

ON-SITE STATION MONITOR (OSM-4)

CASCADE TECHNOLOGY CORPORATION



FEATURES

- Provides EAS compliance log validation at server*
- Modular design for flexibility and compatibility
- Time stamped ENDEC activity reporting
- AM / FM / WX / (D)TV / UHF / VHF EAS audio analysis
- Internet connection regularly monitored by server
- Software update and remote setup via internet

DESCRIPTION

The On-site Station Monitor is a RU2 rack mount unit designed primarily to monitor on-site received and broadcast EAS alerts (on-air or direct audio) at stations required to carry these alerts.

When the unit detects an EAS alert, the full FSK text (including the two repetitions) are captured along with any voice audio and sent to the server for analysis and reporting through an Ethernet connection to the internet.

The base unit provides ENDEC output activity monitoring (using a RS232 digital input). In addition to monitoring the ENDEC serial output, expansion cards allow the OSM to monitor up to 4 audio sources which may include RF on-air signals or output from available monitor receivers.

The OSM is intended to monitor the actual on-air audio in order to confirm the actual broadcast of an EAS alert.

APPLICATIONS

- Individual on-site station ENDEC monitoring
- On-site, off-site audio or RF signal monitoring
- EAS Weekly / Monthly Required Test verification
- Ethernet / Internet connection validation
- Spurious EAS alert detection
- Alternative to RSM units where remote monitoring is impractical due to low signal levels.

The ENDEC monitoring function forwards information on all EAS alerts received to the server allowing the server to identify spurious alerts. With the on-air monitoring (audio or RF) the OSM can confirm actual broadcast of intentional or spurious EAS transmissions.

The OSM is regularly contacted through the internet by the server to assure connectivity. Should there be a connection disruption, the OSM stores alert information and updates the server as soon as the connection is restored.

The OSM is required in situations where station location and/or signal strength make remote monitoring impractical and/or impossible.

The OSM may be setup locally using the graphic display interface or remotely via internet from the Emergency Management Center.

*Requires OSMM-AFW or OSMM-AUDIO expansion card



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MODULES AND OPTIONS:

OSM Modules (OSMM):

Allows for monitoring different on-air signal types (AM / FM / WX / TV Audio / DTV Audio / UHF / VHF)

In addition to monitoring the RS232 output of an ENDEC, up to 4 input modules may be added:

- OSMM-AFW (AM / FM / WX)
- OSMM-AUDIO
- RSMM-UHF
- RSMM-VHF
- SatStream EAS Satellite Receiver (*One per unit*)

The OSMM-SC module may also be added in addition to the 4 input modules.

OSMM-SC Module:

EAS Second Chance EAS generation with broadcast quality balanced output. The module allows the Emergency Management Center to initiate an EAS alert at stations which have not broadcast an important or critical alert. Normally requires OSM-DISPLAY. See ESC Datasheet for more information.

OSMM-AFW (AM-FM-WX) Module:

AM RF input monitors (520 - 1710 KHz)
FM RF input monitors (88.1 - 107.9 MHz)
WX NBFM input monitors (162.4 - 162.55 MHz)

The OSMM-AFW module can be software set to any of these modes and frequencies.

OSMM-AUDIO Module:

Monitors on-air EAS signals (from local station monitor output). This audio must be derived from the actual transmitted signal

NOTE: Including the OSMM-AFW or OSMM AUDIO module option allows the server to generate a report of EAS events received and transmitted which can be compared with station logs. The server can be configured to send reports to stations automatically.

RSMM-VHF / UHF / Satellite Modules (separate modules):

VHF-L RF input monitors low band (30 - 50 MHz)
VHF-H RF input monitors high band (148 - 162 MHz)
UHF RF input monitors (450 - 480 MHz)
SatStream EAS receiver module (960-1450 MHz)

Typical installation at AM Broadcast Station:

- OSM Base Unit (Accepts digital RS232 output from ENDEC) to communicate ENDEC activity to the server.
- OSMM-AFW for AM on-air RF monitoring
- OSMM-SC -- Local EAS generation (broadcast quality balanced output)

This configuration monitors actual transmitted on-air program and ENDEC activity. It also provides a second chance to deliver EAS if normal distribution channels fail.

Typical installation at AM/FM Broadcast Station:

- OSM Base Unit (Accepts digital input from ENDEC) to communicate to the server of EAS receipt at ENDEC
- OSMM-AUDIO from station AM monitor receiver
- OSMM-AUDIO from station FM monitor receiver
- OSMM-SC local EAS generation (broadcast quality balanced output)

This configuration monitors station receiver audio and ENDEC unit for EAS, and allows for on-site EAS generation. It also provides a second chance to deliver EAS if normal distribution channels fail.

OSM-DISPLAY Option:

This option allows for on-site customizing alarms, alerts, and running system tests (This is done with the server / software for base units).

With the Second Chance option, the display shows any EAS deemed critical by the EMC and allows user interaction.

OSM-MODEM Option:

The Dial-up Modem option provides a modem using a standard RJ11 connection in place of standard RJ45 Ethernet. Dial-up telephone connection does not support capture of the voice portion of the EAS.

Base unit does not include the monochrome graphic display with user interface (as shown).

