



Compact Network Encryption

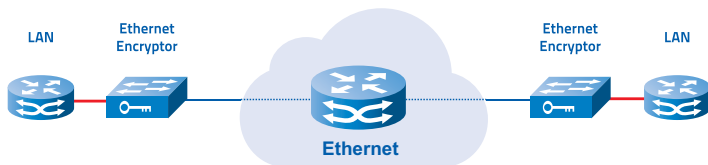
The **atmedia 100M compact Encryptor** extends the atmedia Encryptor product range with a versatile device. Because of its compact design, the device particularly qualifies for use in small branches or for the connection of remote security relevant systems, like automatic teller machines, access control systems or other steering or monitoring systems.

The 100M compact device supports transparent layer 2 network interconnections over arbitrary WAN connections, including IPv4 and IPv6 networks. The implementation of special optimizations in FPGA hardware guarantees a link usage above 97% at low latencies even in IP-Tunnel mode.

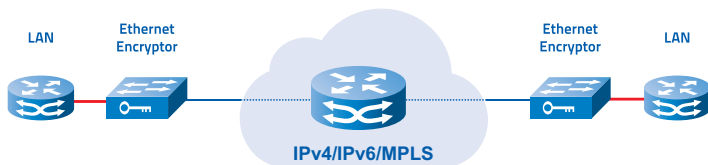
The atmedia Encryptors implement the network and encryption functionality with programmable FPGA hardware. All security relevant parts of the systems are completely developed and implemented by atmedia. A main security feature is the encryption in combination with secure integrity and replay protection (AES-GCM) for the data plane and the control plane. This works like a "perfect firewall" which protects the customer network against active and passive attacks and increases the Cyber Resilience of critical infrastructures .

Applications

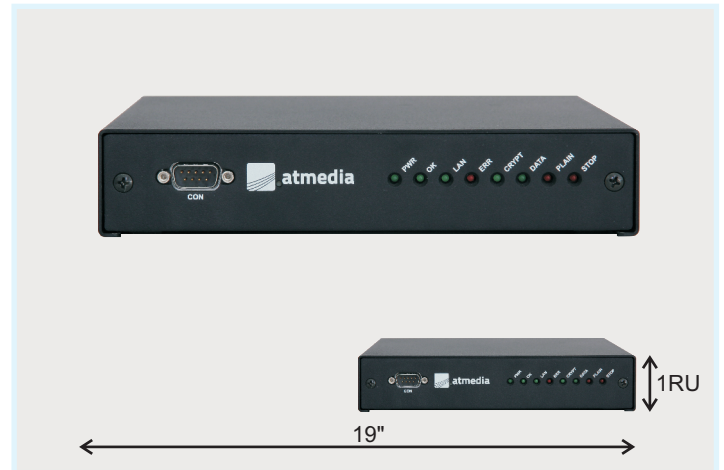
Ethernet interconnection via Layer 2 or Layer 1



Ethernet interconnection via Layer 3 (IPv4 or IPv6 managed services)



Ethernet interconnection via mobile IP connections (UMTS, LTE, Sat)



Highlights

- Strongest available crypto technology (AES256-GCM, 512bit ECC)
- Quantum-resistant implementation
- Integrity- and Replay-Protection: „Perfect Firewall“
- Lowest encryption overhead possible for secure operation
- Hardware-based random number generation
- Tamper resistant chassis
- IP-Tunnel via arbitrary IPv4 and IPv6 networks
- Traffic Flow Security (optional)
- No change of network design needed
- No impact on existing redundancy schemes
- Autonomous and maintenance free operation
- Low energy consumption (Green IT)
- Approved by the German BSI for classified data (VS-NfD, EU Restrict, NATO restricted)
- Made in Germany



Technical Data

atmedia 100M compact encryptor

Models	Crypto Technology
<ul style="list-style-type: none">A100MC (compact): 10M/100M throughput (RJ45 copper interfaces)	<ul style="list-style-type: none">AES-GCM or AES-CBC (256 bit) encryptionIntegrity and replay protection with Galois Counter Mode (GCM)Key generation with hardware random sourceKey exchange with Diffie-Hellman ECC algorithm (DH-ECDH)Compliant to the requirements of FIPS 140-2 L3 and CC EAL4Approved by the BSI for VS-NfD, NATO restricted and EU Restrict
Performance	Key management
<ul style="list-style-type: none">Ethernet (Layer 2) und IP (Layer 3) encryption in point-to-point-, point-to-multipoint- or multipoint modeMulti tenant group encryption (max. 1000 peers)Real-time encryption in FPGA hardwareEncryption independent of packet size and packet contentKey changes without interruption of trafficLatency A100M/A100MC < 50µs	<ul style="list-style-type: none">Ad-hoc device authenticationTamper resistant key storageBuilt-in key server for the distribution of group keysAutomatic time triggered change of master keys and group keys
Network	System management
<ul style="list-style-type: none">Compatible with E-Line, E-Tree, E-Lan, VPLS, VPWS and other Ethernet servicesSupport of Jumbo framesIP-Tunnel mode: Layer 2 over IPv4 or IPv6 (IP or UDP) Throughput for small packets over 97% of link bandwidthLink Loss Carry Forward/Optical Loss Pass ThroughTraffic Flow Security mode prevents the identification, analysis and leakage of any data on the encrypted link.Protection from active attacks against the control plane (Denial of Service) with hardware-based GCM packet filtersSimple and secure IPv6 supportInteroperable with network products of leading vendors	<ul style="list-style-type: none">Configuration via serial console (RS-232/V.24) or Secure Shell (SSH) network access (out-of-band Ethernet RJ45-10/100BT)Integrated monitoring of network status and operationAudit and event loggingRemote monitoring via SNMP (V2c/V3 authpriv)Link monitoring via atmedia CryptMon
Options	Hardware
<ul style="list-style-type: none">Wall mount kit, DIN-rail kit19" Rack mount kit (supports two 100M compact devices)Optional licences for speed upgradesOptional licences for custom ECC, custom AES, TFS and IP	<ul style="list-style-type: none">Operating temperature: 1°C - 50°CRelative humidity: 10% - 85%, non condensingChassis : H: 44mm, W: 210mm, D: 220mm, Wgt: 2.5kg no fans or other moving partsPower supply: 12-30V DC, 90-240V AC, 7WTamper resistant design
	Conformity:
	<ul style="list-style-type: none">CE (CB), FCC

The atmedia systems and related documentation are subject to continuous improvement. Therefore atmedia reserves the right to change documentation without notice.

Current firmware release: 3.3.2/3.3.3/3.3.4

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