

heynen 

Heynen works for innovators



# MONITOR CATALOG

Professional monitoring, measurement and control tools for Analog & Digital Radio and Television

Signal Monitoring  
Mobile Metering  
Facility Remote Control  
Test & Measurement



**WorldCast**  
Systems  
deliver > transmit > monitor

WorldCast Systems is a highly respected provider of professional, reliable and innovative broadcast systems to the Radio & Television market worldwide. Encompassing the industry-leading brands of APT, Egreso & Audemat, WorldCast Systems offers a wide range of high performing products for audio and data delivery, transmission and monitoring.



**Deliver**



**Transmit**



**Monitor**



APT codecs deliver broadcast-grade audio between locations. Our WorldNet and WorldCast ranges offer reliable and cost-effective broadcast solutions delivering high quality content over IP, T1, E1, ISDN & Leased Lines.

Designed for use in studio transmitter links, studio networking and remotes / OB applications, the APT codec portfolio includes a wide range of stereo and multi-channel units that can be deployed as a simple STL or a large-scale IP audio network.



Egreso transmitters offer efficient distribution of terrestrial Radio signal for many FM transmission technologies such as FM, DAB, DAB+ and T-DMB.

With modular design for maximum flexibility and unequalled simplicity of use and maintenance, our transmitters fit all low power and medium power requirements.



Audemat provides a range of professional monitoring and measurement tools for a wide variety of broadcast technologies.

The Audemat portfolio includes RF and data monitoring equipment and mobile field strength meters for analog and digital radio (HD Radio, DAB/DAB+/T-DMB, AM, FM) and analog and digital TV (DVB-T/H/SH, DVB-T2, ATSC, PAL/SECAM, NTSC). In addition, Audemat offers industry-leading digital test and measurement equipment, audio processors, world-class RDS encoders and a range of facility remote control solutions.

Complementing Audemat's product range is an extensive range of professional software solutions for the management, configuration and monitoring of broadcast networks.

# Monitor...

Audemat, the monitoring specialists within the WorldCast Systems group, offer a highly extensive range of professional tools for the monitoring, metering and measurement of analog and digital radio and television.

Audemat has also developed a highly regarded suite of facility management products, that combine intuitive software applications and robust hardware platforms to provide you with total control of your entire network.

The table below will help you select which product is right for your needs...

Signal Monitoring & Facility Remote Control      Mobile Metering      Test & Measurement      Facility Remote Control      Total Network Management

		Signal Monitoring & Facility Remote Control	Mobile Metering	Test & Measurement	Facility Remote Control	Total Network Management
Television	DVB-T /H/SH	GOLDENEAGLE DVB-T DVB-T/H Monitoring Silver	Navigator DVB-T/H Navigator DVB-T/H/SH		<b>Software:</b> ScriptEasy Suite MasterView	Broadcast Manager
	DVB-T2	GOLDENEAGLE DVB-T2				
	ATSC	GOLDENEAGLE ATSC				
	Analog	GOLDENEAGLE Analog TV				
Radio	AM	GOLDENEAGLE AM			<b>Hardware:</b> IP2Choice Relio Mini Control Silver	SLA Monitor (TV)
	FM	GOLDENEAGLE FM FM Monitoring Silver	FM-MC4	Modulation Analyzer		
	HD Radio	GOLDENEAGLE HD				
	DAB/DAB+/T-DMB	GOLDENEAGLE DAB/DAB+/T-DMB	Navigator DAB/DAB+/T-DMB			

## Metering

FM-MC4	page 5
Navigator DVB-T/H	page 6
Navigator DVB-T/H /SH	page 6

## Test & Measurement

Modulation Analyzer	page 7
---------------------	--------

## Monitoring for Radio

GOLDENEAGLE FM	page 8
GOLDENEAGLE HD FM/AM	page 9
GOLDENEAGLE DAB/DAB+/T-DMB	page 10
GOLDENEAGLE AM	page 11

## Monitoring for TV

GOLDENEAGLE TV Analog	page 12
GOLDENEAGLE DVB-T	page 13
DVB-T Monitoring Silver	page 13
GOLDENEAGLE DVB T2	page 14
GOLDENEAGLE ATSC	page 15

## Supervisory Control

SLA Monitor	page 16
Broadcast Manager	page 17

## Remote Facility Control

IP2Choice	page 19
Relio	page 19
Mini Control Silver	page 20
ScriptEasy Suite	page 21
ScriptEasy Suite: EasyLink	page 21
ScriptEasy Suite: MasterView	page 22

# WorldCast Systems' Products for used throughout

## Monitoring & Control at Transmitter Site

### Signal Monitoring for Radio

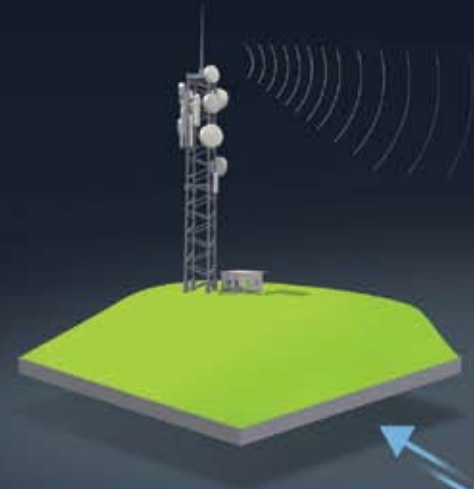
GOLDENEAGLE AM, FM, HD Radio, DAB/DAB+/T-DMB

### Signal Monitoring for Television

GOLDENEAGLE DVB-T, DVB-T2, ATSC, TV analog

### Remote Facility Control

IP2Choice, Relio, Mini Control Silver



## TV or Radio Studio

### Equipment & Network Monitoring

Broadcast Manager Client, MasterView

Alarm Filtering



## Network Monitoring Center

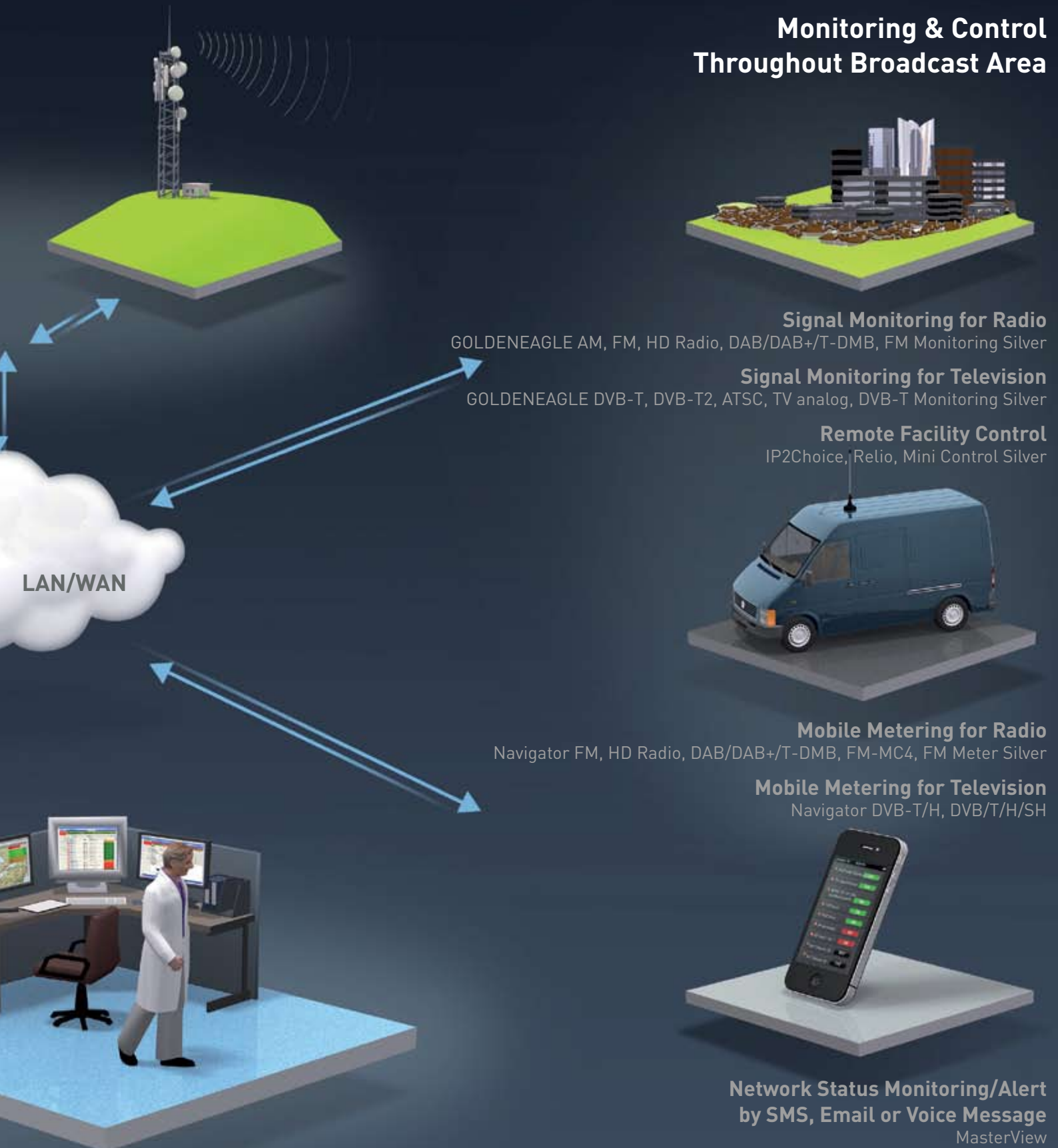
### Network Monitoring & Alarm Centralization

