



**GNC-CR**  
**User Manual**  
**Appendix F**  
**Ethernet Links**

## Document Revision

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## Warnings and Safety



### **STATIC ELECTRICITY**

*The GNC-CR system contains CMOS devices and when serviced, care must be taken to prevent damage due to static electricity. This is very important to ensure long term reliability of the unit.*



### **INSIDE THE SYSTEM (MAINTENANCE)**

*Under normal circumstances, there is no need to remove the GNC-CR front panel.*

*In any case, only trained personnel should remove these covers since power enters directly into the Instrument and can be dangerous. Moreover untrained access may lead to serious damage to the Instrument, as well as may void the warranty.*

*Before removing any of the panels, always:*

- 1. Flip the main switch to "OFF"*
- 2. Disconnect power supply from the POWER connector*
- 3. Disconnect the main battery*
- 4. Make sure that the green Active Charge "AC" LED indicator is OFF*

*If you remove an electronic board, you will probably need to reset the time and date, and verify all other parameters are set correctly.*

## Symbols and Abbreviations

S/	Datastream
N/	Event Notification
D/	Event Download
C/	Instrument Configuration
RMC	Any of the 3-Channel Recorder Module Cards for GNC; GNC-RMC-xx, where xx can be 12, 16, 18 or 24
IP1, IP2, ...	Network address (Internet Protocol Address) for any device

## Introduction

This document describes Ethernet connectivity and operation possibilities of the GNC-CR series central recorder. Please see GeoDAS manual for establishing and configuring the described links.



*Event Download and Instrument Configuration is only possible when you log in to a RMC.*

*In most cases the same communication channel is used both for login to a RMC and for sending the datastream.*

*Therefore it is important to realise that the data stream is always interrupted when you log in to a RMC.*

## 1. TCP/IP Link Over Serial Interface

This link is achieved by connecting a serial (RS-232) to TCP/IP converter (GXX-TCP/IP) at the RS-232 connector of the GNC.

With this configuration, it is possible to operate the GNC to provide **Datastream, Event Notification, Event Download** and **Instrument Configuration** facilities for **one RMC at a time** to remote users, one user at a time per RMC.

Simultaneous datastream links are not supported. Only single datastream link from a single remote host computer (point to point) is supported.

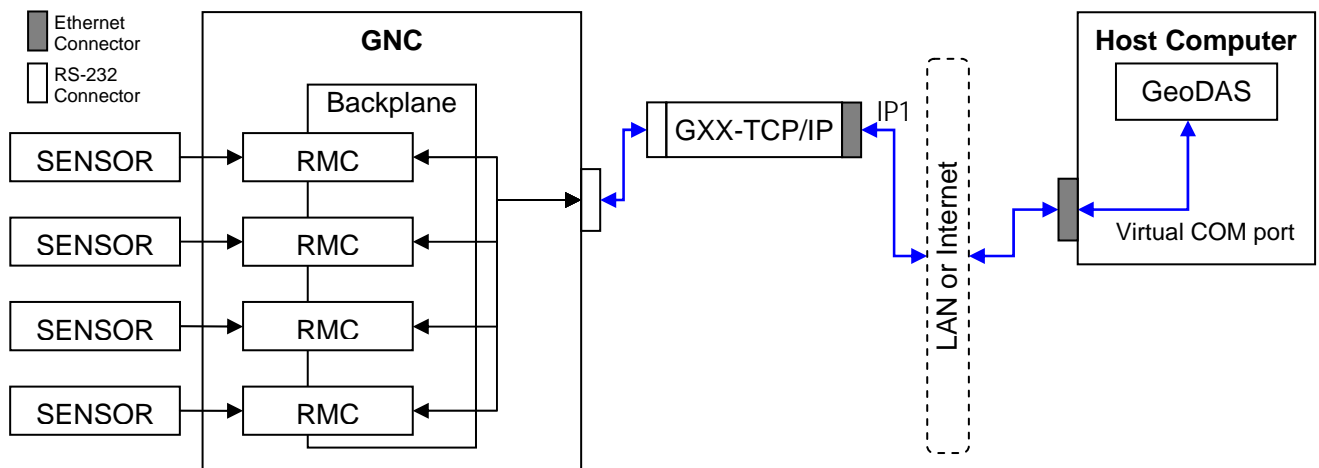


Figure 1. Point to Point, S/N/D/C/

## 2. TCP/IP Link Over Ethernet Interface

This link is achieved by adding an Ethernet Interface into the GNC, which includes one or more base module (GNC-TCP/IP) per GNC and add on interfaces (GXX-TCP/IPIM) per link.

