NX7260

Flexible, Powerful and Reliable

"NEXTSense - Endless Possibilities!"

The NEXTSense NX7260 is an intelligent data logger that offers a complete set of acquisition, processing, logging and dissemination features. It is designed especially for automated weather stations – where system reliability and flexibility are important.

Versatile Input

The NX7260 is compatible with most of the industry's leading weather sensors via its many built-in open and standard interfaces. It has been interfaced to anemometers (analogue, digital and intelligent), multi-element sensors, solarimeters, tipping bucket rainfall sensors, water-level and current profilers.

It is capable of reading data from intelligent sensors using RS232/RS422/RS485 streams with regular expression parsers and also MODBus Serial and TCP/UDP protocols. Analogue sensors are supported via its on-board voltage/current inputs and also digital counter/frequency/bit-series inputs.

Powerful Processing Engine

Raw data from sensors can be converted to engineering values via linear, quadratic and mapping formulas.

Engineering values can be range-validated with bad data marked as invalid at source. Its processing engine is designed for meteorological use and features algorithms for wind averaging, determining directional span, pressure reduction, and deriving humidity products, in addition to standard aggregation features such as minimum, maximum, average and summation.

Data & Storage

Results can be logged to an SQLite database that is stored on a removable USB Pendrive or SD Storage card.

Messages & Data Format

For data dissemination, the processing engine can generate CSV and message files (SYNOP, CLIMATE Hourly/Daily) from the database. Data can be also be sent in streaming format for real time data transmission.

Data Transmission

NX7260 is capable of supporting multitude of data transmission protocol. Data can be streamed via TCP in real-time with synching capabilities to other servers via WAN links. Other methods like FTP and SMS are also being supported in NX7260.

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NX7260 *Intelligent Data Logger*

Eight on-board differential analog input ports that can be used to measure voltages and current signals.

An internal expansion bus allows additional signal conditioning and input types to be added in the future.

Removable SD Storage Card for logging data.

LCD display provides direct view of data, and may be switch off to conserve power.

USB port allows connection to high-speed HSDPA / 3G / EDGE / GPRS cellular modems.

Sixteen on-board digital digital inputs. All of these can return on-off states. Eight of them can be used as counter and frequency monitors. The other eight can be used used for gray-code or BCD inputs.

Ethernet port allows direct connection to LANs, and support WANs via VSAT, Leased Line, xDSL and WiFI.

Three RS232 ports are standard, with one doubling as a RS422/485 port. An additional 4 RS232 ports may be added through internal expansion.

Plugable connectors make maintenace work easy.

Power Switch. Input power is from 6-20VDC. Power consumption is 230mA @ 12VDC.

An HTML5 Web-sockets based interface allows data to be viewed as text, wind dials and charts live in real time, whether from a local PC or remotely, via WAN links. Mobile browsers are supported as well.

Configuration of the NX7260 can be done via a Web Based UI, PC-based configuration tool, or can be managed from a central configuration server.

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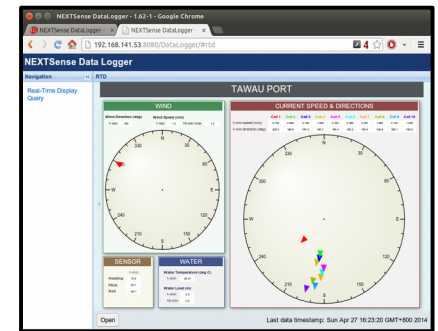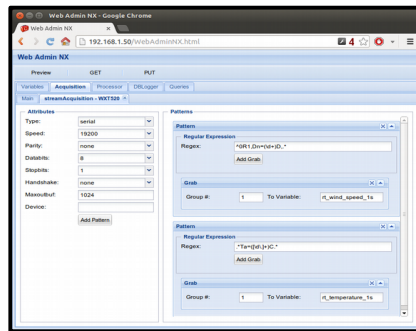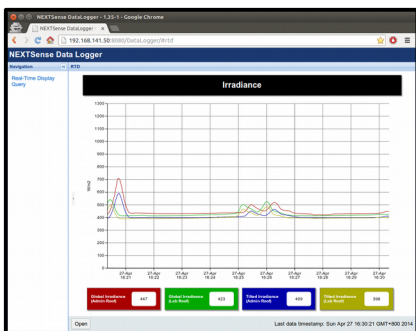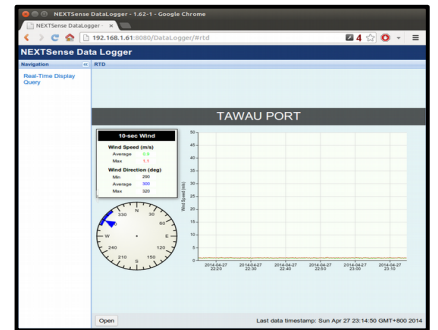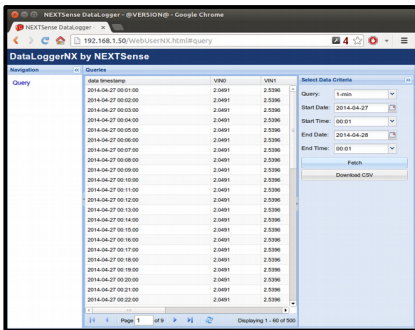
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Technical Datasheet

Processor:

CPU: Technologic System TS-7260 Single Board Computer, 32-bit Cirrus EP9302 ARM9 CPU (200 Mhz ARM920T)
RAM: 64MB
Flash: 32MB
External: USB/SD Card

Ports:
Serial: RS232/TTL Com x 6
:RS485 x 1
Networkt: Ethernet x 1

Extended inputs (Reconfigurable):
0-1V: 2
0-5V:4
0-200mV:2
Pt100 RTD:2

Digital Inputs:
Digital Input/Output:30
USB:2

Input Power:
4.5v to 20v DC Switching Power Supply

Dimension:
Size: 30cm x 10 cm x 5 cm
Weght: 1200g

Protocols:
Protocols Supported: Full Linux TCP/IP Stack, DHCP, FTP, HTTP, NTP, PPP, PPPoE, OpenVPN, DataSynching**,** DataStreaming, HTTP Post

Software Features:
Operating System:NX-Linux
Data Logging: Configurable (minimum 1s)
Data Transmission: FTP, Streaming, SMS.
Data Formats: CSV, SYNOP, MMD CLIMATE Hourly and Daily, Custom Format. Compressed option available.
Conversion: Linear/Quadratic/Map
Calibration: Linear/Quadratic/Directional

Database:
SQLite

Data Storage:
USB Pendrive/SD Card

Web Support:
Real Time Display: Text, Wind Dial/Barb, Running Charts
Data Query: Tabular, Paged
Data Download: CSV

Health Monitoring:
Sensors: Input Power, Onboard Temperature
Statistics: Memory Usage, Storage Card Usage, CPU Load

Configuration:
Methods: Web-Based Forms, Upload Download XML, Standalone PC tool, centralized configuration server.
Settings: Sensors, I/O , Data Conversion, Data Calibration, Data Validation, Derived Products, Logging, Dissemination.

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