Broadcast Manager, SLA Monitor, MasterView

Communication



# Monitoring, Control & Management the Broadcast Chain



# FM-MC4

## On-Site & Off-Site Measurement for FM Radio Networks

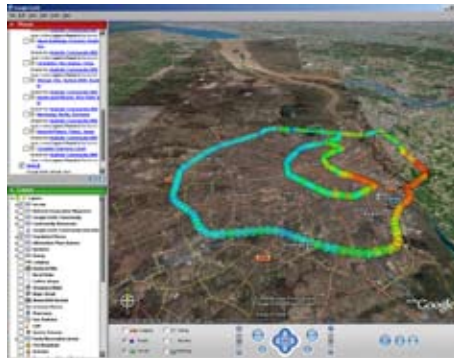
The FM-MC4 is the perfect solution for complete FM signal analysis along the transmission chain. Featuring a professional calibrated FM receiver, this metering unit can be used for on-site and off-site monitoring. With its GPS receiver, it is also a "must have" for mobile measurement campaigns in a vehicle (drive test).

This mobile dynamic FM field-strength meter and base-band analyzer is the reference product for regulation authorities, broadcasters and radio stations worldwide. For smaller budgets, the DFMA02 has no GPS capabilities but features the same high quality receiver and offers the same accurate measurements as the FM-MC4.



### Field Strength Mobile Measurement Monitoring

- 12V DC power for in-car use
- Embedded GPS receiver logs location information with measurement data
- Cover up to 99 stations in one drive
- Results displayed as text, curve, cartographic or geographical format
- Create record of real-world contours of your stations, compare your signal with competitors & correlate real field readings with predicted data
- Easy export of results for comparison with simulation software
- RDS Retuning allows automatic selected of frequency with best reception
- Optional Goldenear software for Mobile FM Reception Quality Analysis
- Goldenear simultaneously acquires highly accurate RF modulation, audio, RDS, pilot and multipath levels every 50ms & displays on user-friendly GUI



Google Earth view

### Audio & modulation analysis

- Check FM signal all along the transmission chain with L&R balanced & unbalanced inputs, composite (MPX) input, RF input, and a 10.7 MHz input (optional).
- Ensure compliance with regulations by measuring modulation (MPX) level, audio level, pilot & SCA Level (RDS, DARC) & MPX Power
- Measurement logs enable tracking and reports can be automatically generated after measurements are made
- Sequencer to launch audio & modulation monitoring at specified times

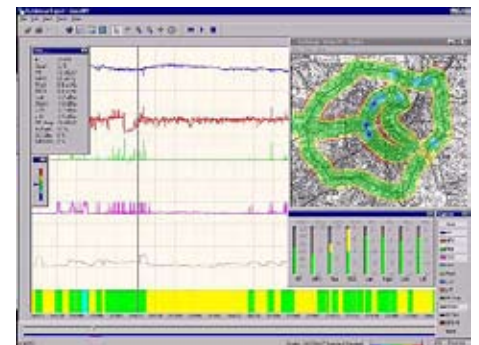
### Additional Features

- Local FM band scanning with recording of Levels and RDS parameters
- RDS analysis - detailed analysis of the sub-carriers with complete RDS data decoding, Bit error Rate processing, TMC analysis and RT+ analysis.
- RDS sequences can be recorded and replayed.
- DARC Analysis
- Supplied without Field Strength Meter and Goldenear software as DFMA02 Version

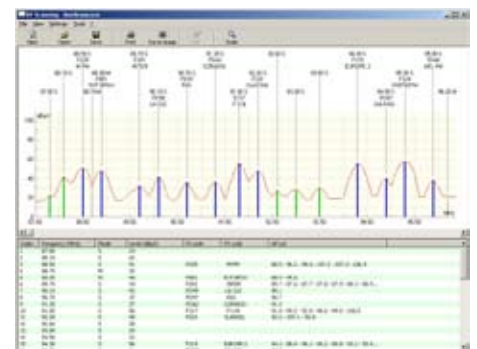
### APPLICATIONS

The FM-MC4 can be used by:

- **Regulation authorities** - Ensure Compliance of FM Signals
- **Broadcasters** - Check transmission quality and coverage for R&D & network maintenance
- **Content providers** - Perform Drive tests and quality analysis to ensure service quality
- **Automotive Professionals** - check antenna systems, verify RDS, qualify test route & investigate complaints



Goldenear view



FM scan view

# Navigator DVB-T/H

## Mobile Metering for DVB-T & DVB-H Networks

The NAVIGATOR DVB-T/H is the perfect tool for DVB-T and DVB-H measurement campaigns. It features a professional receiver that enables wide scale coverage analysis and a high quality demodulator for accurate DVB-T/H metering.

With its GPS receiver, the unit is a must-have for mobile measurement campaigns in a vehicle (drive test) or on foot and can be used with or without a laptop PC connected. The Navigator DVB-T/H measures and reports on actual coverage quality throughout the area under test.

Designed for use by broadcasters, mobile operators and service providers, the Navigator DVB-T/H ensures high quality content is received by the target audience and validates compliance with key parameters established in the DVB-T/H standard.



### APPLICATIONS

- **Network Broadcasters** - analysis of signal for R&D and maintenance purposes
- **Broadcast Content Providers** - monitoring of quality & continuity of program reception
- **Regulation authorities** - outdoor coverage analysis to verify signal complies with requirements

### High Accuracy Measurements

- Measurement of many DVB-T/H RF parameters including the input level, error rates & MER (via software)
- Real-time constellation diagram, spectrum display & channel impulse response
- MPEG data decoded & thoroughly analyzed in real-time
- Real time error display confirms transport stream compliance
- Display audio and video content (MPEG2 or MPEG4/AVC SD) simultaneously with real time measurements
- Record content along with measurements for later analysis

### Truly Mobile

- Light weight hardware for easy transportation
- Supplied with GPS receiver and magnetic antennas for mobile campaigns
- Automatic GPS positioning for mapped representation of mobile measurement campaigns
  - Measurement Data recorded to internal hard disk

### Campaign Data Display & Analysis

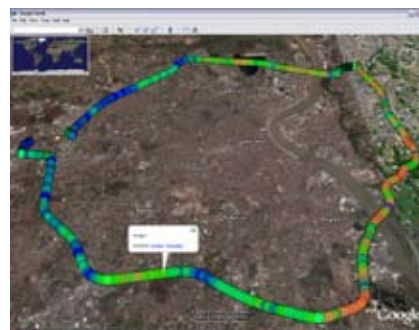
- Export recorded measurement data as CSV (Excel compatible) or binary file
- Goldeneye package, Audemat's analysis software application.
- Goldeneye uses GPS recorded positions to create a geographical representation of the campaign with a different color for each level value (or field strength).
- Export data to coverage planning software (e.g. ATDI, LS telecom) and map software (Google Earth, MapPoint...)

### Flexible Control

- Front panel touchscreen for operation without PC
- TCP/IP support for remote access



Campaign geographical view with GoldenEye



Google Earth representation



Front panel measurement screen

Also Available..

## Navigator DVB-T/H/SH



With all the power and full feature set of the Navigator DVB-T/H, the Navigator DVB-T/H/SH has been designed to perform measurements for DVB-T, DVB-H and DVB-SH networks.

A high level input for optimum accuracy measurements on the S-Band means that the Navigator DVB-T/H/SH can be used in the R&D laboratory as well as throughout the coverage area.



