1. Introduction

The Transtel IP Xtra-100 Series is a new generation hybrid IP communication system employs multi-embedded systems to build a Time-division digital and IP based modern voice & video communication platform.

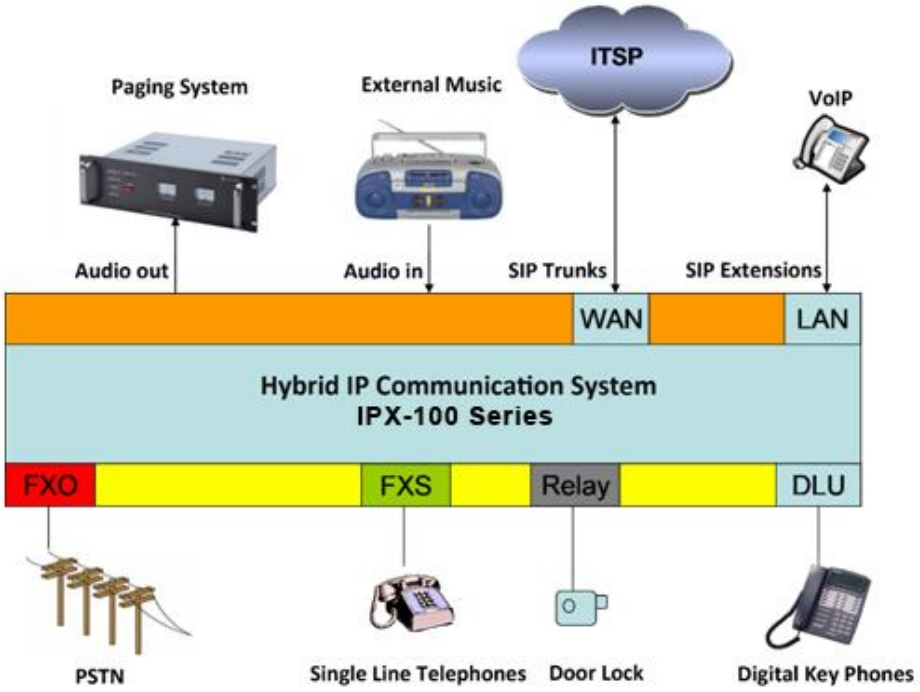
Telephone Recording, Voice Mail, One Button Paging, Automatic Call Hold, Automatic Transfer of Internal and External Lines, Programmable Individual Ringing type, Conference Call, Power Failure Transfer Interface, Intelligent One-Button Programmable Keys for the Special Functions, …, etc. Each Aristel'sproduct design has incorporated and simplified all your daily custom operations.

Combined with the convenience of digital key telephones and the Internet features without distance restrictions, T-IPX-100 Series offers more diverse functions and more flexible applications.

The modular, universal slot design allows you to adjust the capacity according to actual needs, making the system more flexible.

The stackable and networkable design allows for unrestricted use of the system. The system can form a larger system and multi-point integration.

Cards support hot swap makes system maintenance easier and more reliable.



2. Product Specifications

Capacity:	Physical hardware port (Max.):	24
	Digital phone port (Max.):	24 (RJ-11 Connector)
	FXS port (Max.):	24 (RJ-11 Connector)
	FXO port (Max.):	24 (RJ-11 Connector)
	SIPtrunk (Max.):	24
	SIPextension:	20(Basic)
		200(Max. 200 Registers)

Expansion Slot:	3 (Universal slots)
RS232:	1 (DB9male connector, for system maintenance)
WAN:	1 (10/100M, RJ-45connector with LED indication)
LAN:	1 (10/100M, RJ-45 connector with LED indication)
USB:	1 (USB2.0, system software backup, upgrade and programmed data, etc.)
RUN LED:	Each Card has a RUN LED indication, normal is 300ms flash
Port LED:	Extension: Green LED, flashing indicates “In Use”
	FXO Port: Red LED, flashing indicates “In Use”
Reset Button:	Restart system
FUN Button:	Function button
Audio in:	External MOH (Music on Hold) input
Audio out:	External Paging output
Relay:	The outer two pins of the 1st port onALU card
	NO or NC by jumpersetting
Power:	DC 24V, 3.75A

System Features:

1.Speed dial – 900 codes for System, 100 Codes for Personal
2. DISA (IVR) Auto Attendant
3. Voice Mail
4. Call Recording
5. Voice mail to Email
6. Group Hunting
7.Call Restriction
8.Call Duration Limitation
9.Anti-Theft Dial
10. Flexible Numbering Plan (2-8 digits)
11. Time Voice Service - On/Off Duty and Lunch Break Voices for Auto Attendant
12. Toll Control
13. Caller ID Presentation
14. Extension Call Log (Incoming & Outgoing)
15. Extension Password Control
16. Distinguish Extension Ringing
17. Conference Call
18. Alarm (System and Extensions)
19. LCR – Least Call Routing
20. Message Waiting Indication
21. Trunk Groups
22. Extension Groups
23. Hot line

Codecs:

G.711 (A-law and mμ-law)
G.726 (16/24/32/40 kbps)
G.729 A
G.723.1 (6.3 kbps，5.3 kbps)
Dynamic Payload Support
Adjustable Audio Frames Per Packet
DTMF: In-band & Out-of-Band (RFC 2833) (SIP INFO)
Call Progress Tone Generation
Jitter Buffer - Adaptive
Frame Loss Concealment
VAD - Voice Activity Detection w/ Silence Suppression
Attenuation / Gain Adjustments
MWI - Message Waiting Indicator Tones
H.263 / H.264 Video Codec Pass-Thru

Network Specifications:

Compatible with:SIP RFC 3261 and Asterisk
MAC Address (IEEE 802.3)
IPv4 - Internet Protocol v4 (RFC 791)
ARP - Address Resolution Protocol
NS - A Record (RFC 1706), SRV Record (RFC 2782)
DHCP Client - Dynamic Host Configuration Protocol (RFC 2131)
DHCP Server - Dynamic Host Configuration Protocol (RFC 2131)
PPPoE Client - Point to Point Protocol over Ethernet (RFC 2516)
ICMP - Internet Control Message Protocol (RFC792)
TCP - Transmission Control Protocol (RFC793)
UDP - User Datagram Protocol (RFC768)
RTP - Real Time Protocol (RFC 1889) (RFC 1890)
RTCP - Real Time Control Protocol (RFC 1889)
DiffServ (RFC 2475), Type of Service - TOS (RFC 791/1349)
VLAN Tagging - 802.1p/q
SNTP - Simple Network Time Protocol (RFC 2030)

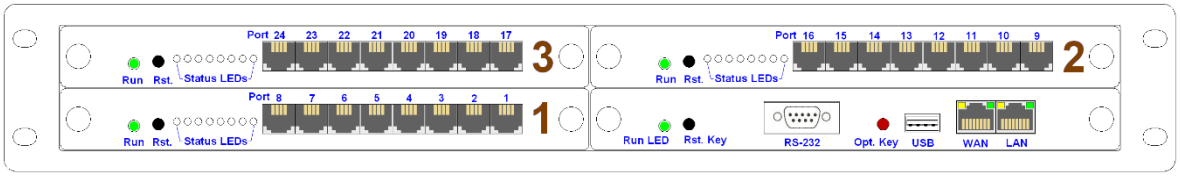
3. Hardware Introductions

Front View:

Side View:

Back View:

Slots and Cards:



Card Description:

ALU 8 port FXO or FXS interface card, modularized design, free allocation

8 RJ-11 connectors

1 Relay connection: Outer two pins of the 1st RJ-11 connector

8 LED indications:	FXS: Green LED
	FXO: Red LED
	In Use: Flashing
Rst. Button:	Restart the card
RUN LED:	Normal is flashing
FXS:	For internal single line telephone
FXO:	For external PSTN (CO) line

DLU 8 ports for proprietary digital key telephone

8 LED Indications:	Connected: green on
	No Connection: off
	In Use: flashing
Rst. Button:	Restart the card
RUN LED:	Normal is flashing

IPX System Core Module

CPU:	32bits DSP
Memory:	SDRAM
	NOR Flash / NANDflash memory
LAN Port:	10/100 M, RJ-45
WAN Port:	10/100 M, RJ-45
USB:	For external USB storage
Opt. Button:	Search external USB storage device while button
RS232:	115,200 bps
Rst. Button:	Restart the System after key is pressed
Run LED:	System is ready to serve while LED is flashing

MBU

SLOT: For IPS / ALU / DLU cards

Paging: External paging port – output

MOH: External music on hold – input (radio, MP3, …, etc.)

DC24V: Power input, 24VDC (-⊂+)