



# Multi-System Controller

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



The GatesAir's Multi-System Controller (MSC) is engineered to ensure your radio or television broadcast is seamless — even in the event of transmitter failure. This next-generation multi-system 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 industry leading provider of redundancy solutions for television and radio transmitters.

\* Requires an optional MSC I/O module

## Product Features

### Multi-System Controller

- Factory scalable and configurable for N = 1 to 8
- Front panel 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 easy to manage 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 4 port 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 front panel 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.*

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## Product Details

### Cost-effective, Reliable, Flexible

At GatesAir, we know on-air time is critical. For that reason, the MultiSystem 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 pushbutton 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, Flexiva VHF (FAX and FLX) FM and HD Radio 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 Xperi® Corporation.*

## Multi-System Controller

### Specifications

Size	19 in. (48.2 cm) rack-mountable unit, 1 RU x ~18 in. (45.7 cm) deep
Weight	Approximately 8 lbs. (3.6 kg)
Power Supply	Universal power supply input with automatic selection; accepts any line voltage 90 to 264 VAC, 50/60 Hz
Cooling	~100 CFM
<b>Options</b>	
Scheduler	Enables transmitters to be turned on and off automatically per a user-defined schedule with two periods per day; scheduler can set a oneweek 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
Data Logging	Transmitter data logging with search capability — assists users in identifying operating parameter trends
Screensaver	Screensaver with wakeup function — extends the life of backlight and prevents accidental frontpanel button operation
Rack Mount	1RU EIA rackmount chassis
Power Supply	Universal power supply input with automatic selection, 90 to 264 VAC input, 47 to 63 Hz, 65 Watts
<b>MSC Tablet Display Unit</b>	
Touch Screen Control	Wireless interface with touchscreen control
Interface	Tablet GUI mounted on a 4RU EIA panel for easy navigation of the MSC and transmitter functional areas
<b>MSC I/O Module</b>	
I/O module for interfacing to the MSC	
Parallel I/O control to the MSC	
Rack Size - 1RU EIA rackmount 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 micromodule 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	
<b>MSC IP Module</b>	
IP module for N+1 to Platinum Z transmitter interface	
Features:	
Platinum Z RS-232 serial to ethernet converter for interfacing basic operating parameters and control	
GatesAir micro-module for easy software updates	
Dual ethernet ports: one for operation and one for user configuration	