# Modulation Analyzer

The Test & Measurement Standard for FM

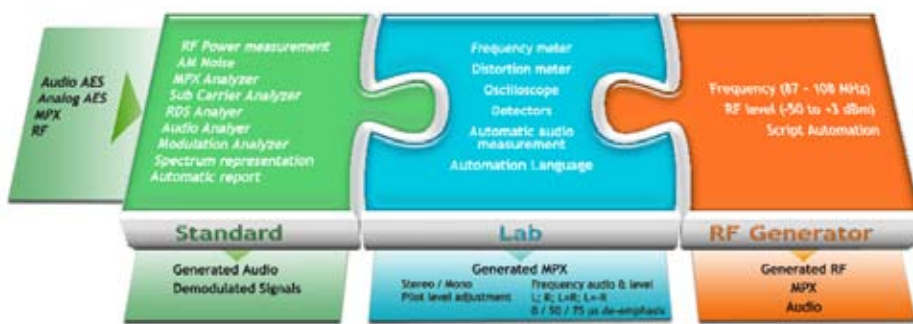


The Modulation Analyzer is a complete Test and Measurement tool, incorporating a multitude of innovative features such as a digital FM demodulator, RF spectrum analyzer, oscilloscope, dual channel audio generator, distortion meter, MPX and RDS analyzers and now, also an built-in RF Generator.

The inclusion of an RF Generator creates a unique platform that provides all the tools required for commissioning and testing an FM Transmitter in a single 3U box. Any FM signal can be simulated and then fed back into the software suite of the Modulation Analyzer for comprehensive and indepth measurement and analysis.

The Modulation Analyzer can also be used for the testing of transmitters, transmitter lines or dedicated FM equipment such as a rebroadcast receiver or encoder.

The unit is available in 3 versions. The **Standard version** is supplied either in a sturdy and easily transportable flight case or as a rack mountable unit and provides the basic measurement tools needed for a precise analysis of the FM signal.



## Lab Tools Version

The enhanced functionality of the Lab tools version offers:

- RF frequency meter, AF distortion meter, AF frequency meter, Pilot frequency meter, RDS frequency meter
- Measurement of Crosstalk, Bandwidth, SNR & THDN Test signal generator, Oscilloscope and Remote access ('automation')

## RF Generator Option

The optional RF Generator turns the Modulation Analyzer into a full service platform enabling both the simulation AND measurement of FM signals. The test engineer can select the RF Level, frequency, MPX signal with pre-emphasis and audio sine wave of the signal to be injected into the equipment under test. The analyzer will then conduct a wealth of measurements.

This unique 'one box' approach eases the burden for the technician in the field both figuratively and literally. With just one unit to operate, the training requirements and the likelihood of compatibility issues are greatly reduced and, with just one 3U box to carry, the engineer enjoys a smaller and lighter load!

## Measurement Display & Reports

- Main information in text or graphic format on front touchscreen panel and on remote PC application
- Excellent reproducibility of measurements
- Automatic measurement reports for analysis
- Calibration only required every 3 years



*A variety of reports are available: RDS, audio, spectrum and MPX power analysis reports as well as automatic measurement reports*

## High Precision Measurement

- All tools and features necessary for the control & measurement of all FM radio broadcasting networks
- «All in One» product incorporates an audio analyzer, a distortion meter, a frequency meter, an RDS analyzer and an audio signal generator all in one unit
- 100% digital technology
- Simultaneous & highly precise measurements
- Multiple inputs and outputs: RF, MPX, analog audio, AES/EBU, 10 MHz synchronization input
- All the required inputs and outputs are present on the unit: RF, base band, analog and digital audio

**For Broadcasters** - Enabling the detection of disturbances in a measurement chain.

- Verify installations
- Establish optimum settings
- Diagnose maintenance issues
- Ensure transmitters & sound processors comply with standards and regulations
- Portable for measurement in-field & site to site transportation

**For FM Transmitter manufacturers** - Enabling Quality Control on the Assembly Line.

- Reduce time spent in testing with automatic reports
- Avoid human errors related to configuration and settings
- Ensure measurement reproducibility with 100% digital components
- Synchronize measurements to an external reference signal for integration into an FM measurement bench (Lab tools version only)

**For R&D Departments** - Enabling unequalled precision in equipment design.

- Verify a dedicated FM product such as transmitters, receivers, stereo encoders/decoders, RDS encoders or audio devices

**For all customers** - Audemat can also provide custom scripts which, when used with our powerful Modulation Analyzer Automation software, enable complex routine tests to be performed at the touch of button.

# GOLDENEAGLE FM

## Signal Monitoring & Remote Control for FM Radio Networks

Audemat's GOLDENEAGLE FM is a powerful and professional solution for FM monitoring at the transmitter site or in the coverage area. The unit sequentially monitors a set list of stations and continuously ensures that your FM network complies with both legislation and your expectations.

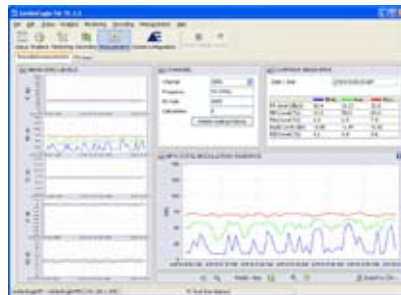
The GOLDENEAGLE FM offers several highly innovative features such as multi-channel monitoring (up to 40 programs), audio streaming and recording, RDS streaming, automatic scanning, transmitter remote control and facilities management.

### Advanced Signal Monitoring

- Automatic FM band scanning to detect any RF intrusions or variations
- FM Monitoring of up to 40 programs - RF demodulator automatically and sequentially browses all the stations configured in the list.
- Track real-time status of your signal 24/7/365 - receive alerts of potential sources of interference
- 3 FM receivers for simultaneous operations (e.g. real time + recorded)
- Alarm management and monitoring for all main parameters including RF level, MPX level, Pilot level, Stereo presence, Audio level, RDS presence & RDS data
- Instant notification of any out-of-tolerance condition with SNMP traps, SMS and email dispatch

### Real time & Recorded Measurements

- At-a-glance status view provides overview of all monitored stations
- Real-time remote measurement of selected station
- Check conformity of transmission with Spectrum Analyzer display (option)
- RDS streaming to ensure RDS services are correctly broadcast & signal is error free
- Recorded measurements and logs for export & analysis
- All measurements stored for 30 days to enable trend analysis
- Export data in csv format for further analysis
- Real-time audio streaming to your desktop enables remote listening
- Download recorded content to PC for listening & analysis



Recorded measurements

### Audio tag option

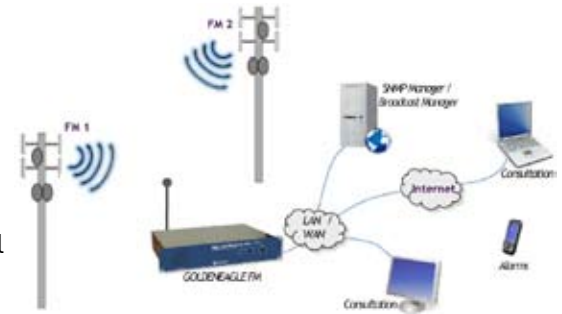
- Audio tagging enables inaudible data to be inserted into any audio signal
- GOLDENEAGLE FM can both the presence and absence of audio tags

### EWS option

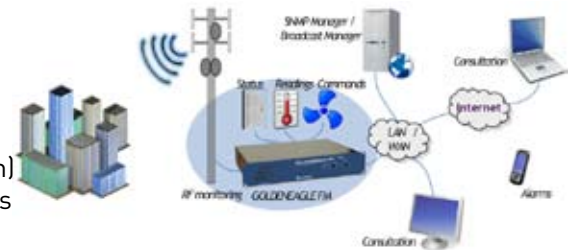
- Emergency Warning System messages can be inserted into the RDS group 9A, the GOLDENEAGLE FM can detect any EWS messages received on a selected frequency and display the hexa sequence in the event log

### Extensive Remote Control

- Access, configure & control all equipment at the transmitter site with remote control over TCP/IP
- ScriptEasy and MasterView for I/O configuration and status visualization
- Optional extended remote control capabilities: up to 7 slots available for metering, status and relays boards.
- Using TCP/IP, GOLDENEAGLE is compatible with any SNMP based Manager such as Broadcast Manager



Off site monitoring



On site monitoring

Also Available...

## FM Monitoring Silver



Where budget is limited, the FM Monitoring Silver offers a more economical alternative for permanent off-air monitoring.

Using 1 FM receiver, the system monitors automatically, in real-time the quality and continuity of up to 10 FM programs and notifies relevant personnel of any problem by sending an alarm.

It offers real-time and average RF & RDS measurements as well as audio streaming, band scanning, and optional I/O slots for remote control.

