



SENSR™

STRUCTURAL MONITORING SOLUTIONS™

SNX-P4 SENSRnet Expansion Module User Guide



Version 2.0
June 17, 2016

Table of Contents

1 PREAMBLE	3
1.1 FCC Statement.....	3
1.2 Acceptable Use	3
2 SENSRNET EXPANSION MODULE	3
2.1 General	3
2.2 Specifications.....	3
3 INSTALLATION.....	4
3.1 System Requirements.....	4
3.2 Mounting the Expansion Module.....	4
3.3 Connecting the Expansion Module	5
4 MISCELLANEOUS	5
4.1 Maintenance	5
4.2 Technical Support.....	5
4.3 Product Warranty.....	5

SNX-P4 SENSRnet Expansion Module User Guide

1 Preamble

1.1 FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

1.2 Acceptable Use

It is the responsibility of the user to confirm that any use of the product conforms with all: country, federal, state, county and municipal laws, ordinances and regulations.

2 SENSRnet Expansion Module

2.1 General

The SENSRnet Expansion Module is an accessory for the SENSRnet remote monitoring system. The Expansion Module supports two functions:

1. Expand the number of CX1s that can be connected to a SENSRnet Server. Expansion Module supports up to four CX1s. A user can connect two Expansion Modules to a SENSRnet Server and deploy up to eight CX1s.
2. Extend the operating distance of a CX1. Expansion modules can be located up to 325' away from a SENSRnet Server and CX1s can be located 325' away from the Expansion Module.

2.2 Specifications

Size:	11.28" x 7.15" x 3.74"
Weight:	6 lbs.
Housing material:	Cast Aluminum
Connectivity:	1 – SENSRnet uplink port and 4 – SENSR ports
Power source:	SENSRnet Server
Power consumption	6 watts
Operating temperature range:	-40°F to 176° F (-40°C to 80°C)
Environmental protection:	IP65

SNX-P4 SENSRnet Expansion Module User Guide

3 Installation

3.1 System Requirements

The Expansion Module works with a SENSRnet Server to provide power and communications to SENSR branded sensors and accessories. The Expansion Module must be connected directly to the SENSRnet Server in order for it to operate.

The Expansion Module contains circuitry and components designed to limit the negative consequences related to lightening strikes. In order for these measures to be effective the Expansion Module must be connected to an earth ground.

3.2 Mounting the Expansion Module

Location - Several factors need to be considered when deciding where to mount the Expansion Module including:

- a) Distance from the SENSRnet Server – The Expansion Module uses a special cable to connect to the SENSRnet Server, the length of this cable would have been specified at the time of ordering. The maximum length for this cable is 325'.
- b). Distance from the sensors - The Expansion Module uses a special cable to connect to the SENSR CX1s, the length of this cable would have been specified at the time of ordering. The maximum length for this cable is 325'.
- c). Sheltering – The Expansion Module is rated for outdoor environments however, certain locations should be avoided such as those locations that place the unit in the path of run-off or areas that are a risk for puddling or pooling of water. An ideal location is one where the Expansion Module is sheltered from continuous sunlight, falling snow and rain.

Orientation - The Expansion Module can be mounted in a horizontal or vertical position. If the Expansion Module is expected to be rained upon we recommend mounting the Module vertically and orientating the connectors down.

Securing - Mounting tabs are located on the base of Expansion Module, due to the mass of the module we recommend using all four tabs for mounting. A mechanical drawing is included with the module for determining hole coordinates.

Grounding – In order to enable the suppression capabilities of the Module a 4 – 10 Ga wire must be connected to the Expansion Module's ground receptacle and an earth ground.

SNX-P4 SENSRnet Expansion Module User Guide

3.3 Connecting the Expansion Module



To the SENSRnet Server - Insert the weather-proof RJ style connector into the UPLINK port of the Expansion Module and rotate the connector shell ¼ turn to secure.

To the CX1s – Insert the weather-proof RJ style connector into one of the numbered SENSR ports of the Expansion Module and rotate the connector shell ¼ turn to secure.

Note: Mated connectors provide IP66 level of protection.

4 Miscellaneous

4.1 Maintenance

No periodic maintenance is required.

4.2 Technical Support

For questions about the SENSRnet Expansion Module or an application, e-mail support at support@sensr.com or call 512.240.5273. Standard hours of operation are 8 am - 5 pm CST, Monday thru Friday.

