

[PRODUCT SHEET]

Product	Ascom Tactical Access Node T
End user	Defence Segment
Platform	Ascom openAccess®



ASCOM TACTICAL openACCESS NODE MOBILE VOICE AND DATA SWITCH FOR TACTICAL COMMUNICATION SYSTEMS



Ascom openAccess Nodes are integrated voice and data switches that provide the essential foundation for today's mission critical communications infrastructures. They are used by national and international military forces, peace keeping troops and crisis management teams.

Ascom openAccess Nodes' connectivity and operational features provide secure and scalable functionality for voice, data and imagery applications demanded in the combat arena and homeland security relations.

Built on proven hardware and software technology, Ascom compact network nodes are compliant with global industry and governmental standards for vehicle and military grade electronics.

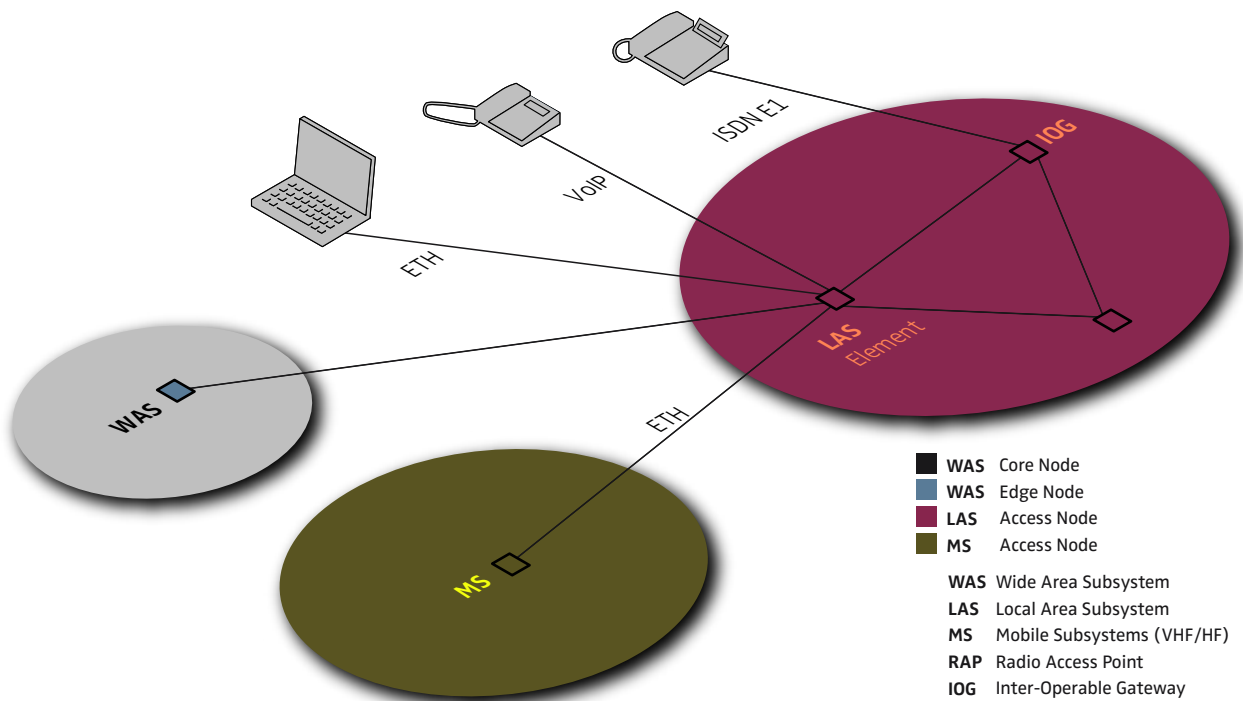
In alignment with NATO TACOMS Post 2000 architecture, Ascom Tactical openAccess Node T provides interoperable access functionality towards mobile headquarter communication infrastructures. In mission critical operations this critical communication link assures information flow at all levels from command headquarters to the troops.

Ascom Tactical openAccess Node T connects local area subsystems with headquarter offices, other detached command and control facilities and isolated mobile area sub-systems. By creating an extended single all-IP network, fixed line communication equipment and field radio devices are able to exchange information enhancing situational awareness.

Ascom Tactical openAccess Node T is a rugged high-performance military-grade communication network access node with integrated routing functionality. With low power consumption it is mechanically designed for a large variety of permanent and ad-hoc deployments, principally in extreme field conditions. The watertight ultra rugged enclosure is hermetically sealed to withstand severe humidity and dust exposure as well as extreme temperatures. It is corrosion resistant and shock/vibration protected.

Ascom openAccess Node T can be used to create virtual LANs even over various transmission technologies, including Ethernet, ISDN, SHDSL, LOS (Line-of-sight) and satellite infrastructure. QoS routing priorities can be defined as well as security levels set for secure and efficient traffic management.

Ascom Tactical openAccess Node T



Ascom Tactical openAccess Node T is a ruggedized interoperable voice and data network access element for tactical communication systems. It provides efficient connectivity between permanent and detached ad-hoc command and control facilities and mobile area sub-systems while allowing essential links to external public, strategic and legacy networks.