# GOLDENEAGLE HD FM/AM

## Signal Monitoring for HD Radio Networks



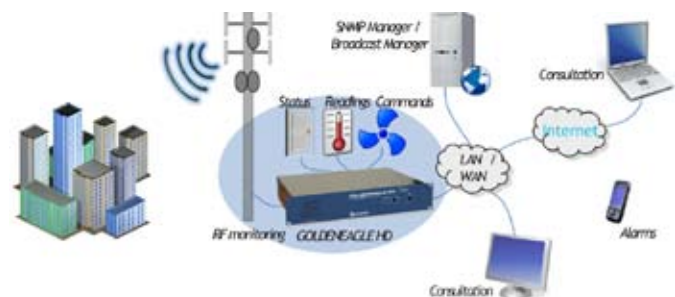
Audemat's GOLDENEAGLE HD FM/AM is a professional tool for HD and analog FM and/or AM monitoring. It can be deployed at the transmitter site or in the coverage area.

The unit sequentially monitors a set list of stations and continuously ensures that your broadcast complies with both legislation and your expectations. With its Ethernet interface, the GOLDENEAGLE HD FM/AM can be controlled remotely using the user-friendly software supplied or an SNMP-based network software package such as Audemat's Broadcast Manager.

The GOLDENEAGLE HD FM/AM offers several highly innovative features such as multi-channel monitoring (up to 10 programs), audio streaming and recording, spectrum analyzer, automatic monitoring measurement of the market and storage as well as remote control GPIO boards.

### Advanced Signal Monitoring

- Automatic band scanning - RF demodulator automatically & sequentially browses all the stations configured in the list
- Track real-time status of your signal 24/7/365 - receive alerts of potential sources of interference
- RF and AF Level monitoring of up to 10 channels
- HD2 and HD3 monitoring with multicasting detection
- Advanced HD Data monitoring - UFID (iTunes HD Tagging), IBOC BER & PAD
- Advanced RDS Monitoring
- Alarm management and monitoring for all main parameters
- Instant notification of any out-of-tolerance condition



Overview of Signal Monitoring Network with GOLDENEAGLE HD FM/AM

### Real time & Recorded Measurements

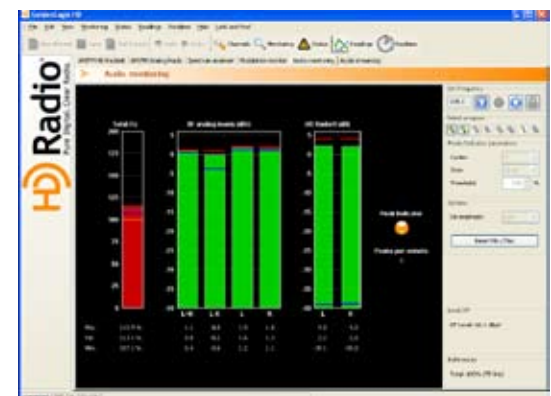
- At-a-glance status view provides overview of all monitored stations
- Real-time remote measurement, focused on a selected station
- Check conformity of transmission with Spectrum Analyzer display (option)
- Recorded measurements and logs enabling export for further analysis
- All measurement values stored for 30 days for trend analysis
- Export data in csv format for further analysis
- Real-time Audio streaming to your desktop for remote listening
- Schedule up to 10 daily recordings of audio
- Download recorded content to PC for listening & analysis



Real Time & Recorded measurement

### Audio Modulation Monitoring

- Control Audio Modulation Peaks
- FM analog modulation sampling supplied as standard
- Optional Digital Demodulator for fast, accurate modulation measurements with bargraph display, peak weighting and filtering



Audio Modulation Monitoring

### Extensive Remote Control

- Access, configure & control all equipment at the transmitter site with remote control over TCP/IP
- ScriptEasy Software Suite including MasterView for advanced configuration and status visualization (page 21)
- Optional extended transmitter remote control capabilities: 5 slots available for GPIO boards (max. 1 metering board)
- Using TCP/IP, GOLDENEAGLE is compatible with any SNMP based Manager such as Broadcast Manager (page 17)

# GOLDENEAGLE DAB/DAB+/T-DMB

## Signal Monitoring & Remote Control for DAB/DAB+/T-DMB Radio networks

Audemat's GOLDENEAGLE DAB/DAB+/T-DMB Monitor is an affordable solution for stand alone DAB, DAB+, T-DMB Monitoring at the transmitter site or in the coverage area. Automatically checking its RF inputs, the unit continuously ensures that your DAB, DAB+ or T-DMB network complies with your expectations.

With its Ethernet interface, the GOLDENEAGLE DAB/DAB+/T-DMB Monitor can be controlled remotely using the user-friendly software or an SNMP-Based network software such as Broadcast Manager.



### Advanced Signal Monitoring

- Automatic band scanning
- Track real-time status of your signal 24/7/365 - receive alerts of potential sources of interference
- The GOLDENEAGLE DAB/DAB+/T-DMB Monitor can continuously monitor an RF signal (coming from a monitoring output, a probe...)
- Monitor Version enables monitoring of single channel
- Standard Version enables monitoring of up to 20 channels
- Alarm management and monitoring for all main RF and DAB parameters:
  - » RF (RF levels, SNR, DAB Mode, Null length, Frequency Offset, OFDM Lock)
  - » DAB Services (Component type, Component name, TMId ASCTY, P/S flag, DSCTY, CA flag, language, SubCh ID, SCID, FIDC ID, SCID, StartCU, Size, Bitrate, Protection level...)
  - » Error rates: FIC, CRC, MSC Error, Total Error, BER
- Instant notification of any out-of-tolerance condition via SNMP trap and email dispatch

### Real time & Recorded Measurements

- At-a-glance status view provides overview of all monitored stations
- Real-time remote measurement, focused on a selected station
- Recorded measurements and logs enabling export for further analysis
- All measurement values stored for 30 days for trend analysis
- Export data in csv format for further analysis
- Real-time Audio streaming to your desktop enables remote listening

### Extensive Local & Remote Control

- User Friendly Software Interface
- Access, configure & control all equipment at the transmitter site with remote control over TCP/IP
- ScriptEasy Software Suite including MasterView for advanced configuration and status visualization
- Optional extended transmitter remote control capabilities: 4 additional slots available for GPIO boards (max. 1 metering board)
- Using TCP/IP, GOLDENEAGLE is compatible with any SNMP based Manager such as Broadcast Manager

Also Available...

## Navigator DAB/DAB+/T-DMB Mobile Metering for DAB Radio



Navigator DAB/DAB+/T-DMB has been designed to perform mobile measurement campaigns for DMB networks.

This handheld equipment can be used in a vehicle, or on foot (indoor or outdoor) and can be dedicated to a single channel (frequency) or for multiple channels (sequential measurement).

- Automatic scanning of DMB band to detect available multiplex channels
- View & analyze RF & data measurements in realtime
- Map-based field strength display
- Automatically log data with GPS position on internal hard disk
- Data export (Custom text file, Google Earth, MapPoint, LS Telcom...)
- Audio Streaming
- Goldeneye Quality Evaluation Software for detailed campaign analysis
- Designed for drive test, coverage analysis, quality analysis, R&D and maintenance

# GOLDENEAGLE AM

## Signal Monitoring for AM Radio Networks

Audemat's GOLDENEAGLE AM can be deployed at the transmitter site or in the coverage area as a powerful and professional yet affordable solution for MW AM monitoring. The unit sequentially monitors a set list of stations and continuously ensures that your AM network complies with both legislation and your expectations.

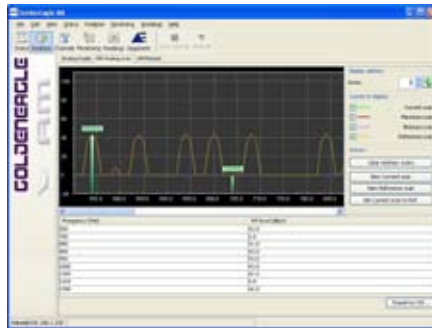
With its Ethernet interface, the GOLDENEAGLE AM can be controlled remotely using the user-friendly software supplied or an SNMP-based network software package such as Audemat's Broadcast Manager.

The GOLDENEAGLE AM offers several highly innovative features such as multi-channel monitoring (up to 10 stations), audio streaming and recording, spectrum analyzer, automatic scanning and remote control GPIOs (General Purpose Inputs /Outputs).



