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**Access to a new world of feature rich,
connected anywhere telephony, at low cost and low risk**

An Ethernet based, Com.X telephony line card in a 1U box

Comma iTA is a flexible and comprehensive telephony interface solution for Com.X IP PBX and generic Asterisk™ installations.



Comma iTA provides a seamlessly scalable and distributed framework for integrating legacy telephony interfaces within Asterisk™ based telephony platforms.

Asterisk™ solution providers can build large, feature-rich IP telephony systems using commodity computing platforms and an Ethernet backbone interconnection to multiple Comma iTA's which provide integration to legacy telco infrastructure.

Features

- 1U rack-mount or desk mount unit
- PRI (E1/T1), 1 to 4 ports
- BRI (S/T), 4 or 8 ports
- Analogue extensions (FXS) and analogue trunks (FXO), up to 32 ports
- 10/100Base-T Ethernet connection to Com.X or Asterisk™ host server
- Supports all Asterisk™ features
- Echo cancellation for all channels (DSP hardware based)
- Timing synchronization over Ethernet
- Extremely cost effective solution for all applications
- Supports "Plug 'n Play" type integration to Com.X and Asterisk™ telephony platforms
- Power-cross and intra-building (secondary) surge protection on device
- ICASA type approval (TE-2009/023)

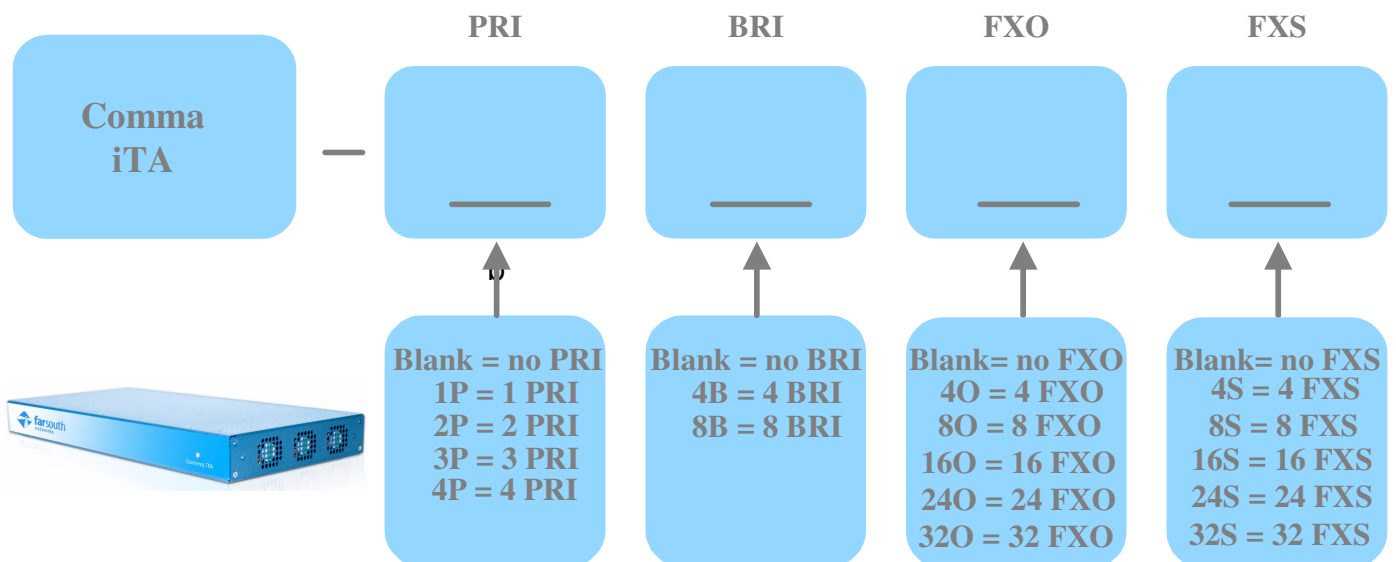
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Ordering Information



Part Number Generator

The Comma iTA is modular, with the ordering code made up as follows. Not all combinations are possible.