4.3 Product Warranty

SENSR LLC. (“SENSR”) warrants to the original Customer (“Customer”) that SENSR brand instruments (“Product”) are free from defects in material and workmanship under normal use and service for a period of 1 year commencing upon the date of purchase. This Limited Warranty is conditioned upon proper use of Product by Customer. This Limited Warranty does not cover: (a) defects or damage resulting from accident, misuse, abuse, neglect, unusual physical, electrical or electromechanical stress, or modification of any part of Product, including cables, or cosmetic damage; (b) equipment that has the serial number removed or made illegible; (c) any surfaces or other externally exposed parts that are scratched or damaged due to normal use; (d) malfunctions resulting from the use of Product in conjunction with accessories, products, or ancillary/peripheral equipment not furnished or approved by SENSR; (e) defects or damage from improper testing, operation, maintenance, installation, or adjustment; (f) installation, maintenance, and service of Product, or (g) Product used or purchased outside the United States or Canada. During the warranty period, SENSR will repair or replace, at SENSR’s sole option, without charge to Customer, any defective component part of Product. To obtain service under this Limited Warranty, Customer must contact SENSR Customer care at 512.240.5273. Upon receipt, SENSR will promptly repair or replace the defective Product. SENSR may, at SENSR’s sole option, use rebuilt, reconditioned, or new parts or components when repairing any Product or replace Product with a rebuilt, reconditioned or new Product. Repaired or replaced product will be warranted for a period equal to the remainder of the original Limited

SNX-P4 SENSRnet Expansion Module User Guide

Warranty on the original Product or for 90 days, whichever is longer. All replaced parts, components, boards and equipment shall become the property of SENSR. If SENSR determines that any Product is not covered by this Limited Warranty, Customer must pay all parts, shipping, and labor charges for the repair or return of such Product.

EXCEPT AS SET FORTH IN THE EXPRESS WARRANTY CONTAINED HEREIN, CUSTOMER TAKES THE PRODUCT "AS IS," AND SENSR MAKES NO WARRANTY OR REPRESENTATION AND THERE ARE NO CONDITIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, OF ANY KIND WHATSOEVER WITH RESPECT TO THE PRODUCT, INCLUDING BUT NOT LIMITED TO: THE MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR ANY PARTICULAR PURPOSE OR USE; OR COMPLIANCE OF THE PRODUCT WITH THE REQUIREMENTS OF ANY LAW, RULE, SPECIFICATION OR CONTRACT PERTAINING THERETO. NOTHING CONTAINED IN THE INSTRUCTION MANUAL SHALL BE CONSTRUED TO CREATE AN EXPRESS WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THE PRODUCT. ALL IMPLIED WARRANTIES AND CONDITIONS THAT MAY ARISE BY OPERATION OF LAW, INCLUDING IF APPLICABLE THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY LIMITED TO THE SAME DURATION OF TIME AS THE EXPRESS WRITTEN WARRANTY STATED HEREIN. SOME STATES/PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. IN ADDITION, SENSR SHALL NOT BE LIABLE FOR ANY DAMAGES OF ANY KIND RESULTING FROM THE PURCHASE, USE, OR MISUSE OF, OR INABILITY TO USE THE PRODUCT OR ARISING DIRECTLY OR INDIRECTLY FROM THE USE OR LOSS OF USE OF THE PRODUCT OR FROM THE BREACH OF THE EXPRESS WARRANTY, INCLUDING INCIDENTAL, SPECIAL, CONSEQUENTIAL OR SIMILAR DAMAGES, OR LOSS OF ANTICIPATED PROFITS OR BENEFITS, OR FOR DAMAGES ARISING FROM ANY TORT (INCLUDING NEGLIGENCE OR GROSS NEGLIGENCE) OR FAULT COMMITTED BY SENSR, ITS AGENTS OR EMPLOYEES, OR FOR ANY BREACH OF CONTRACT OR FOR ANY CLAIM BROUGHT AGAINST CUSTOMER BY ANY OTHER PARTY. SOME STATES/PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE/PROVINCE TO PROVINCE. THIS LIMITED WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL CUSTOMER OF THIS PRODUCT AND STATES CUSTOMER'S EXCLUSIVE REMEDY. IF ANY PORTION OF THIS LIMITED WARRANTY IS HELD ILLEGAL OR UNENFORCEABLE BY REASON OF ANY LAW, SUCH PARTIAL ILLEGALITY OR UNENFORCEABILITY SHALL NOT AFFECT THE ENFORCEABILITY FOR THE REMAINDER OF THIS LIMITED WARRANTY WHICH CUSTOMER ACKNOWLEDGES IS AND WILL ALWAYS BE CONSTRUED TO BE LIMITED BY ITS TERMS OR AS LIMITED AS THE LAW PERMITS.