### Advanced Signal Monitoring

- Automatic AM band scanning to detect any variations
- RF demodulator automatically and sequentially browses all the stations configured in the list.
- Track real-time status of your signal 24/7/365 - receive alerts of potential sources of interference
- RF Level Monitoring
- AF Level Monitoring
- Audio Modulation Monitoring; view positive & negative modulation in real-time
- Alarm management & monitoring for all main parameters
- Instant notification of any out-of-tolerance condition with SNMP traps & email dispatch



Automatic Band Scanning

### Real time & Recorded Measurements

- At-a-glance status view provides overview of all monitored stations
- Real-time remote measurement, focused on a selected station
- Check conformity of transmission with Spectrum Analyzer display (option)
- Recorded measurements and logs enabling export for further analysis
- All measurement values stored for 30 days for trend analysis
- Export data in csv format for further analysis
- Real-time Audio streaming to your desktop enables remote listening
- Schedule up to 10 daily recordings of audio
- Download recorded content to PC for listening & analysis

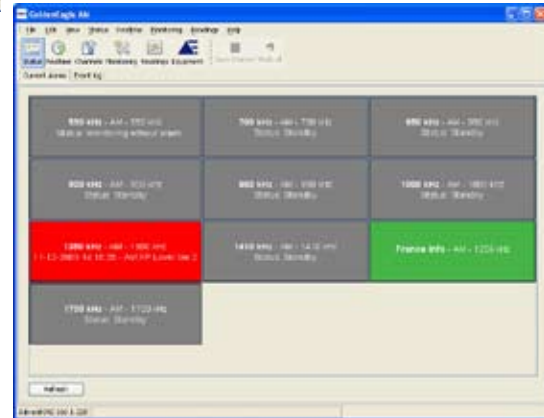
### Extensive Remote Control

- Access, configure & control all equipment at the Transmitter site with remote control over TCP/IP
- ScriptEasy Software Suite including MasterView for advanced configuration and status visualization
- transmitter remote control capabilities: 5 slots available for I/O boards (max. 1 metering board)
- Using TCP/IP, GOLDENEAGLE is compatible with any SNMP based Manager such as Broadcast Manager

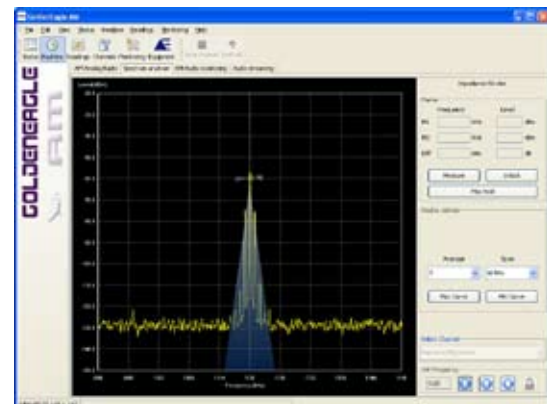
### APPLICATIONS

#### On-site and Off-Site Monitoring for:

- **Broadcasters** - Supervise Network and check transmission quality
- **Regulation authorities** - Ensure Compliance
- **Service providers** - Provide monitoring services to channels
- **National AM Radio networks** - offer a centralized management solution



Status View



Spectrum Analyzer Display

# GOLDENEAGLE TV Analog

## Signal Monitoring for Analog Television

Audemat's GOLDENEAGLE TV is a powerful and professional yet affordable solution for analog TV monitoring in PAL, SECAM, NICAM, A2 Stereo or NTSC standards.

Deployed either at the transmitter site or in the coverage area, the unit sequentially monitors a set list of stations and continuously ensures that your TV network complies with both legislation and your expectations. With its Ethernet interface, the GOLDENEAGLE TV can be controlled remotely using the user-friendly software supplied or an SNMP-based network software package such as Audemat's Broadcast Manager.

The GOLDENEAGLE TV offers several highly innovative features such as multi-channel monitoring (up to 40 programs), audio/ video streaming and recording, video test line analysis, automatic scanning and remote control GPIOs (General Purpose Inputs/Outputs).



Status page

### Advanced Signal Monitoring

- Automatic band scanning - RF demodulator automatically and sequentially browses all the stations configured in the list.
- RF monitoring of up to 40 channels
- Track real-time status of your signal 24/7/365 - receive alerts of potential sources of interference
- Compatible with PAL, SECAM, NICAM, A2 Stereo & NTSC standards
- Alarm management and monitoring for all main parameters
- Instant notification of any out-of-tolerance condition

### Real time measurements, analysis, content display & recording

- At-a-glance status view to alert user to active alarms or issues
- Real-time remote measurement, focused on a selected channel
- Check conformity of transmission with Spectrum Analyzer display
- Recorded measurements and logs for export & analysis
- All measurement values stored for 30 days
- Export data in csv format for further analysis
- View what your audience views with audio/ video streaming to your desktop
- Dedicated streaming receiver allows you streaming with no interruption to the monitoring cycle (PAL/SECAM version only)
- Video test line analysis
- Schedule up to 10 daily recordings
- Download recorded content to PC for viewing & analysis

### Extensive Remote Control

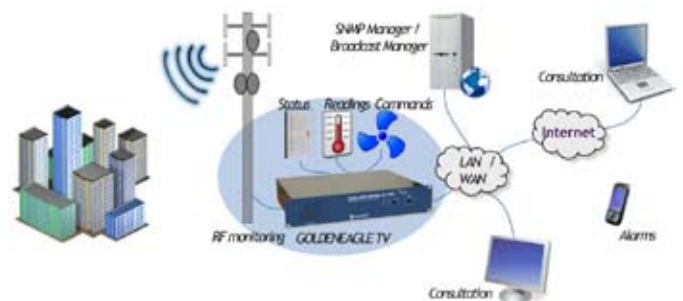
- Access, configure & control all equipment at the transmitter site with remote control over TCP/IP
- ScriptEasy Software Suite including MasterView for advanced configuration and status visualization (page 21)
- Optional extended transmitter remote control capabilities: 10 slots available for GPIO boards (max. 1 metering board)
- Using TCP/IP, GOLDENEAGLE is compatible with any SNMP based Manager such as Broadcast Manager (page 17)



### APPLICATIONS

#### On-site and Off-Site Monitoring for:

- **Broadcasters** - Supervise Network and check transmission quality
- **Regulation authorities** - Ensure Compliance
- **Service providers & Cable Operators** - Provide monitoring services to TV channels
- **National TV networks** - offer a centralized management solution



On site monitoring



Off site monitoring

# GOLDENEAGLE DVB-T

## Signal Monitoring for DVB-T Networks

New Version!  
Increased performances

Audemat's GOLDENEAGLE DVB-T is designed for stand alone DVB-T monitoring at the transmitter site or in the coverage area.

Through RF and/or ASI inputs, the unit sequentially monitors a set list of channels and continuously ensures that your DVB network complies with both legislation and your expectations.

GOLDENEAGLE DVB-T offers TV broadcasters, TV Content providers, regulation authorities and service providers truly innovative functions such as multi-channel monitoring, audio/video streaming and recording, automatic scanning and remote control GPIOs (General Purpose Inputs/Outputs).



### Signal & Data Monitoring

- Track the real-time status of your signal 24/7/365
- Automatic band scanning alerts you to any potential sources of interference or pirate transmissions
- Sequentially monitor a set list of channels (up to 20 per receiver)
- Monitor DVB-T
- RF and/or ASI inputs enables RF and MPEG analysis in a box
- SFN and RF spectrum monitoring
- Customisable parameters to trigger alarms
- Instant notification of any out-of-tolerance condition

### Real-time & Recorded Measurements

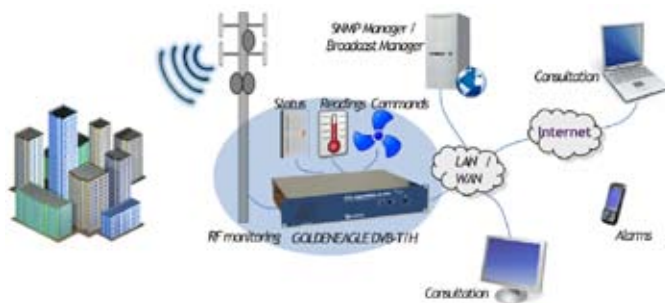
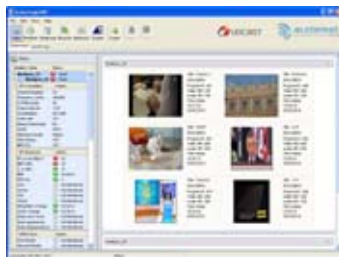
- Stores all captured values for 30 days enabling historical analysis
- Recorded measurements and logs with track performance to identify trends
- Graphical display & report generation
- Real-time remote measurement focusing on selected channel
- MPEG Error Monitor (TR 101 290)
- Transport Stream Template Monitoring: compares TS Structure to user-defined reference with alarms on variance
- With an ASI input, GOLDENEAGLE DVB-T can also analyze and monitor a Transport Stream (MPEG2-TS)

### Picture control

- View what your audience sees with real-time streaming to your desktop
- Investigate effect of changes to the viewer's experience
- Schedule up to 10 daily recordings

### Powerful yet Simple Control

- Access, configure & control all equipment at the transmitter site with remote control over TCP/IP
- With its Ethernet interface, the GOLDENEAGLE DVB-T can be controlled remotely using the user-friendly software supplied
- ScriptEasy and MasterView for I/O configuration and status visualization
- Compatible with any SNMP-Based management system such as Audemat's Broadcast Manager (page 17).



