ethernet
- Seamless integration with PBX (any make)

- Data can be transported over E1 from one exch to another.
- Voice and data both use same E1( FE 1 / dynamic).
- No need for separate CSU / DSU.
- IP camera stream can be sent.





सत्यमेव जयते

GOVERNMENT OF INDIA  
Ministry of Communications  
& Information Technology

## Awards and Achievements

- 2004 the **Award for Excellence in Professional Electronics**, conferred by the Ministry of Communication and Information Technology, Government of India

## Others Awards and Achievements

- 2009 the **Best Managed Company** by Baroda Management Association, India
- 2008 the **Best SSI Unit Award** by the Federation of Gujarat Industries (FGI), India
- 2008 the **Best Electronics Company Award** by the Gujarat Electronics and Software Industries Association (GESIA)
- 2004, 2005, 2006, 2007, 2010, 2011  
the **EFY Readers' Choice Award for the Best PBX-KTS Company**  
Conferred by popular EFY Magazine