

Microwave Networks Lifecycle Support Services (LSS)

Microwave Networks understands the mission critical environment of your telecommunication infrastructure and prides itself in providing customer centric solutions that deliver peace-of-mind. Our goal is to maximize customers' operational and capital investments in microwave communications and to ensure consistent network reliability.

Microwave Networks takes a consultative approach to delivering a proactive, value-added solution that reduces the risk of downtime and increases your microwave system availability, longevity, and dependability. The Microwave Networks LSS packages provides a comprehensive service offering that can easily be customized to support your mission critical requirements and to keep your microwave radio systems running at peak efficiency.

The following LSS packages are available from Microwave Networks.

LifeCycle Services Support (LSS) Programs

Bronze LSS	Silver LSS	Gold LSS	Platinum LSS
Extended warranty	Extended warranty	Extended warranty	Extended warranty
Network Health Check	Preventative Maintenance	Preventative Maintenance	Preventative Maintenance
8/5 tech phone support	24/7 tech phone support	24/7 tech phone support	24/7 tech phone support
	Proteus Radio Firmware update	Proteus Radio Firmware update	Proteus Radio Firmware update
	Review of spares	Review of spares	Review of spares
	Frequency Protection Services	Frequency Protection Services	Frequency Protection Services
	Interference Detection Services	Interference Detection Services	Interference Detection Services
		Advanced replacement	Advanced replacement
			NMS (SPARCS) Upgrade
			Hardware refresh

Lifecycle Support Services Definition

Extended Warranty	MNI's Standard Warranty is two years after shipment on most MNI manufactured products. The Extended Warranty is in addition to the MNI standard two years warranty. - Warranty provides repair and return of Microwave Networks supplied equipment. - Standard repair turnaround time is 30 days from receipt of unit and may change subject to availability of parts. - Repair and Exchange Services is handled via the RMA (Return Material Authorization) process
8/5 Technical Support	Available during 8:00 AM – 5:00 PM CST business hours, Monday – Friday, excluding Holidays Contact Us : Phone: 1 (281) 263-6501 or Email: customerservice@microwavenetworks.com
24/7 Technical Support	Available 24/7, 365 days Toll Free Contact: Phone: 1 (888) 225-4762 or Email: customerservice@microwavenetworks.com
Remote Network Health Check	Remote Annual Network Health Check on the Proteus MX radios beginning one year after installation to review microwave network performance and reliability and it includes: - Review of link performance - Firmware status checks - Verification of RF parameters against path design criteria - Historical performance check via Chart Recorder data - Wellness report
On-site Preventative Maintenance	Annual On-site Preventive Maintenance (PM) on the Proteus radios begins in year one after installation to optimize the microwave network performance and reliability while minimizing reactionary corrective maintenance. MNI's Customer Support will contact you to schedule the PM service and our field engineers will visit every site and examine every link to assess the microwave network's health and performance. PM services includes the following: - On-site maintenance per year by a factory certified system auditor - Link operation optimization against path design criteria - Dehydrator system checkup - Radio Software / Firmware upgrades, as required - Power system and battery checkup - Cabling check - Environmental review (facilities, cleanliness, security, etc) - Updates for Network Management System including radio element manager and SPARCS NMS (if included) - Spares inventory review and firmware upgrades - Final report with findings and recommendation
Proteus Radio Firmware Update	Microwave Networks notifies customers about the latest firmware versions for each type of equipment. Required firmware upgrades can be done during the annual Preventive Maintenance visit, but customers can also upgrade their Proteus radios anytime with the latest firmware.
NMS (SPARCS) Upgrade	NMS Software will be updated to the latest software revision. This will be done during one of the Annual On-site Preventive Maintenance visit.
Annual Review of Spares	Microwave Networks will evaluate your spares inventory required to keep equipment running at optimum performance. This will be done during the Annual On-site Preventive Maintenance.
Frequency Protection Services	Microwave Networks will serve as a protection agent to licensed microwave owners as part of FCC's Prior Coordination Notice (PCN) Part 101 process whenever new frequency coordination are being requested in the microwave owner's area of operation. The Frequency Protection Services will provide: - PCN Analysis and Response - Case Resolution
Interference Detection Services	Microwave Networks interference detection is based on proprietary diagnostic tools to monitor and collect network health data such as SNR, RSL, and BER providing customers with: - Trend Analysis - to identify, analyze and isolate interference events. - Proactive Preventive Maintenance – to address problem links before a service outage. Customer Support will provide customers quarterly reports showing overall network health performance and any potential interference and/or equipment issues that may require further investigation.

RMA Advance Replacement	Access to Microwave Networks tested and ready to ship equipment inventory that can ship same day for next day delivery. Next day delivery is subject to carrier availability at time of request. Customer should contact customer service at 281-263-6501 for advance replacement request.
Hardware Refresh	Perform hardware refresh to the latest MNI supplied equipment and as per contract requirement. A MNI Program Manager will be assigned to audit the existing system, develop a project plan for upgrading the software and hardware, installation plan, test plan and cutover plan. Microwave Networks will perform the system upgrade and provide Field Acceptance Testing results to the customer. At the conclusion, the Microwave Networks PM will obtain upgrade completion sign off from the customer.

Repair and Exchange Services

An RMA (Return Material Authorization) is required prior to shipping defective unit(s) to Microwave Networks for repair. To obtain an RMA number, please visit <https://www.microwavenetworks.com/support/>. Units must be packed properly to prevent damage during shipment, which could render the unit un-repairable. Please contact MNI customer service at 281-263-6501 to obtain best practices with respect to proper packing. Customer is responsible for shipping costs to MNI, and MNI pays the cost of shipping back to customer. Repaired modules are guaranteed for 90 days from the date of shipment, or the remaining portion of the product's warranty, whichever is greater.

Microwave Networks Corporate address for RMA returns:

Send To: **Microwave Networks Inc.**
4000 Greenbriar Drive
Stafford, TX 77477
Attn: Repair Department (SR#'s _____)

On Site support services

In addition to the above programs, Microwave Networks can provide onsite service for corrective maintenance via a local installation partner.

We offer services for the following response times:

- 2-hour response time
- 4-hour response time
- Next-day response time

Pricing will vary dependent on customer location and project size.