

# Modulus Comm Concentrator Firmware

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The Modulus Comm Concentrator Firmware is a compatible firmware for Modulus Comm, Radio & Cellular units. This code has increased Register, Destination and Event counts from the normal firmware's.

This Firmware is compatible with Modulus Units:

8x-5x00, 8x-5x02, 8x-5x03, 8x-5x04, 8x-5x11, 8x-5x12,  
8x-5x40, 8x-5x42, 8x-5x43, 8x-5x44, 8x-5x51, 8x-5x52,  
8x-5x60, 8x-5x62, 8x-5x63, 8x-5x64, 8x-5x71, 8x-5x72.

*This code will not run in COMM units with Mesh, Extended I/O or Audio.*

## Changes from the Normal Code

- Increase N Registers from 504 to 1000.
- Increase B Registers from 504 to 1000.
- Increase Communication Destinations from 32 to 64.
- Increase Communication Events from 128 to 250.
- Tag names for "B" and "I/O" Registers have a max length of 30 Characters; all other Tags have a max of 24 Characters.
- TLS email support ( No EIP version ).
- No Support for IOX on the backplane ( RS-485 Support only )
- No Support for the "?" command on SMS/Texting interface ( Cell units only ).
- No Support for individual Register Write enables.
- Add Mobile interface Write enables per line item.
- No Support for Pump Controller & PID
- Remove Master Latency and replace with Single Destination Latency w/ selector.

## Filenames (xxxxx = Version)

|                    |  |
|--------------------|--|
| MCMC2Kxxxx.SFS     | Concentrator Firmware for Cell and Comm units  |
| MCMxxxx.SFS        | Normal Comm Firmware – TLS email support       |
| MCMxxxxEIP.SFS     | Normal Comm Firmware – Ethernet IP support     |
| MCMCELLxxxx.SFS    | Normal Cellular Firmware – TLS email support   |
| MCMCELLxxxxEIP.SFS | Normal Cellular Firmware – Ethernet IP support |

## Installation and Switching between firmware's

Because of the different organization of the internal registers, there is a procedure for switching between the Concentrator and normal Cell or Comm code.

1. Make a backup of your configuration. This is done on the System | Miscellaneous web page or can be done from the front panel. The backup can be created on your computer, on an inserted SD card, or can be made to the "internal" storage area.
2. Download the new firmware. This is done on the System | Miscellaneous web page or can be done from the front panel if a SD card with the firmware is inserted.
3. Restore Factory defaults. This is done on the System | Miscellaneous web page or can be done from the front panel. This is needed to setup the defaults for items that are not in the backup. The IP address will NOT change during this step so access to the web pages will still be available.
4. Restore the backup that you made. This operation will only restore the things that are needed for the installed firmware. Tag names will be shortened if needed; this could cause an issue if using long tag names in programming and the WUI.
5. Refresh your Web browser after the restore is complete.
6. Recompile Programming. Go into the programming editor, press the STOP icon then press the download icon. This will recompile the code which is needed to sync the registers. You should also use the Register Inspector to confirm that your registers are setup. If long file names were used and the restore function truncated the names, the registers will now be variables and you will have to reassign them.
7. Recompile a WUI. If using a WUI, the registers will need to be synced. Go into the WUI editor and press the download icon (if grayed out then move something in the WUI to enter edit mode).