

[PRODUCT SHEET]

Product: Ascom openAccess® Node G

Platform: Ascom openAccess®

Segment: Defense

Division: Security Communication



ASCOM openACCESS® NODE G INTEROPERABLE GATEWAY 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 scaleable 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.

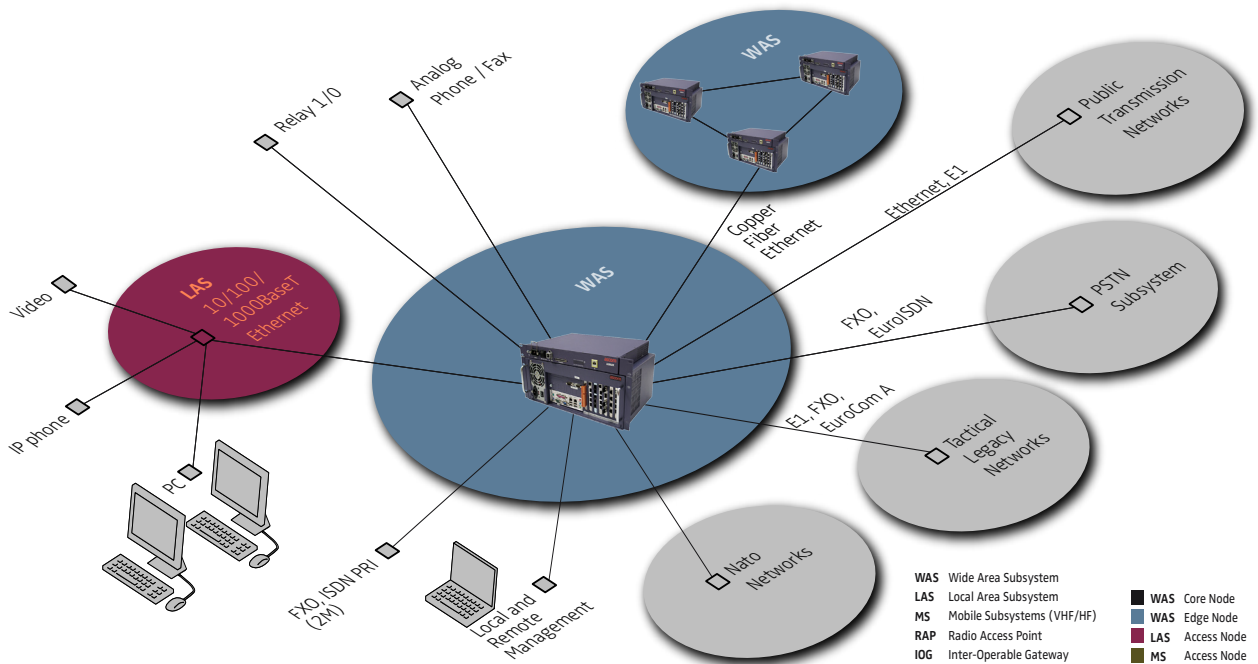
In alignment with NATO TACOMS Post 2000 architecture, openAccess Node G provides interoperable gateway functionality towards external public, strategic and legacy networks. Thus covering the need in joint missions to communicate with coalition partners, non-military forces and troops connected via legacy systems.

Ascom openAccess® Node G connects headquarter offices with command and control facilities and detached local and mobile area subsystems. By creating a single all-IP network, fixed line communication equipment and field radio devices are able to exchange information enhancing situational awareness.

Ascom openAccess® Node G can be used to create virtual LANs even over various transmission technologies, including 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.

System interfaces, reliability and extensive network applications give Ascom openAccess® Node G the flexibility required for a multitude of permanent and ad-hoc deployments.

Ascom openAccess® Node G -- Core Network Voice and Data Switch



Ascom openAccess® Node G provides efficient connectivity between permanent and detached ad-hoc command and control facilities and mobile area sub-systems. It is an essential interoperable gateway to external public, strategic and legacy networks.

Technical Specification			
Network applications		Qos, traffic control and security	
Mesh topology	Ascom openAccess 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, Authentication	BlowFish and AES-256 (CBC) symmetric block cipher encryption of traffic with variable key length of up to 256 bits. FIPS 140-2 qualified. RSA certificate based authentication with variable key length of up to 2048 bits and SHA2 HMAC integrity protection.
Serial lines	Serial port connectivity over IP	Compression	ZLIB, LZO and BZIP2 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.	Configuration storage	Storage of multiple configuration profiles. Configuration changes without reset or reboot. Configurations can be backed up locally or between Ascom Access Nodes.
Bridging	Ethernet bridging locally between Ethernet interfaces and/or over a bridged connection.	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.	Network monitoring	Built-in browser based monitoring system or SNMP network monitoring.
DHCP	Built-in Dynamic Host Configuration Protocol server for distributing IP addresses.	Environmental conditions	
Voice features		Temperature	Operative 0... +50°C Storage -20... +50°C
Analogue phone multiplexing	Analogue (AT) to digital (ISDN) conversion to channelled G.704.	Humidity	Operative 10... 90% (non-condensing) Storage 10... 95% (non-condensing)
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. Non-hierarchical numbering utilizing both numbers and alphabetical characters.		
Voice gateway/proxy	Fast real-time conversion between voice protocols and codecs. Least cost routing.		
Protocols and codecs	Support for SIP and H.323 protocols. G.711 a-/μ-law (PCM), G.729, G.723, and GSM codecs. ISDN/EuroISDN (Q.931), CCS, and CAS signalling. EUROCOM.		

Custom features can be included by additional software provided by Ascom or 3rd party suppliers

EMC (industrial usage)			Expansion units (Inside main unit)	
Emissions	EN55022 B		Number of PCI expansion slots	6 (Relay card doesn't occupy a slot)
Immunity	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6		8 x E1 PCI	8 x E1 ports per unit for data (G.703/G.704) and voice (EuroISDN)
Mechanical			SHDSL/E1 PCI	2 x G.SHDSL ports and 2 x E1 ports per unit
	Main Unit	Telephony MUX Unit	Eurocom PCI	4 x Eurocom A ports (8 pin) per unit
Size (WxHxD)/mm:	485x163x325mm 445x163x300mm (4U) inside 19" rack	393x45x294mm 445x45x294mm (1U) inside 19" rack	4 x FastEthernet PCI	4 x 10/100Mbit/s Ethernet ports per unit
Weight	11,6 kg	3,9 kg	Gigabit switch PCI	4 x SFP module slots (for optical ethernet) and 4 x 10/100/1000Mbit/s ethernet ports per unit
Cooling	Filtered airflow from right side to left side / front	Filtered airflow from right side to left side	Relay extension	6 x Relay in, 2 x Relay out and reset button per unit (possibility to double in/out ports in single extension)
Power			Telephony expansion units (Inside telephony MUX unit)	
	Main Unit	Telephony MUX Unit	Number of expansion slots	8
Input voltage	230 V AC Optionally: 48 V DC	230 V AC or 48 V DC (selectable by switch)	4xa/b FXS	4xa/b FXS per unit
Power consumption	max 350W	max 75W	4xa/b FXO	4xa/b FXO per unit
Available interfaces				
Main Unit				
Management LAN	10/100/1000Mbit/s Ethernet with autocross			
LAN	1 x 10/100/1000Mbit/s Ethernet with autocross			
Serial port	4 x RS-232			

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