Note:

Total FXS plus FXO ports may not exceed 32 ports per Comma iTA

Comma iTA models with 2, 3 or 4 PRI do not support BRI, analogue FXS or analogue FXO ports

Part number examples:

Comma iTA-8O24S	Telephony support for 8 analogue trunks (FXO) and 24 analogue extensions (FXS)
Comma iTA-4B16O16S	Telephony support for 4 basic rate ISDN (BRI), 16 analogue trunks (FXO) and 16 analogue extensions (FXS)
Comma iTA-1P24S	Telephony support for 1 Primary Rate ISDN (PRI) and 24 analogue extensions (FXS)
Comma iTA-8B	Telephony support for 8 basic rate ISDN (BRI)
Comma iTA-4P	Telephony support for 4 Primary Rate ISDN (PRI)

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Technical Specifications

	Primary Rate	Basic Rate	Analog (FXS)	Analog (FXO)
Telephony Interfaces				
Voice Ports	30 (E1) 23 or 24 (T1)	8 or 16	8, 16, 24, 32	8, 16, 24, 32
Physical	RJ-45	RJ-45	RJ-11	RJ-11
Electrical	E1/G.703 120Ω T1/G.703 100Ω	S/T TE or S/T NT (software selection)	Zone dependent, software programmable DC and AC characteristics. Balanced sinusoidal ringing (3 REN)	Zone dependent, software programmable impedance matching.
Protection	Power cross Inter-building	-	Power cross Inter-building	Power cross Inter-building
Conformance	TBR 4	TBR 3		Country-dependent
Voice Features				
Echo Cancellation	Hardware based G.165 type adaptive echo cancellation per channel Up to 64 channels at 16 ms or 32 ms Up to 32 channels at 64 ms			
Hardware Codecs	-	-	G.711 A-law or μ-law	G.711 A-law or μ-law
Software Codecs (via Asterisk)	G.711, G.726, iLBC, SPEEX, GSM G.729A (optional with license purchase)			
Hardware Codecs	-	-	G.711 A-law or μ-law	G.711 A-law or μ-law
Fax and Modem	Packet-network synchronization and G.711 provide transparent fax/modem support			
Signaling				
Signaling System	ISDN PRI - ETSI ISDN PRI - NI-2 E1-CAS T1-CAS	ISDN BRI - ETSI ISDN BRI - NI-2	Loop-start DTMF	Loop-start DTMF
Other Features	Configurable network clock synchronization	Configurable network clock synchronization	Caller ID transmission Hook flash Distinctive ring	Caller ID reception
Packet Interfaces				
Physical	Ethernet 10/100 Base-T			
Comma iTA to Com.X & Asterisk	Low latency TDM over Ethernet (latency is < 5ms)			
	Zaptel dynamic: TDMoE TDMoIP	mISDN TDMoIP	Zaptel dynamic: TDMoE TDMoIP	Zaptel dynamic: TDMoE TDMoIP
VoIP (via Asterisk)	RTP with SIP or H.323 IAX2			
Administration				
Management	Comma Proxy Manager (CPM) resides on Asterisk host and manages one or more attached Comma iTA's			
Configuration	Configuration files and firmware image reside on Asterisk server and are sent to Comma on startup			
Status	Status is monitored by CPM and status changes are logged			
Logging	Log (with configurable levels) is continuously spooled onto host server by CPM			
Field upgrade	Firmware upgrade by changing image on host server and configuration file. Programmable Hardware upgrade by download and upgrade over network.			
Physical Characteristics				
Power	12VDC, 5A via external AC/DC adapter (supplied)			
Environmental	0°C - 40°C			
Dimensions	427mm x 200mm x 43mm			
Mounting	Desktop, 1U rack mount (mounting kit supplied)			
Certification				
Safety	IEC 60950-1:2001 & SANS 60950-1:2003			
EMC	CISPR 22 Class B (emissions) & IEC 61000-4-3 (immunity)			
Other	TBR 3, TBR 4, ICASA TE-001 (S. Africa)			



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Developers (Wiki) Resources

Refer to the web page links below for available Comma iTA developer Wiki resources:

Comma User Guide: http://farsouthnet.com/mediawiki/index.php?title=Comma_User_Guide

Comma Developer Resource: http://farsouthnet.com/mediawiki/index.php?title=Comma_Developer_Resources

Firmware images: <http://archive.farsouthnet.com/comma/firmware/>