

## DXM Firmware Release Notes

Version 2.02.00 of the DXM Controller firmware requires version 3.1 of the DXM Configuration Software to use the new features. Version 3.1 should be backwards compatible with earlier versions of DXM Controller firmware.

Refer to [Updating Your DXM Processor Firmware](#) (p/n b\_4474194) for instructions.

Date	Version	Feature	Details
13 May 2019	2.02	New Modbus Capabilities	<p>Modbus TCP Client—The DXM Controller now has Modbus TCP Client Rules. The controller can be programmed to access other Modbus devices using Ethernet. Under <b>Register Mapping &gt; Modbus TCP</b> complete each socket definition with the IP address, Poll rate and Poll timeout of other Modbus TCP server devices. Then create Modbus TCP Write/Read rules to Move register data between devices.</p> <p>Optimized Memory allocation for Modbus Rules—Memory use for Rules based logic is now dynamically allocated. This creates more efficient memory use for ScriptBasic programming and file operations.</p> <p>Enhanced Radio Polling—The Automatic Radio Polling (<b>Settings &gt; General</b>) has four settings to get data from the internal ISM radio into the processors Local Registers. Each setting alters the Local Register data organization and/or the usage of outputs.</p> <p>Storing data into Local Registers Organized by Devices—This groups register data into Local Registers by radio devices: Local Registers 1-16 = Gateway, 17-32 = Node 1, 33-48 = Node 2, et al. When data is grouped by device there are two options, inputs only or inputs and outputs.</p> <p>Storing data into Local Register Organized by Inputs/Outputs—This setting groups radio register data into Local Registers by inputs/outputs. Local Registers 1-48 = Input 1 for each device (GW, N1-N47), Local Registers 49-96 = Input 2 for each device, et al.</p> <p>Action Rule Update—Tracker Rules have been updated to allow for the result register to be cleared. Functions for the Tracker Rules are also updated, functions include rising edge counting, Time in milliseconds the register is in high state and time in milliseconds the register is in low state.</p>
		Security Updates	<p>Enhanced SSL/TLS Performance—Use the hardware assist within the DXM Controller micro to increase the performance of encrypting and decrypting data payloads.</p> <p>Updated SSL/TLS stack—Updated the DXM Controller network stack to use the latest version of SSL/TLS for the most reliable and greatest performance possible.</p> <p>Boot Loading over SSL/TLS—Resolved issue with DXM boot loading over Ethernet using an encrypted data connection.</p>
		Feature Enhancements and Fixes	<p>Updated LCD scaling with I/O</p> <p>Extended Modbus addressing for PTL</p> <p>Modbus RTU Slave port parity—Corrected the DXM Controller Modbus RTU slave port handling of parity for devices that require different parity settings.</p> <p>Reset Registers in Action Rules—Added the ability to reset the Action rules, Tracker registers and On-Time registers in Threshold rules.</p>
		Cellular Updates	<p>Cellular updates to enhance LTE and GSM modems</p> <p>LCD additions for LTE / GSM modems</p> <p>Correction for GSM formatting of SMS messaging</p>
15 Apr 2020	2.09	New Features (Not all features will be available to all platform devices)	<p>PROFINET - will be available to the DXM700 and DXM1200 platforms. Version 2.09 provides a certified version of a PROFINET interface and the initial firmware release for BETA testing with our PROFINET customers. Supported production release will be second half 2020.</p> <p>Amazon AWS IoT platform support to provide DXM connections to the public AWS IoT infrastructure (DXM700, DXM1000, and DXM1200 only).</p> <p>New cellular support for LTE CAT M1 cellular modems.</p> <p>New support for FOTA (Firmware Over-The-Air updates) requirements for cellular modems.</p> <p>New DXM controllers, DXM1000 and DXM1200</p>
		Networking	<p>Ethernet hot plug, DXM will continuously recognize if the network connection is available. (DXM700, DXM1000, DXM1200 only)</p> <p>Encryption, Larger payloads</p>
		Cellular	<p>Increased throughput for heavy traffic</p> <p>Additional network registration checks for increased connection reliability.</p>
		Scripting	<p>Increased maximum register counts available for Modbus operations over the wireless network</p>
		Push webserver	<p>Register Scaling/Offset options</p> <p>Push groups</p> <p>HTTP Log file splitting for more efficiency</p>
29 Jun 2020	3.0	Cleanup	<p>Ethernet—Modbus TCP, Floating Point registers</p> <p>ISM/LCD improvements</p> <p>DXM700 pushbutton functionality</p>
		Cellular	<p>Additional cellular statistics/metrics</p>

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		Cleanup	Ethernet— Optimization/performance improvements to minimize dropped connections ISM/LCD improvements— <ul style="list-style-type: none"> <li>• Clean up IMEI/ ICCID values on LCD menu</li> <li>• Cellular Signal Strength indicator corrections</li> <li>• Cellular status corrections</li> <li>• Fixed updating high register addresses with values</li> <li>• Corrected issues with updating Ethernet IP / Sub mask using the display menu</li> </ul> HTTP push <ul style="list-style-type: none"> <li>• Corrected empty push packets</li> <li>• Corrected saving multiple identical entries in connection failure cases</li> <li>• AWS IOT support with JSON format</li> </ul>
13 Aug 2020	3.01		Control/Logic Rules modifications for application designs creating feedback loops Change for Action Rules/Control Logic JK Flip-Flop element to implement toggle operation change. Added inactivity timeouts for Modbus TCP connections, if a Modbus TCP connection is left hanging open for a determined amount of time, the DXM will automatically close the connection to free up the resources for another Ethernet connection. This feature is turned off by default. Created an override mode in the DXM Controller to use Ethernet connectivity based on user preference.
10 Nov 2020	3.02		Updated DXM1000 to correct issues with internal radio operations. Resolved periodic fault/reset issue created by version 3.01. Updated firmware for inconsistencies in the first cloud push message for initial parameters, DXM100, DXM150