

## Multi-System Controller

Multi-System Controller (MSC) for Redundant Television and Radio Transmission Systems

The GatesAir's MultiSystem Controller (MSC) is engineered to ensure your television or radio broadcast is seamless—even in the event of transmitter failure. This nextgeneration multisystem control platform extends the redundancy capabilities of our transmitters to both new and legacy transmitter platforms—the first system on the market that integrates legacy transmitters into N+1 systems.\*

The MSC incorporates the latest advances in technology, reflecting the GatesAir's commitment to innovation and history as the industryleading provider of redundancy solutions for television and radio transmitters.

\* Requires an optional MSC I/O module

### Product Features

- Factory scalable and configurable for N = 1 to 8
- Frontpanel control and readout of system status
- Operation in automatic or manual mode, and by local or remote control
- Local and remote selection on the front panel to lock out remote inputs during servicing
- One of N logic output to control an external video or audio router
- Ethernet interface to each transmitter and RF switch control board for easytomanage connections
- External program router control — routes the correct service to the redundant transmitter
- Fast, reliable operation



- Fail-safe — current system configuration is retained in the event of MSC fault/power failure
- Compatible with 4port coaxial switches from multiple vendors
- Remote software upgrades available via network connection. Latest software is available on the GatesAir Service Portal (requires a Windows®-based PC, not provided)
- Sleek, elegant GUI — easy navigation of system level or individual transmitter control and monitoring with a single IP connection
- Screensaver with wakeup function to extend life of backlight and prevent accidental frontpanel button operation
- SNMP (Simple Network Management Protocol) network agent for broadcast manager operations
- External interlock monitoring — can be removed for servicing without interruption of the interlock chain
- Programmable N+1 priority — for backup of the most important programming during multiple main transmitter outages

\*Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

## Product Details

### Cost-effective, Reliable, Flexible

At GatesAir, we know on-air time is critical. For that reason, the Multi-System Controller is designed to maximize on-air reliability for broadcasters with digital networks, and can be configured across various applications—main/alternate, N+1 and dual transmitter systems.

As an N+1 controller, the MSC is a cost-effective, reliable backup system with a simple-to-use interface, making it ideal for larger network operators with multiple transmitters at each site. As a dual transmitter system controller, the MSC enables increased power capability, operational flexibility, and reliability by combining two or more transmitters.

### How it Works

The MSC monitors the operating status and parameters of the main transmitters and keeps the +1 reserve in standby. When the MSC detects a failure, it safely disables the main transmitter and activates the standby transmitter.

Users have the option of monitoring and controlling the MSC through the front-panel push-button controls with an alpha-numeric display, or remotely via a web browser or optional, parallel I/O.

In N+1 applications, the MSC monitors and controls each main or N transmitter. If the MSC detects RF output or other failure output that exceeds the user's configured time delay, it automatically sets the frequency of the reserve or +1 transmitter to that of the failed main transmitter. It then routes the correct video/audio to the reserve, changes the configuration of the RF switching system to place the reserve transmitter on air, and turns it on. The failed main transmitter's RF output is simultaneously routed to the dummy load, where it can be tested and repaired without further broadcast interruptions.

If a second main transmitter fails, the reserve will back up the highest-priority transmitter.

### MSC Compatibility

The MSC is designed specifically for GatesAir transmission products, including Maxiva™ UHF (ULX and UAX) DTV transmitters, Platinum™ VHF (VLX and VAX ) DTV transmitters and Platinum Z, ZX® and HPX® FM and HD Radio™\* transmitters. With an optional I/O module, the MSC also works with most legacy and other vendors' transmitters in N+1 systems.

\*HD Radio™ is a registered trademark of iBiquity Digital Corp.



## Specifications

*Specifications and designs are subject to change without notice*

- 19 in. (48.2 cm) rack-mountable unit, 1RU high
- Approximately 18 in. (45.7 cm) deep
- Weight – approximately 8 lbs (3.6 kg)
- Universal power supply input with automatic selection; accepts any line voltage 90 to 264 VAC, 50/60 Hz
- Cooling – approximately 100 CFM

### Options

System Multi-Controller (SMC): The System Multi-Controller (SMC) adds system control to the standard MSC controller.

### Features:

- Scheduler — enables transmitters to be turned on and off automatically per a user-defined schedule with two periods per day; scheduler can set a one-week schedule for the entire year and modify individual days for fast, easy schedule programming
- Customizable overall block diagram — allows users to label each transmitter with operating frequency and select a layout of left to right or right to left to match the building floor plan
- Transmitter data logging with search capability — assists users in identifying operating parameter trends
- Data graphing — shows a parameter trend over time
- Screensaver with wakeup function — extends the life of backlight and prevents accidental front-panel button operation
- 1RU EIA rack-mount chassis
- Universal power supply input with automatic selection, 90 to 264 VAC input, 47 to 63 Hz, 65 Watts

### MSC Panel PC Display Unit

#### Features:

- Ethernet interface with a 4x6 in. touch-screen control
- GUI mounted on a 3RU EIA panel for easy navigation of functional areas of MSC and transmitters

### MSC I/O Module

General-purpose I/O module for interfacing to the MSC

#### Features:

- Enables legacy transmitter integration into N+1 systems
- Parallel I/O control to the MSC
- 1RU EIA rack-mount chassis
- Opto-isolated and RFI-filtered command outputs, status inputs and analog metering inputs
- Dual ethernet ports: one for operation and one for user configuration
- GatesAir micro-module for easy software updates using our In-System Programming (ISP) software
- Universal power supply input with automatic selection, 90 to 264 VAC input, 47 to 63 Hz, 65 Watts



## MSC IP Module

IP module for N+1 to Platinum Z transmitter interface

### Features:

- Platinum Z RS-232 serial-to-ethernet converter for interfacing of basic operating parameters and control from the Platinum Z transmitter to MSC; enhanced data provision (for logging and graphing), scheduling and control by the SMC
- GatesAir micro-module for easy software updates
- Dual ethernet ports: one for operation and one for user configuration
- Enhanced Platinum Z serial protocol and transmitter firmware — enables additional commands for remote switching of exciters and IPAs via the SMC