Technical Specification			
Network applications		Qos, traffic control and security	
Mesh topology	Ascom Tactical Access Node can be used as autonomous mesh network node	Traffic prioritization	Packet, service, IP address, VPN, VLAN, port, and protocol based prioritization.
VLAN	Virtual LAN locally between Ethernet interfaces and/or over a bridged connection.	Traffic grouping	Secure isolation of traffic groups
VoIP	Voice over IP termination, transmission, and protocol transformation.	Packet shaping	Possibility to change packet header fields.
VPN	IP, Ethernet, and PPP VPN tunnelling with compression, encryption, traffic prioritization, and bandwidth management.	Bandwidth management	Bandwidth sharing for different traffic types, e.g. for voice, http, management and control, and streaming.
PBX networking	VoIP trunking in PBX networks.	Firewalling	SPI (stateful packet inspection) packet filtering based on source and destination addresses, source and destination ports, protocols, input and output interfaces, connection state, etc.
Audio channeling	64 kbit/s channel guaranteed, 16 kHz clear audio bandwidth	NAT	Network Address Translation based on source and destination addresses, ports, interfaces, and protocol for both incoming and outgoing traffic either before or after routing.
Remote relay	Relay I/O control over IP	Encryption	Network Address Translation based on source and destination addresses, ports, interfaces, and protocol for both incoming and outgoing traffic either before or after routing.
Serial lines	Serial port connectivity over IP	Compression	ZLIB, LZO based compression algorithms with optimization of compression efficiency or compression speed.
Data features		Management features	
Routing	Static and dynamic routing using OSPF based on source and destination addresses as well as input and output interfaces.	Local and remote management	Local and remote configuration and management with web browser based user interface. Management traffic in-band and out-of-band.
Streaming	Streaming of TDM type traffic over IP networks.	GUI	Graphical user interface that can be used with common web browsers.
Bridging	Ethernet bridging locally between Ethernet interfaces and/or over a bridged connection.	Configuration storage	Storage of multiple configuration profiles. Configuration changes without reset or reboot. Configurations can be backed up locally or with networked Ascom Access Nodes.
E-mail	Built-in e-mail server with SMTP, POP3, and IMAP4 protocol support for sending and receiving e-mail.	User access levels	Access groups for phone, server, data transfer, monitoring, and administration.
DNS	Built-in Domain Name Server for IP address to name and name to IP address translations.	Update management	Intelligent, model independent software updates installable from a single update file.
DHCP	Built-in Dynamic Host Configuration Protocol server for distributing IP addresses.	Network monitoring	Built-in browser based monitoring system.
Voice features		Environmental conditions	
Analogue phone multiplexing	Built-in Dynamic Host Configuration Protocol server for distributing IP addresses.	Temperature	-40..+50°C operation (with internal heating), -40..+60°C storage
PBX	Software Public Branch Exchange with digital (ISDN) and analogue (FXS, FXO, E&M) interfaces as well as an IP interface for connecting PBXs. Full PBX feature set with group call and hot line. All interfaces suitable for both subscriber (phone, fax) and central office connections. Non-hierarchical numbering utilizing both numbers and alphabetical characters.	Humidity	MIL-STD-810F, method 507.4, proc. 507.4-1, 10 cycles @ 60°C, 95%RH
Voice gateway/proxy	Fast realtime conversion between voice protocols and codecs. Least cost routing	Rain	MIL-STD-810F, method 506.4, proc. I (rain and blowing rain 100mm/h, 40' per surface)
Protocols and codecs	Support for SIP and H.323 protocols. G.711 a-/μ-law (PCM), G.723, and GSM codecs. ISDN/EuroISDN (Q.931), CCS, and CAS signalling.		

Technical Specification			
EMC (industrial usage)		Internal expansion units	
Emissions	MIL-STD-461E	ETP-104	8 x E1 per unit
Immunity	MIL-STD-461E	DSLPL-104	4 x G.SHDSL (2-wire) per unit
Mechanical		AtMUX-r	30 x a/b FXS or FXO per unit; configurable in groups of 4; reserves 1xE1 port
Watertight and hermetically sealed housing, carry handles or 19" mounting adapters, hardened for military use		Power	
Size (LxHxD)/mm	400x110x265	Input voltage	22-60VDC or 230VAC with external power supply
Weight	10 kg	Power consumption	
Cooling	Cooling functions without air exchange between inside and outside the housing. If required, an internal fan activates the airflow and optimises the cooling.	Main unit	58W without heating 81W with maximum heating
Vibration	MIL-STD-810F, method 514.5, cat. 20, ground mobile, proc. I, 1.04g rms, according tab. 514.5C-VII fig. 514.5C-1, 5-500Hz, 40' per axis	Expansion units	ETP-104: 3.1W TCC-104: 6W (preliminary) DSLPL-104: 5.6W AT-Mux: 25W peak, 10W typical
Functional shock	MIL-STD-810F, method 516.5, proc. I, functional shock/operation, 30g/11ms	Standard configuration	
Shock, bench handling	MIL-STD-810F, method 516.5, proc. VI	The standard configuration includes following units and externally available interfaces:	
Available interfaces		1 x Main unit with:	
Main unit		- 1 x 100Base-TX,	
Management Ethernet		- 2 x 1000Base-T,	
Switched Ethernet		- 2 x 1000Base-X, single mode	
SPF Ethernet		- 1 x Relay in,	
Relay in		- 1 x Relay out,	
Relay out		- 1 x RS-232	
Serial port		1 x ETP-104 with:	
USB		- 3 x E1	
		1 x TCC-104 with:	
		- 4 x EUROCOM EES D/1	
		1 x DSLPL-104 with:	
		- 2 x G.SHDSL	
		1 x AtMUX-r with:	
		- 3 x FXS	
		- 1 x FXO	

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