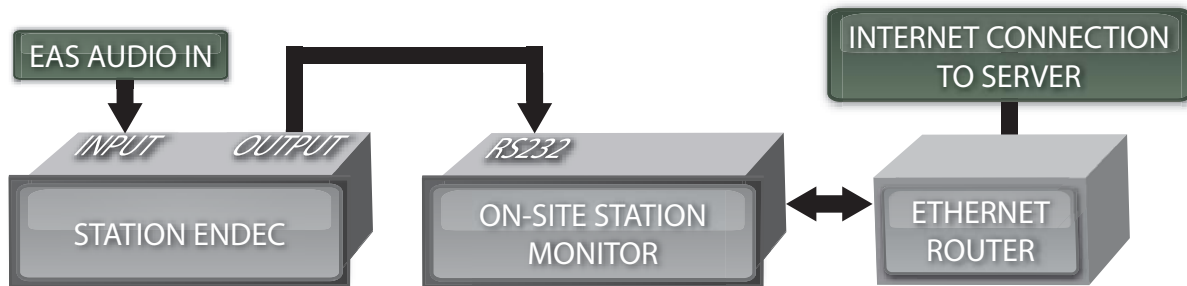
Requires reliable Ethernet to Internet connection or dial-up connection option.



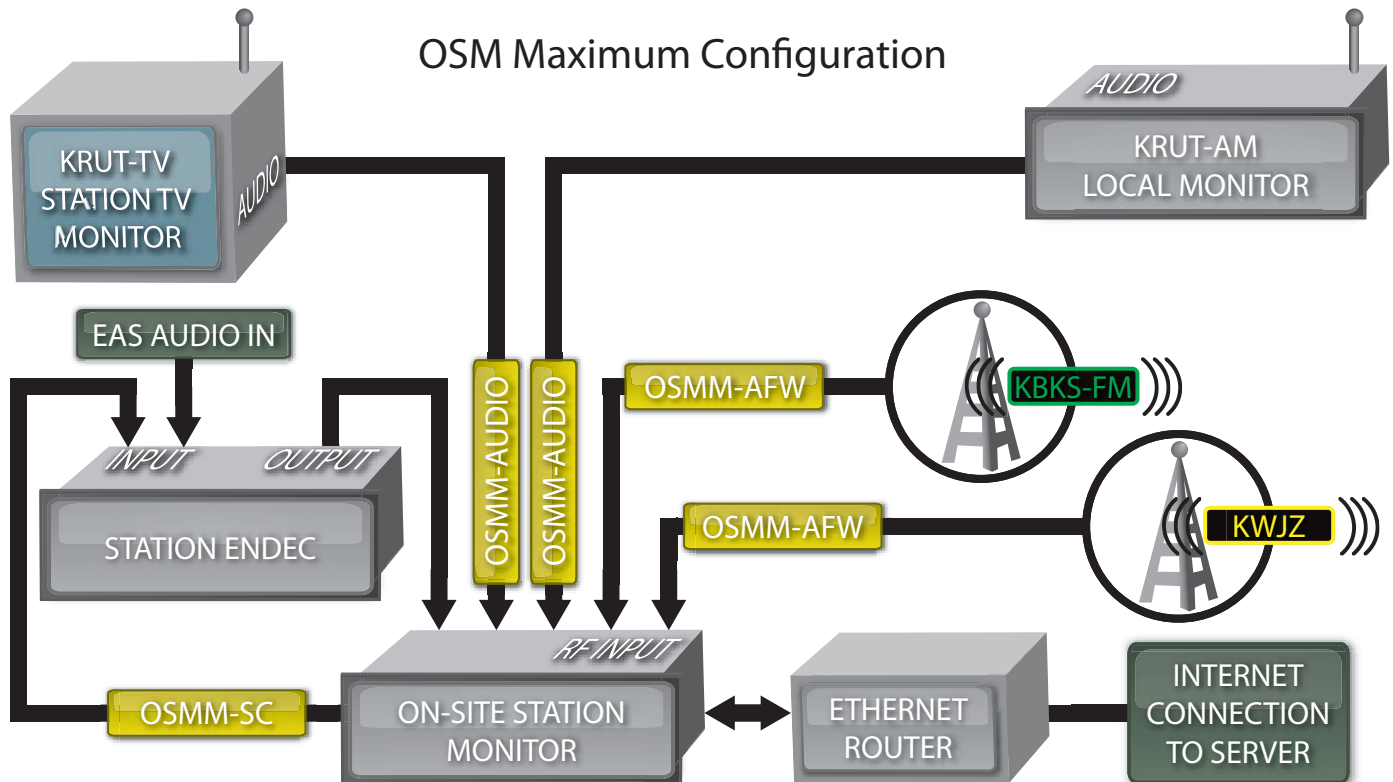
OSM-4 SPECIFICATIONS

| | |
|-----------------------------------|---|
| Input ENDEC Serial Port | DB9 RS232 receptacle. |
| Audio Output | Balanced 600 ohm professional audio XLR 3 Pin Connector |
| Display | Monochrome graphic FSTN with LED backlight 128 x 64 pixels |
| Output Serial Port | Standard RJ45 Ethernet Jack |
| Power requirements | 110 -130 VAC, 60 Hz 60 VA typical configuration |
| Power Supply | Low noise linear mode |
| Environmental requirements | 10 - 40 C, 5 - 95% relative humidity |
| Dimensions | 2RU Rack Mount Panel and case: 19" wide x 3.5" high x 12" deep (48.3 x 8.9 x 30.48 cm) |

OSM Minimum Configuration



OSM Maximum Configuration



OSM Installation at KRUT also monitors nearby stations KBKS-FM and KWJZ