Overview of Signal Monitoring Network with GOLDENEAGLE DVB-T

Also Available...

## DVB-T/H Monitoring Silver



A smaller, more affordable version of the GOLDENEAGLE DVB-T/H, the DVB-T/H Monitoring Silver has been designed for smaller stations and markets and/or budget conscious broadcasters.

The DVB-T/H Monitoring Silver enables a user to monitor up to 40 DVB multiplexes/programs using one DVB receiver.

The DVB-T/H Monitoring Silver can monitor all main RF and TR 101290.

Available in 3 versions:

- RF
- ASI
- RF & ASI

# GOLDENEAGLE DVB-T2

## Signal Monitoring for DVB-T2 Networks

New!  
Available Now

Audemat's GOLDENEAGLE DVB-T2 is a powerful and professional yet affordable solution for standalone DVB-T2 monitoring at the transmitter site or in the coverage area. The unit sequentially monitors a set list of channels and continuously ensures that your DVB-T2 network complies with your expectations.

GOLDENEAGLE DVB-T2 offers innovative functions such as multi-channel monitoring (up to 20 channels), audio/video streaming, scanning of the band and remote control GPIOs (General Purpose Inputs/Outputs).



### Signal & Data Monitoring

- Track the real-time status of your signal 24/7/365
- Sequentially monitor a set list of channels (up to 20)
- SFN monitoring\*
- Customisable parameters to trigger alarms
- Instant notification of any out-of-tolerance condition

### Real-time & Recorded Measurements

- Stores all captured values for 30 days enabling historical analysis
- Recorded measurements and logs with track performance to identify trends
- Graphical display & report generation
- Real-time remote measurement focusing on selected channel
- Transport Stream Template Monitoring: compares TS Structure to user-defined reference with alarms on variance\*

### Picture control

- View what your audience sees with real-time streaming to your desktop
- Analyze changes and problems from the viewers' perspective

### Powerful yet Simple Control

- Access, configure & control all equipment at the transmitter site with remote control over TCP/IP
- Front panel screen display alarms at a glance and allows network configuration
- With its Ethernet interface, the GOLDENEAGLE DVB-T2 can be controlled remotely using the user-friendly software supplied
- Optional extended transmitter remote control capabilities: 5 slots available for GPIO boards (max. 1 metering board)\*
- ScriptEasy and MasterView for I/O configuration and status display\*
- Compatible with any SNMP-Based management system such as Audemat's Broadcast Manager.\*

\*Contact us for availability



### Monitoring



### Analysis



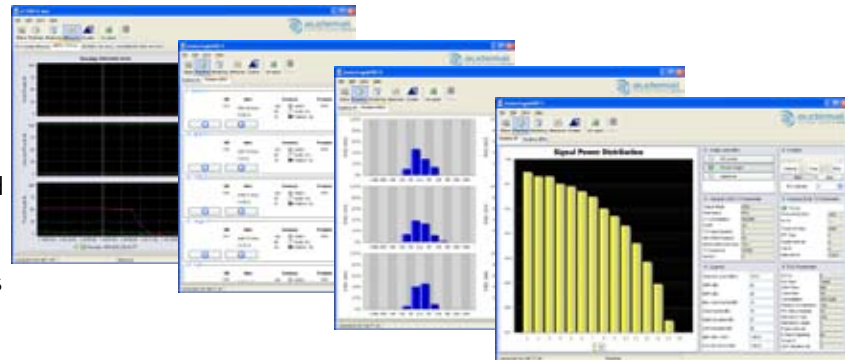
### Telemetry



- ◆ A complete 24/7 DVB-T2 monitor
- ◆ A powerful DVB-T2 signal analyzer
- ◆ An amazing facility control device

... in a single box

Recorded and real time measurement on the remote application



## OPTIONS

- **SFN**  
Check the integrity and stability of your SFN network
- **Transport Stream Analyzer**  
Monitor and Analyze the TS in details
- **Picture control**  
Remotely check the quality of the video
- **Telemetry**  
With 1 Metering board, 1 Status board and 1 Command board, monitor the whole facility without any development skill using ScriptEasy software



# GOLDENEAGLE ATSC

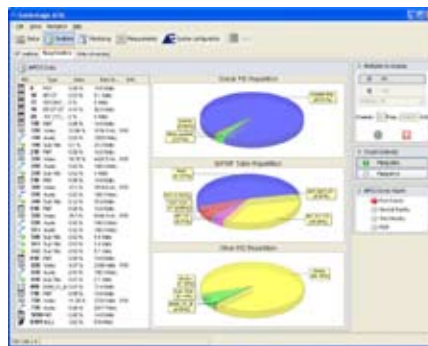
## Signal Monitoring for ATSC Networks

Audemat's GOLDENEAGLE ATSC is a powerful and professional yet affordable solution for ATSC signal monitoring. It can be deployed at the transmitter site for continuous monitoring or in the coverage area to collect field measurements.

The unit sequentially monitors a set list of stations and continuously ensures that your broadcast network complies with both regulations and your expectations. With its Ethernet interface, the GOLDENEAGLE ATSC can be controlled remotely using the user-friendly software supplied or an SNMP-based network software package such as Audemat's Broadcast Manager.

### Advanced RF & MPEG2 monitoring

- ATSC broadcast band scanning
- Monitor up to 20 or 40 different channels
- Automatic Scan alerts you to any potential sources of interference
- RF or ASI input (depending on version)
- Track your signal status 24/7/365
- Alarm management and monitoring for main parameters including RF, pilot & MER (level) plus transport stream errors (1st, 2nd, & 3rd priority, PAT PID & PSIP errors, etc.)
- Instant notification of any out-of-tolerance condition
- Combine RF & MPEG2 monitoring in the same unit for reduced costs
- MPEG-TS analysis with data repartition & real-time MPEG error displays MPEG analysis from decoded TS from RF receiver or optional ASI input



MPEG analysis

### Real time measurements, analysis & content display

- At-a-glance view to alert user to active alarms or issues
- Record measurements and logs to track performance and identify trends
- Analysis tools: constellation display, eye diagram & spectrum analysis
- View what your audience views with audio/ video streaming to your desktop

### Extensive Control On-site & Remotely

- Front panel touchscreen display
- Access, configure & control all equipment at the transmitter site with remote control over TCP/IP
- Optional extended transmitter remote control capabilities: 3 slots available for GPIO boards (max. 1 metering board)
- ScriptEasy and MasterView for I/O configuration and status display (page 21)
- Using TCP/IP, GOLDENEAGLE is compatible with SNMP based Managers such as Broadcast Manager (page 17)



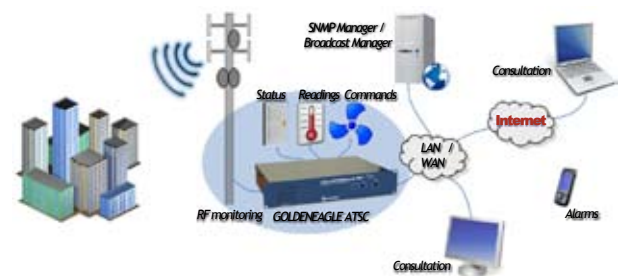
### APPLICATIONS

#### On-site and Off-Site Monitoring for:

- **Broadcasters** - Supervise Network and check transmission quality
- **Regulation authorities** - Ensure Compliance
- **Service providers** - Provide monitoring services to TV channels
- **National TV networks** - offer a centralized management solution



Off site monitoring



On site monitoring

# SLA Monitor

## Quality Monitoring System for TV

**New!  
Available Now!**

SLAs (Service Level Agreements) are contracts between service providers and their customers. These contracts determine the level of service to be provided to the client, the criteria for assessing the quality of service (QoS), and the financial compensation associated with their non-compliance.

Audemat has developed the SLA Monitor software package to provide the user with an objective tool for monitoring the QoS offered including the rate of service availability and the duration of interruptions. This data can then be used to establish the need for financial compensation.

An intuitive web interface enables the user to set parameters as required, to view the data stored on a server and to generate reports.



### APPLICATIONS

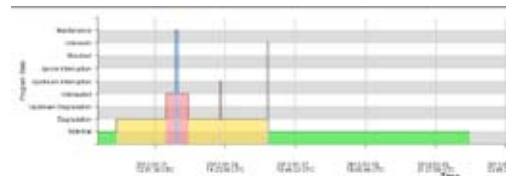
The SLA Monitor is a tool for Network Broadcasters to enforce SLA contracted with TV content providers in a fair and objective manner.



Status of all active SLAs



Specific SLA Performance



Monitored program timeline

### Collecting data

- Data collected from remote monitoring units:
  - » existing Audemat units
  - » compatible SNMP enabled monitoring unit (on demand)
- Parameters objectively measured and stored in a secure database.

