

MC3100



Modular Multiplexer for IPTV and Broadcast Distribution (Cable, Terrestrial and Satellite)

ATEME's MC3100 multiplexer is the simplest, most powerful solution for operators launching or expanding their digital service offering.

The MC3100 advanced multiplexer platform simplifies engineer's deployment and operational routines. Developed specifically for DTH operators, the multiplexer performs full analysis of source PSI/SI and PSIP tables, with automatic regeneration of all tables as required, up to a maximum of 250 Multiplexes scrambled in DVB CA or AES mode.

ATEME presents high performance output modules for direct insertion of digital services into the terrestrial, cable and satellite networks. Based on a full digital-modulation and up conversion architecture, the Output modules deliver a clearer signal, and makes future upgrades easier.

For insertion of local programming at regional broadcast locations, the MC3100 is a powerful, space efficient solution. Transparent mode enables direct transport stream forwarding for network conversion applications.

KEY FEATURES

- ASI, GB IP inputs (electrical or optical)
- Maximum of 24 ASI inputs
- GB IP (electrical or optical), ASI and COFDM outputs
- PSI/SI regeneration
- PSI/SI/PSIP input analysis
- Support DVB and AES scrambling, Simulcrypt interface based
- Intuitive web-based user control
- SNMP Alarm MIB
- SOAP/XML Interface for external control
- DVB-T/T2 Single Frequency Network support with embedded MIP inserter
- Seamless Statistical Multiplexing with ATEME's SR1000 SmartRate allocator
- Any number of TS outputs within 250 services and 800 Mbps

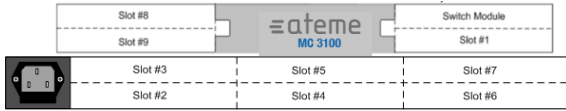
CHASSIS

Chassis 1RU

- Modular configuration with up to 9+1 board positions
- WEB based configuration, SNMP Alarms,
- SOAP/XML interface
- Forced air-cooling (through sides of 1RU)
- Swappable modules in back
- Optional IP IO in front

Switch Module

- Gbit/s routing between modules in a chassis
- 1 slot wide



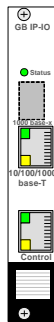
INPUTS MODULES

Ethernet Input w/Management

- 10/100/1000BaseT input card (RJ45)
- Mini-GBIC interface (SFP) for optical input
- Supports UDP/RTP Multicast/Unicast reception
- IGMP v2 and v3
- Supports reception of MPTS and SPTS
- Service filtering
- PCR regeneration
- 10/100/1000BaseT management port (RJ45)
- Enables WEB management
- 1 slot wide.

Ordering code: MC/GBIPIN-MMI

Interface	: 10/100/1000 Base-T Ethernet and SFP interface
Maximum data rate	: Up to 850 Mbps
Data format	: UDP Multicast/Unicast, RTP
Transport stream	: SPTS and MPTS
PCR de-jittering	: Yes



ASI Input w/Management

- 3xASI input
- BNC connectors
- 213 Mbit/s per input
- Supports reception of MPTS and SPTS
- Service filtering
- 10/100/1000BaseT management port (RJ45)
- Enables WEB management
- 1 slot wide

Ordering code: MC/3ASI-MMI

Connector	: BNC female, 75Ω
Number of inputs per module	: 3
Maximum bit-rate per port	: up to 213.7Mbit/s
Management	: 10/100/1000 Base-T Ethernet



PROCESSING MODULES

Scrambling

- DVB CA compliant scrambling (CSA) and AES compliant scrambling
- Scrambles up to 250 services, maximum 850 Mbps
- Supports partial scrambling and PVR
- Support scrambling of MPEG-2 and H264 in SD & HD
- DVB Simulcrypt compliant
- 10/100/1000BaseT IP interface towards CA system (RJ45)
- Handles up to 250 ECM's
- 1 slot wide

Ordering code:

DVB Scrambler with SCS, MC/DVBMCSXX
DVB Scrambler with AES, MC/AESMCSXX



EPG

- Regeneration of EIT schedule on selected output port
- Gathers EIT information from all inputs ports
- EPG data is filtered and regenerated to reflect new channel plan
- Supports multiple of networks
- Configurable play out rate with prioritization
- Configurable period to be played out
- EIT reception from multiple of ATV units*
- 1 slot wide

PROCESSING SPECIFICATIONS

PSI/SI

Function	: Full regeneration based on input and Operations performed on the signal.
Pass-through of scrambled services	: Yes, on TS level.
PSI/SI handling	: Automatically regenerated.
Tables Supported	: PAT, PMT, CAT, SDT, NIT

PSIP

Function	: PSIP input analysis,
Pass-through of scrambled services	: Yes, on TS level. For SPTS output only
PSI/SI handling	: Automatically regenerated.
Tables supported	: PAT, PMT, CAT, SDT, NIT, EIT, TDT, TOT

Multiplexing

Supported on	: ASI output (standard) and IP output (option)
Video format	: Transport stream, MPEG-2 SD/HD and MPEG-4 SD/HD.

