



## DATA LOGGERS

# FTS H1

## ESPECIFICACIONES TÉCNICAS



### ESPECIFICACIONES TÉCNICAS

El registrador de datos H1 es un DCP resistente diseñado para la recopilación remota de datos y aplicaciones de sensores SDI-12. El modelo H1R cuenta con dos puertos SDI-12 independientes eléctricamente aislados, cada uno de los cuales puede manejar hasta 500 mA, mientras que el H1RS incluye todas esas características, además de un regulador solar integrado. Ambos modelos no requieren una computadora portátil ya que toda la programación se realiza a través de una interfaz gráfica de pantalla táctil.



### CARACTERÍSTICAS

#### Hardware

- Display/touchscreen:**
  - Graphical color touch screen display, 3.65" (diagonal), QVGA (320x240 pixels).
  - Display is transfective (readable in low light and outdoors in bright daylight)
  - Displays system status, configuration, stored data (graphical and tabular) and provides system configuration and troubleshooting diagnostics.
  - Displays voltage and current separately for battery and solar panel and battery temperature.
  - Supports troubleshooting, configuration and programming.
- CPU:**
  - Two (2) CPUs total, both low-power RISC.
  - Main CPU is 200MHz 32-bit ARM.
- Memory/storage:**
  - 64MB RAM
  - 256MB fixed physical, non-volatile flash memory for data and program storage.
  - Data is stored in a circular 10MB buffer (oldest data overwritten by newest when buffer full).
  - Based on NFDRS logging criteria, 7,575 days (about 20 years) of data can be stored.
- Device ports:**
  - 2 waterproof USB 2.0 host ports, 1.5Mbps and 12 Mbps, support for flash memory and other USB-compliant devices.
  - 1 waterproof USB 2.0 12 Mbps device port with automatic PC detect.
  - Supports USB keyboard and mouse.
  - GOES RF output (for models with an integrated GOES transmitter): N-type jack
  - GPS RF input (for models with an integrated GOES transmitter): SMA jack
- Sensor ports:**
  - Waterproof, color-coded, military-style connectors.
  - Dedicated ports (F6):
    - wind speed (frequency input)
    - wind direction (potentiometer input)
    - rain gauge (counter)
    - temperature & humidity (thermistor, 0-1.0V)
    - fuel stick (thermistor, 0-1.0V)
  - Dedicated ports (H2):
    - rain gauge (counter)
  - 2 (F6 and H1) or 4 (H2) independent SDI-12 V1.3 ports, expandable using external expansion modules to support up to 62 digital sensors.
  - SDI ports each support up to 500mA and are electrically isolated.
  - Optional, configurable [analog-to-SDI expansion module \(SDI-AM\)](#) to connect legacy analog sensors (terminal strips).
- Serial ports:**
  - Either:
    - 2 ports factory configured as internal GOES transmitter and one external, waterproof, military style bayonet connector
    - 2 external, waterproof, military-style bayonet connectors
    - One external, waterproof, military style bayonet connector
  - Signal levels: RS232C
  - Signals: TXD, RXD, RTS, CTS, DCD, DTR, RI
- Environmental sealing, size, weight:**
  - Waterproof to IP67, O-ring sealed, cast aluminum & stainless steel hardware, engineered resin bezel
  - Dimensions: 10" W x 8" H x 6" D
  - Weight: approx. 8 lbs.



Solicita tu cotización y visítanos en:  
<https://www.oceanproo.net>

Ubícanos en:  
**Av. Las Palmeras N° 5334**  
**Los Olivos 15304**





### CARACTERÍSTICAS

#### Software

- Station identification:** The station's name, NESID and GOES data can be easily identified on the touchscreen display.
- Programming:**
  - All programming done through intuitive graphical user interface (GUI) without writing code.
  - No laptop required; GUI accessed through integrated touchscreen.
  - Unlimited setup configurations are stored directly on the datalogger; different configurations can be selected or a new one created with the GUI.
- Electronic service reports:**
  - All of the data recorded by field techs during a service call can be captured electronically in the Axiom and saved to a USB memory stick.
  - Data includes:
    - a list of sensor serial numbers before and after the service trip.
    - Audit log.
    - datalogger program version.
    - latitude, longitude, elevation.
- Datalogger performance verification:**
  - Graph sensor data and diagnostic parameters.
  - Battery load tests; view voltage before and after (requires dummy load on battery).
  - View current sensor readings.
  - View historical data.
  - View GPS performance stats.
  - View forward and reflected power stats to check GOES antenna performance.
- Rain count:**
  - Custom NFDRS rain GUI allows users to quickly test tipping buckets each year by viewing manual tip measurement in real-time and quickly removing the test tips from memory (F6).
  - User can select a rain reset date if desired and set the action on power failure (rain total can be set to return to previous values or reset to zero).
- One-touch current conditions:**
  - Users can customize the Current Conditions screen so that all sensors' real-time data are viewable with one button press, extremely handy when validating wind quadrants or simply validating each sensor as it is replaced.
  - The electronic service report automatically captures the current conditions at the start (pre-swap) and after (post-swap).
- Data transfer via USB memory stick:**
  - Data, Programs and Firmware updates can be transferred to and from datalogger via a conventional USB memory stick.
  - Historical data download is fast: approximately 5 seconds for 1 year of data including logger and telemetry records.
  - Data downloaded in universal .CSV (comma-separated values) format; importable into Excel and many other software.

#### GOES Transmitter (Optional)

- Manufacturer:**
  - FTS
- Supported baud rates:**
  - 100 bps
  - 300 bps
  - 1,200 bps
- Operating supply voltage:**
  - 10.8 VDC to 16 VDC
- Supply current (at 12VDC):**
  - Idle: <3 mA
  - Transmitting: <2.6 A
  - GPS ON: <50 mA



Solicita tu cotización y visítanos en:

<https://www.oceanproo.net>

Ubícanos en:

Av. Las Palmeras N° 5334  
Los Olivos 15304





### CARACTERÍSTICAS

#### Environmental Protection

**Operational moisture range:**

- 0-100% RH, condensing

**Operational temperature range:**

- Display operation: -20°C to +60°C
- Datalogger operation: -40°C to +60°C
- Storage: -55°C to +70°C

**Lightning protection:**

- Three-stage protection circuit offers superior protection:
  - Stage 1: transient earth clamp.
  - Stage 2: series impedance.
  - Stage 3: high speed shunt diode.

**UV resistance:**

- Excellent, as minimal plastics are used. Cable housing and omnidirectional GOES antenna are UV-stable.

**Electronics protection:**

- Core electronics sealed from moisture and dust in waterproof housings, completely isolated from environment and user.
- All non-telemetry data exchange (firmware upgrades, report downloads) performed through waterproof USB port.
- Battery overcharge protection.

**IP code rating:**

- IP67

#### Power Consumption

**Datalogger current:**

- Idle: 2-3mA (no integrated GOES transmitter), 7-8mA (with integrated GOES transmitter)
- Active (collecting data): 7.5mA (no integrated GOES transmitter), 12mA (with integrated GOES transmitter)
- Touchscreen backlight on: 60mA
- GOES transmit: 2.6A.
- GPS on: <50mA

**Power status:**

- Datalogger measures and logs solar panel voltage, solar panel current, battery voltage, battery current and battery temperature.
- Status indicators (always visible) allow techs to identify if the system is charging correctly or not.
- This data is also part of the Current Conditions screen call and are captured in the electronic service report.



Solicita tu cotización y visítanos en:

<https://www.oceanproo.net>

Ubícanos en:

Av. Las Palmeras N° 5334  
Los Olivos 15304