### Managing data

- SLA Monitor configured to exactly match your existing Service Level Agreements
- Criteria for quality set by the user
  - » Availability rate
  - » Guaranteed return to service
- Errors marked either as interruption of service or degradations according to their types
- Specific monitoring points can be identified so errors initiated outside your network are ignored
- Alarms triggered when nearing guaranteed return to service time
- Intuitive web interface

### Views and reports

- Always know the status of service
- Share relevant information with clients
- HTML or pdf format automatic and manual reports
- Resolve disputes with verified data
- Establish grounds for fair financial compensation based on the SLA.

### KEY FEATURES:

- Service quality measured and stored in a secure database
- Criteria for quality set by the user
  - » Availability rate
  - » Guaranteed return to service
- Weighting factor used to help calculate the financial penalties#:
  - » According to geographical location
  - » According to time and duration of the interruption
- Automatic and manual reports
- Alarms triggered when nearing guaranteed return to service time
- Compatible with any SNMP enabled monitoring unit on demand

# Contact us for availability of these features

# Broadcast Manager

## Software for Total Network Management

Audemat's Broadcast Manager combines professional hardware monitoring equipment with a powerful data server to provide you with a global network monitoring solution. This highly innovative and comprehensive software application will link a network of signal monitoring equipment and remote control units, enabling extensive alarm management and continuous monitoring of network performance from a single seat.



Broadcast Manager is a truly scalable solution that can be used as a simple monitoring system for a single station as well as a total control solution for an international network. Whatever the size, the status of the entire network can be visualized in one glance on cartographic view.

Using the Broadcast Manager, the alarms are received, stored, centralized and dispatched to the relevant personnel in real-time. All the data is accessible through many types of communication with secure and filtered access.

### View Your Entire Network At A Glance

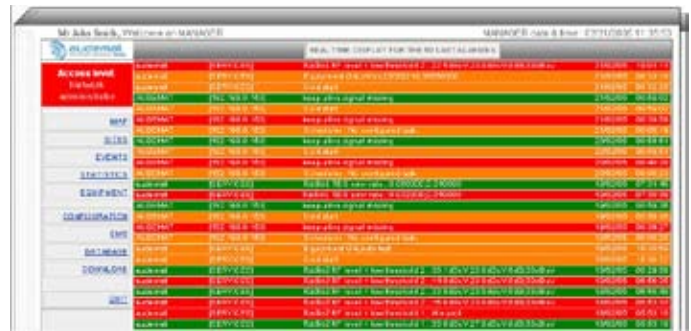
- Real time information about the entire network 24/7/365
- Uses broadcast monitoring network and transmitter site remote control to form complete monitoring network
- Configuration and control of remote monitoring equipment
- Continually logs and displays status of RF transmission, broadcast programs, equipment & sites
- Schedule automatic measurements and scans and log events
- Access real-time measurements on deployed monitoring units
- Statistics and alarm filters (date, type, severity, site, network, program...) to prove service availability and identify trends for preventative maintenance or planning filters

### Real time alarm management

- Always know the status of your network with multi-task management & continuous notification
- Real-time alarm centralization and storage and accurate, instantaneous dispatch
- Automatic Notifications with specific filters sent to the relevant personnel.
- User-selected notification method (by SMS, Email, Fax, SNMP) and time schedule
- Personalized messages to your station's requirements.
- View information in real time or via recorded files for further trend analysis
- Statistics for preventative maintenance

### Fully Featured Server Application

- Real-time, remote audio and video streaming to your desktop for viewing & measurement
- MEDIA center for recorded audio and video content
- 3D Scanning representation of historical scans
- Map visualization of global positioning and sites' status
- Quickly spot sites with alarms and drill down to relevant parameter via several levels of zoom
- Web interface & integrated elements of the specific remote applications give you full access to your remote unit.



List of current alarms

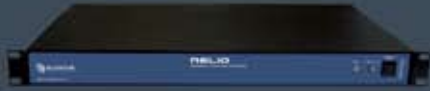


View of media

Supervisory Control

# Audemat tools for Facility Control

## HARDWARE



Relio



Mini Control Silver



IP2CHOICE



GPIO boards for Audemat Products



## SOFTWARE

Give intelligence to your hardware

ScriptEasy Suite

- ScriptEasy
- EasyLink



## SUPERVISORY CONTROL



View your site



MasterView

Multisite Network Management



Broadcast Manager

# IP2Choice

## Remote Facility Control

Audemat's IP2CHOICE is a modular system for management and monitoring of remote equipment. It can be configured to connect with any equipment at a remote site through serial ports, status or metering inputs, commands (relays) or IP.

All units linked to the IP2CHOICE can then be monitored and controlled locally and remotely via a variety of communications modes (ADSL, LAN, GSM, PSTN...).

- Control & monitoring of equipment at a remote site
- Connect to the external unit through digital/analog/audio inputs, relays, serial ports or through IP (SNMP, PING)
- Remote communication through LAN/WAN, 3G, GSM, CDMA, PSTN...
- Number and type of GPIOs configurable to meet the demands of the site
- Continuous monitoring and logging of status, values or levels
- Triggering of automatic actions on out of tolerance conditions or on set schedules
- Notifications via Email, SNMP and optional Voice/DTMF Interface
- ScriptEasy software for automatic actions and remote control & MasterView software for end-user views of data and control (see page 21)



- Communicate and control external equipment using SNMP protocols
- Easily manage and communicate with serial equipment using EasyLink (see page 18) or tunneling
- Fully compatible with Audemat's Broadcast Manager (see page 17)
- Solution for all budgets thanks to modular configuration with 12 available I/O slots

Type of interface	Max number of boards	Number of I/O per board	Max number of I/O per unit
Metering (analog inputs)	5	8	40
Status (digital inputs)	8	16	128
Commands (relay outputs)	8	8	64
RS232 port	NA	3	3 + 4 x USB *
Audio (inputs)	1	2	2

\*With optional serial-USB port converters.

# Relio

## Remote Facility Control



The Audemat Relio system is a perfect solution for broadcast monitoring, communications, IT infrastructure management, facility control and security applications.

Relio enables a user to permanently ensure that equipment status and levels are within tolerance and normal conditions. You can also create scripts that will trigger automatic actions upon detection out of tolerance conditions.

A choice of convenient I/O panels with simple screw terminal connectors makes connection to real world signals easy.

Relio systems are IP-enabled to allow remote monitoring from virtually anywhere. The Relio includes ScriptEasy software that allows the user to drag and drop I/O data and logic functions to create control scripts.



### Relio features:

- 9 serial ports (USB, RS232) for API, EasyLink & IP tunneling
- Easy to use connection panels with high-density SCSI snap lock cables
- 64 digital inputs, 64 control outputs, 24 analog inputs
- SNMP GET/SET and PING commands.
- Voice/DTMF interface as standard
- Connects to a phone line, an Intranet network, Internet, a GSM network in order to send alarms or status via email, SMS, SNMP trap, Voice message

# Mini Control Silver

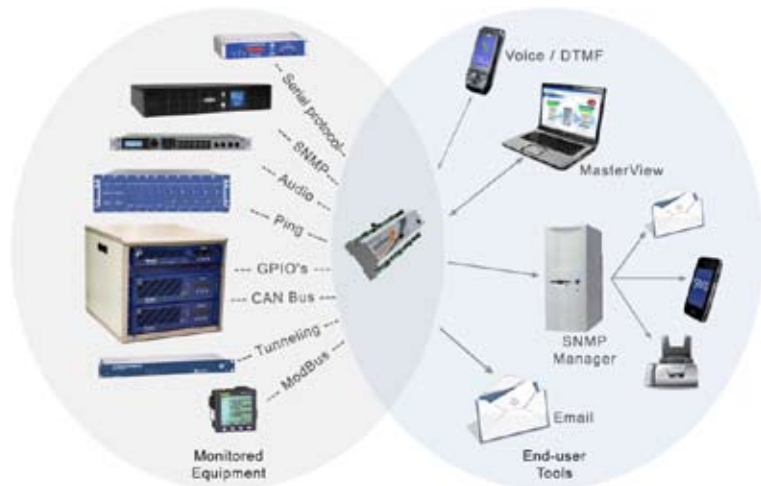
## Compact & Powerful Remote Facility Control

The Audemat Mini Control Silver is a deceptively compact system for management & monitoring of remote equipment. It offers a wealth of features at a very affordable price.


The unit can be configured to connect with any equipment at a remote site through serial ports, status or metering inputs, commands (relays) or IP. Despite its compact size, the Mini Control Silver offers up to 8 analog inputs, 8 digital inputs and 8 command relay outputs.

All units linked to the Mini Control Silver can be monitored and controlled both locally and remotely via a variety of communication modes. Should an issue arise, notifications can be sent via Email, SNMP and an optional Voice/DTMF Interface. For maximum reliability, the unit can offer audio backup at the transmitter site.