With this configuration, it is possible to operate the GNC to provide **Datastream, Event Notification, Event Download** and **Instrument Configuration** facilities for every RMC simultaneously to remote users, one or two users at a time per RMC card.

Simultaneous datastream links from a single remote host computer (multiple points to point) or from two remote host computers (multiple points to two point) are supported.

If in addition UDP links are established as described in UDP Link section; multiple simultaneous datastream links from multiple remote host computers are supported.

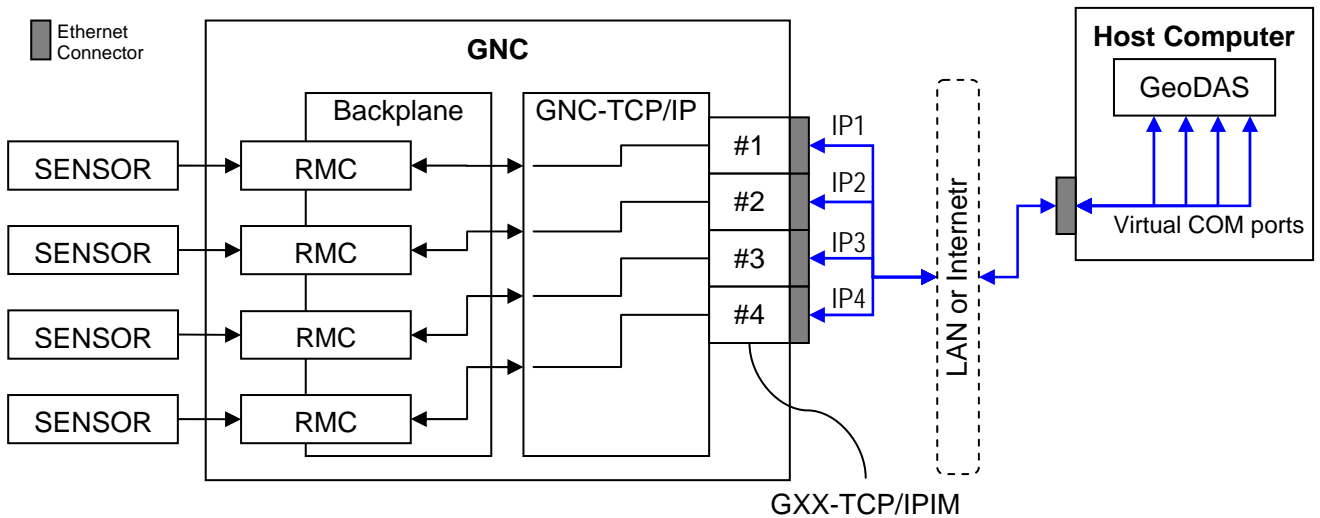


Figure 2. Multiple Point to Point, S/N/D/C/

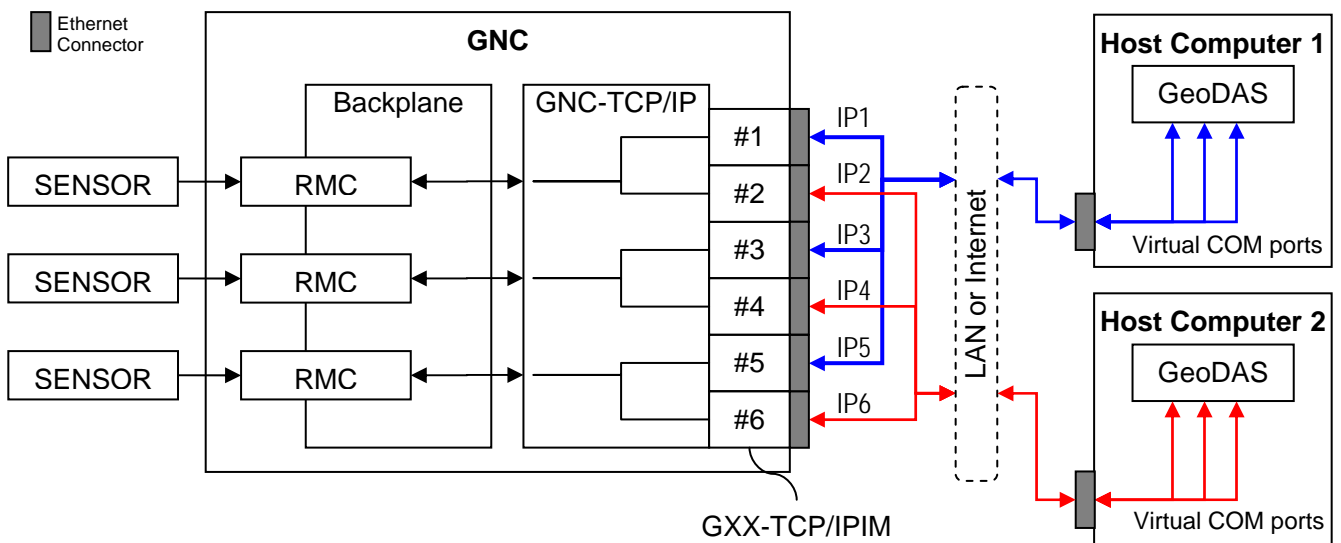


Figure 3. Multiple Point to Two Point, S/N/D/C/