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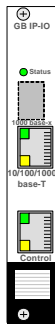
OUTPUTS MODULES

Ethernet Output

- 10/100/1000BaseT input card (RJ45)
- Mini-GBIC interface (SFP) for optical input
- Supports UDP/RTP Multicast/Unicast transmission
- IGMP v2 and v3
- Supports multiple of output cards
- Streaming of up to 850 Mbps
- Maximum 250 service per output card
- Supports streaming of SPTS
- Support streaming of MPTS with Multiplexing (optional)
- PSI/SI regeneration
- PCR regeneration
- 1 slot wide.

Ordering code: MC/GBIPOINT

Interface	: 10/100/1000 Base-T Ethernet output and SFP interface
Maximum data rate	: Up to 850 MBit/s
Maximum number of services	: 250
Data format	: UDP Multicast/Unicast, RTP
Video format	: Transport stream, MPEG-2 SD/HD and MPEG-4 SD/HD
PCR Regeneration	: Yes, According to EN50083_9
Multiplexing	: Yes (Option)



ASI output

- 4xASI outputs
- BNC connectors
- 213 Mbit/s per output
- 4 Different multiplexed outputs
- Maximum 250 services per card
- PSI/SI regeneration
- PCR regeneration
- 1 slot wide

Ordering code: MC/4ASIOUTMX

Connectors	: 4 BNC female, 75Ω
Number of outputs per module	: 4 Different Transport Streams
Maximum bit-rate per port	: up to 213 Mbit/s Burst mode up to 72 Mbit/s Spread mode
Transport stream output	: SPTS and MPTS
Number of services per card	: 250 (sum of all 4 ports)
Output format	: Constant bit-rate
PCR Regeneration	: Yes, According to EN50083_9
Multiplexing	: Yes, per port

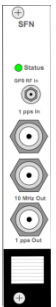


SFN Clock and MIP Inserter

- Integrated or external GPS receiver
- Full clock synchronization on GPS signal
- High accuracy OCXO (2ppb/day)
- MIP inserter for any MPTS on ASI or IP outputs
- Single PLP or Multiple PLP

GPS Interface	: SMA
PPS / 10MHz connector	: BNC

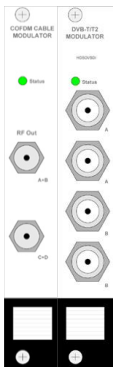
Please note that card ejector will not be mounted for modules installed in 1RU chassis. Modules mounted in front of 1 RU chassis are not hot-swappable.



COFDM Modulator

- 2 (DVB-T2) or 4 (DVB-T) outputs per module
- All carriers are fully agile
- 3 different output options:
 - CATV, 75 ohm F, 47-862 MHz
 - VHF/UHF, 50 ohm BNC, 47-862 MHz
 - L-band, 75 ohm F, 950-1450 MHz
 - Based on ETSI EN 300 744 and ETSI EN 302 755 standards
- Supports multiplexing and transparent pass-through
- PSI/SI regeneration
- Support for MISO (later release)
- Support for SFN (later release) Support for multiple PLPs (later release)

Function	:
Pass-through of scrambled services	: PSIP input analysis, Yes, on TS level. For SPTS output only
PSI/SI handling	: Automatically regenerated.
Tables supported	: PAT, PMT, CAT, SDT, NIT, EIT, TDT, TOT



ENVIRONMENTS SPECIFICATIONS

Conditions

Conditions	Operational temperature	: 0°C to +40 °C
	Operational humidity	: 0% to 95% (non-condensing)
	Storage temperature	: -20°C to +70 °C
	Storage humidity	: 5% to 95% (non-condensing)
Power	AC Power	: Input voltage 110V/240V, 50/60 Hz, 200W, T250V 4A fuse
		: Power supply is monitored from GUI and via LEDs on chassis
Fans	Cooling chassis	: Integrated fans (airflow right to left side)
	Number of fans chassis	: 6
	Dimensions chassis	: 19" x 1RU
Physical	Mounting options chassis	: Broadcast style – cable in back and front

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