Users can access the site from anywhere via an embedded web server and, with ScriptEasy & optional MasterView software, view all the readings and set up automatic actions. SNMP can also be used to read status or meters from a remote manager.



Overview of the facility management capabilities



*"It's very powerful for its tiny size."  
"A very effective control system that's easy to install and access." NAB 2010 Pick Hit Award judges*



*"Super inexpensive but feature laden"  
"About the most bang for the buck in the whole area of remote facilities control" techINK's 2010 Award judges*

### KEY FEATURES:

- Control and monitoring of any equipment at a remote site
  - » Through GPIOs, ModBUS, SNMP, CAN / USB / Serial port, DTMF/Voice commands...
- Comprehensive event and action management using Audemat's ScriptEasy, the smartest facility management software suite on the market.
  - » Enables manual or automatic control
  - » Sends relevant automatic or preset notifications via Email, SNMP and optional Voice/DTMF Interface
- Audio backup for transmitter sites
  - » Prevents audio interruption in case of unexpected issues
- Maintenance mode
  - » Avoids unnecessary alarms during maintenance or replacement of devices
- Fully compatible with Audemat's Broadcast Manager as well as any SNMP Manager
  - » With alarm centralization, statistics, filters, notification forwarding ...
- Mini format: compact and light, the Mini Control Silver can fit anywhere (DIN rail mountable)

### Also Available...

#### Accessories for Remote Facility Control Units

- GPIO boards – metering, analog, status inputs and relays
- External Modems for any communication type
- Environment : Temperature, hygrometry, voltage, current and associated accessories
- Cabling & Connectors – DB25 male & female, SUB-D25, Patch panels, Adaptors & DIN Rails

#### Software Options:

- MasterView- Status visualization and remote user actions
- Phone Alerts - voice alarm & DTMF control
- EasyLink - monitoring and control of third party equipment.



Script easy

# ScriptEasy Suite

Give intelligence to your hardware

The ScriptEasy software suite is a powerful and innovative graphical application that makes it easy and intuitive to configure, control, and monitor even the most complex and challenging of facilities.

The intuitive interface, consisting of the ScriptEasy Designer and the MasterView modules, supports easy development and allows real time status display and management.

## Simple, User-Friendly Scripting & Control

- Innovative Software for writing simple or complex scripts
- Enables Remote Equipment configuration & monitoring
- Initiate automatic actions based on scripts
- Alarm activation according to threshold values
- Alarms via Email, SNMP and Voice/DTMF Interface
- Technical site management: electrical consumption & protection, maintenance services, security
- Preventative Maintenance - alert operator to minor problems before they become major failures
- Secure and filtered access
- Management of communication with serial equipment using EasyLink or tunneling
- Fully compatible with Audemat's Broadcast Manager

## DESIGNER MODULE

User-friendly **Graphical interface** with drag & drop capability

With this highly intuitive interface, you can:

- Drag and drop any function into a graphic interface.
- Establish relationships between objects
- Generate scripts for automatic responses to various conditions
- Simulate your script for testing & debugging
- Use Play Mode for user remote control
- Create your own script using many objects: Inputs and Outputs, Math expressions, Logic elements (AND, OR, Inverter...), Scheduler, Timer and Counter, Alarms, Action Buttons for live control



Script creation with the Designer module



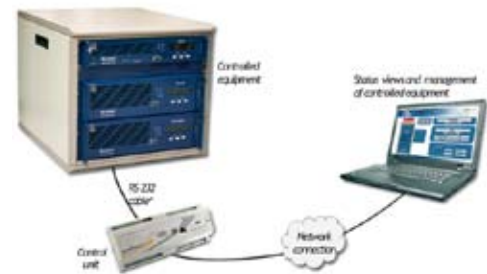
## APPLICATIONS

Used to configure and control multiple equipment over various sites, ScriptEasy enables:

- Remote Control & Monitoring of Equipment for Broadcast sites
- Technical Site Management & Operational Intelligence
- Preventative Maintenance

## EASYLINK

EasyLink is a complete, ready-to-use, control solution for remotely-located equipment. On one side, a WorldCast Systems unit is linked to the remote equipment via a simple cable connection and a driver enables communication between the two using the remote equipment's native protocol (serial, SNMP, ModBus...). On the other side, an intuitive and user-friendly interface gives access to readings and control functions.



- Pre written interface, no programming needed
- Multiple MasterView views included
- Load only the EasyLink script, or merge with an existing script using traditional I/O
- Connect a transmitter or other broadcast equipment supported by EasyLink
- Access hundreds of data and control points (depending on monitored equipment)
- Access measurements and control functions with only a single cable connection between the facility control device and the external equipment
- Save hours of planning and installation time
- Provides a 'plug-and-play' solution
- Access measurements that cannot be obtained with traditional I/O wiring connections
- Save the traditional I/O connections for other equipment
- Views can be customized to fit your needs
- Easily duplicated from site to site

# ScriptEasy Suite

Give intelligence to your hardware

## MASTerview MODULE

View your site

MasterView provides remote monitoring and control of the facility management unit from virtually anywhere.

Each view can contain as much information from the remote site as desired. MasterView comes in two parts:

### MasterView Designer to create and customize your view:

It is integrated into ScriptEasy. Pictures, text, and other graphic elements can be added as desired. Different views can be created to enable the user to group the information or to provide a specific status.

### MasterView Viewer to remotely visualize the status, the measurement and launch actions:

The Viewer is a program designed to be used even by non-technical personnel. The relevant information is displayed on a single page.

MasterView is supplied as standard or as an option depending on the facility management unit purchased.

### MasterView web version\*

It will allow users to access MasterView display on their iPhone or 3G-enabled device to check the status and performance of their network wherever and whenever they want.



\*: Available in 2012



## KEY FEATURES

- MasterView Designer allows customisation of your display
- Add pictures, text, and other graphic elements
- With MasterView Viewer remotely view status / measurements and launch actions
- Easily understood by non-technical personnel
- Displays real-time or historic status & readings...

The ScriptEasy and MasterView software applications are delivered with the following products:

ScriptEasy as standard	MasterView as standard	MasterView as option
<b>REMOTE CONTROL</b>		
Relio	✓	
IP2CHOICE	✓	
Mini Control Silver		✓
<b>SIGNAL MONITORING</b>		
GOLDENEAGLE FM	✓	
FM Monitoring Silver		✓
GOLDENEAGLE DVB-T	✓	
DVB-T/H Monitoring Silver		✓
GOLDENEAGLE ATSC	✓	
GOLDENEAGLE TV	✓	
GOLDENEAGLE HD	✓	
GOLDENEAGLE AM	✓	
GOLDENEAGLE DAB/DAB+/T-DMB	✓	
<b>AUDIO PROCESSING</b>		
Digiplexer HQsound		✓





## WorldCast Systems

**Head Office:**

20, av Neil Armstrong  
Parc d'Activités J.F. Kennedy  
33700 Bordeaux-Mérignac  
France

T: +33 557 928 928

E: [contact@worldcastsystems.com](mailto:contact@worldcastsystems.com)

**UK Office:**

Whiterock Business Park  
729 Springfield Road  
Belfast, BT12 7FP  
UK

T: +44 (0) 28 90 677 200

E: [info@aptcodecs.com](mailto:info@aptcodecs.com)

## WorldCast Systems Inc

19595 NE 10th Avenue Suite A  
Miami, FL 33179  
USA

T: +1 305 249 3110

E: [ussales@worldcastsystems.com](mailto:ussales@worldcastsystems.com)



[www.WorldCastSystems.com](http://www.WorldCastSystems.com)

h y n  
h c c

c

h y

c

h y

h y

c

h c

#### **Heynen werkt voor vernieuwers**

Hierbij een document van Heynen. Deze producten worden door ons exclusief vertegenwoordigd in de Benelux. Voor een demo of offerte kan u rechtstreeks contact opnemen met onze account managers.

#### **Heynen travaille pour des innovateurs**

Voici un document de Heynen. Nous représentons ces produits exclusivement pour le Bénélux. N'hésitez surtout pas de demander votre personne de contacte pour un démo ou une proposition de prix.

#### **Heynen works for Innovators**

Here is a document from Heynen. We represent these products exclusively for the Benelux. Please contact our account managers for a quotation or demonstration.

#### **Heynen Leistung für Neuerer**

Anliegend eine Dokumentation von Heynen. Wir haben die exklusive Vertretung dieser Produkte für den Benelux-Raum. Bitte nehmen Sie Kontakt auf mit unserem Kundenbetreuer, falls Sie ein Angebot oder eine Vorführung benötigen.

[heynen@heynen.com](mailto:heynen@heynen.com) • [www.heynen.com](http://www.heynen.com) •