

## MODEL 5400-SDC Satellite Data Concentrator

### General Description

HydroLynx Satellite Data Concentrator is an intelligent multi-path repeater that performs the same role as a terrestrial ALERT radio repeater while providing an alternate data path via satellite radio transmission. The satellite radio transmits data through ORBCOMM, a real-time commercial satellite telemetry provider.

As an intelligent repeater, the 5400-SDC decides to repeat data reports based on three criteria: 1) the report is a valid message, 2) the ID number is in the programmable Repeat Range list, and 3) the same report is NOT in the Talk Back Buffer. Data reports that meet the repeat criteria are buffered for immediate transmission through the terrestrial ALERT radio. Buffered data reports are transmitted through the satellite radio on 10 minute intervals.

The Model 5400-SDC Satellite Data Concentrator includes a Model 50386PCB and ALERT modem to decode ALERT data reports, a terrestrial VHF or UHF radio transceiver to receive and transmit data, and a 5400 satellite radio to transmit the data.

The ScadaLynx Toolbox software package is used to configure all of the 50386 programmable parameters. This includes which ALERT data report station ID numbers are buffered and transmitted through the terrestrial ALERT or satellite radio. Each radio has its own repeat list. Individual and blocks of ID numbers can be selected for transmission. Up to 24 station ID numbers can be transmitted through the satellite radio along with the local battery voltage.

### Specifications

#### General

Output power:

RTR only:..... 5 Watts  
RTR with RPA:..... 25 Watts

Standby Current:..... 65 mAmps

Transmit Current Drain:

RTR only:..... 2 Amps  
RTR with RPA:..... 7 Amps

Repeater processor: ..... See 50386 specifications

Satellite Radio specifications: .. See 5400 specifications

ALERT Radio specifications:.... See RTR specifications

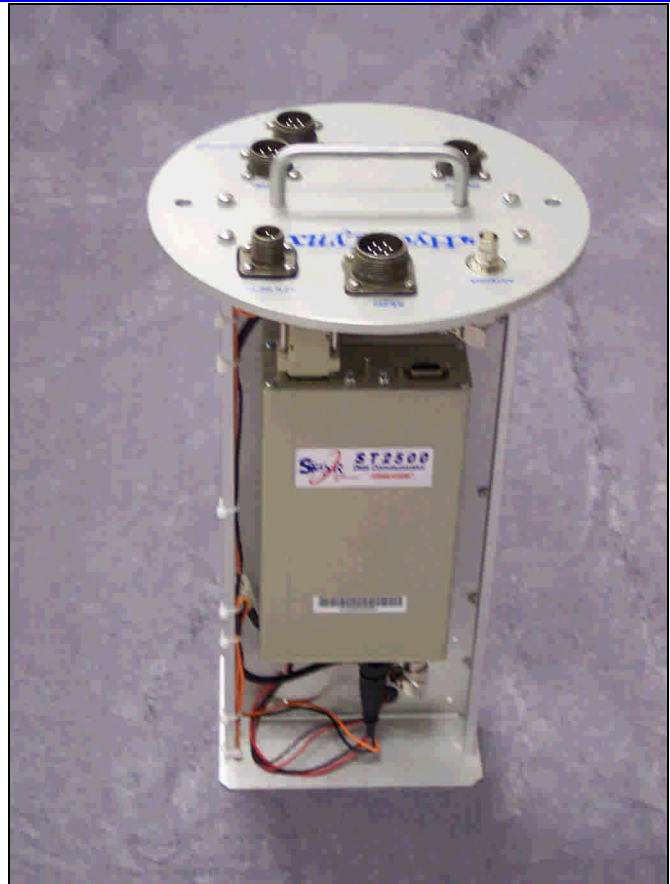
Power Amp specifications:..... See RPA specifications

#### Model 5400-SDC

Enclosure:..... Aluminum canister  
Size:..... 8 in. diameter x 23 in. high  
Weight: ..... 25 lbs with battery  
Shipping weight: ..... 12 lbs (battery shipped separately)  
Sensor inputs:..... Keyed MS connectors  
Battery:..... 12 Vdc, 18 Amp-hour rechargeable gel cell  
External 12 Vdc connector:..... 3 pin MS male connector  
Antenna: ..... Two BNC female bulkhead connectors  
Serial port:..... 7 pin MS male connector

#### Model 5400-SDC-N

Enclosure:..... NEMA-4X fiberglass  
Size:..... 5.5 in. x 13.5 in. x 6.5 in.



Model 5400-SDC Satellite Data Concentrator

#### Model 5400-SDC-N (continued)

Weight:..... 25 lbs with battery  
Shipping weight: ..... 12 lbs (battery shipped separately)  
Sensor Inputs: ..... Enclosure with cable strain reliefs and screw terminal interconnect PCB or keyed MS connectors  
Battery: ..... 12 Vdc, 18 Amp-hour rechargeable gel cell  
External 12 Vdc connector:..... Two 3 pin MS male connectors  
Serial ports: ..... Two onboard DB9 male connectors  
Antenna: ..... Two N-type female lightning arrestors

### Ordering Information

5400-SDC ..... Satellite Data Concentrator in Round Canister, 50386PCB, ALERT modem, Satellite Radio, VHF/UHF Radio  
5400-SDC-N..... Satellite Data Concentrator in NEMA 4X Enclosure, 50386PCB, ALERT modem, Satellite Radio, VHF/UHF Radio

Specify receive and transmit ALERT radio frequencies.

### Options

5073TBX ..... 50386 Toolbox Software  
50386-OP1 ..... 7 Pin MS Male RS232 Connector  
50386-OP2 ..... 10 Pin MS Female Digital Status Connector  
50386-OP3 ..... 3 Pin MS Male SDI-12 Connector  
50386-OP4 ..... 6 Serial Port Expansion  
50386-OP5 ..... Leased Line Modem  
50386-OP6 ..... Internal Power Supply  
50386-OP8 ..... ScadaLynx Radio  
50386-OP9 ..... Microwave Interface  
50386-OP11 ..... Industrial Dial-up Modem  
50386-OP12 ..... Digital Input Expansion  
50386-OP13 ..... Analog/Digital Output  
50386-OP14 ..... Network Connector