### 3. UDP Link Over Ethernet Interface

This link is achieved by adding an Ethernet Interface into the GNC, which includes one or more base modules (GNC-TCP/IP) per GNC and add on interfaces (GXX-TCP/IPIM) per link.

With this configuration, it is possible to operate the GNC to provide **Datastream** and **Event Notification** facilities **for every RMC simultaneously** to remote users, multiple users at a time per RMC.

 ***This link is possible only within a LAN and would not work over Internet/Intranet***

Simultaneous datastream links from multiple remote host computers (multiple point to multiple point) are supported.

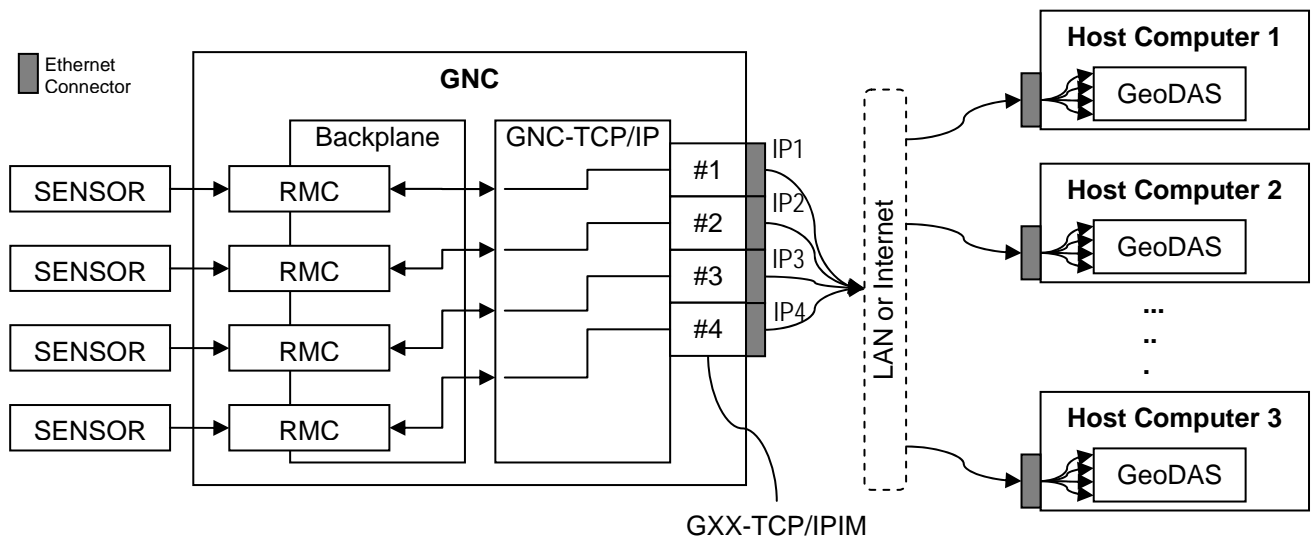


Figure 4. Multiple Point to Multiple Point, S/N/