

## Data Acquisition System Logger Station II DL2800

32-Channels with Multiple Sensor Type Direct Input  
Control and Measure Both Stand-alone & via Network



### Remote Control Measurement & Recording via Network

Up to eight (8) DL2800 units (256 channels) can be remotely Network controlled via Ethernet connection.

### Stand-alone Operation

Simply connect user's monitor, keyboard and USB mouse to operate the DL2800 as a self-contained stand-alone Data Logger

### Three (3) Powerful Measurement Modes

Memory Mode - Record Fast Events  
HDD Mode - Long-term Measurements  
Multi Mode - Combined Memory & HDD

### Direct Input from Various Sensors

Plug-in AP Series Amplifiers used with RA recorders enable direct sensor input for Voltage, Vibration, Strain, Temperature, Pressure, Pulse, etc.

### Make Both Transient and Long-term Recordings

Transients: Up to  $2\mu\text{S}$  sampling  
Long-term: Record for 60-days at 10mS sampling on 32 channels.

### Multi-channel Measurements

Each mainframe provides 32 Channel capacity via 16 dual channel AP-Amplifier Module slots. Additionally, 16 Logic/Event Digital Inputs are provided standard.

### Common Signal Amplifiers

Plug-in Signal Input Conditioning Amplifier Modules are the same as used with the RA1000 and RA2000 series Data Acquisition Recorders. Each isolated Amplifier can be interchanged among units for measurement versatility.

### Rack Mounting Available

Optional 19"rack mount adapters are available for the DL2800 mainframe. A front panel located HDD simplifies maintenance.

### Multi-unit Synchronization Option

Time synchronize up to 10 each DL2800 mainframes (320 channels) with this option when operating in the Memory Recorder mode.

## Basic Specifications

Number of channels	32 channels (16 slots) + 16 digital input (mainframe)
Storage device	Internal memory: 32MW, Built-in HDD: 40GB (includes system domain 5GB) USB memory using the USB port
Interfaces	Ethernet (10BASE-T/100BASE-TX): for control with communication command (std) USB mouse: for USB memory, 2 ports (standard) RS-232C: for control by communication command or UPS shut-down (optional)
Sampling speed	Max 2 $\mu$ s (500k/s) **Depends on recording drive and number of channels
Measuring mode	Selectable from Memory Recorder, HDD Recorder and Multi Recorder modes
Memory Recorder Mode	Records measured data onto internal memory by set trigger. For fast or accidental events
Memory capacity	32MW (1MW per channel when using 32 channels)
Memory division	1, 2, 4, 8, 16, 32, 64, 128 divisions
Measuring Operation	One time, repeat, endless
HDD Recorder Mode	Records measured data on HDD at real time. For long-term measurement.
HDD capacity	Max 35GB
Starting condition	Press start key or set start time.
Measuring Operation	Normal or ring (repeat recording at set time period)
Recording method	Sample: record data at set sampling speed Peak: record max and min value at every 2 $\mu$ s sampling during set recording period
Multi Recorder Mode	Combination of Memory & HDD recording. Steady-state and transient events can be recorded simultaneously.
Monitor output	XGA (analog RGB, 1024 x 768 dots)
Operating environment	Temperature: 5 to 40°C, humidity: 35 to 80%RH (Without condensation. Humidity must be 45%RH or lower if temperature is 30°C or over.)
Power supply	90 to 264VAC, frequency: 50 or 60Hz
Power consumption	Max approx. 170WAC (when using USB port and 16 AP11-103s installed)
Dimensions	Approx. 431 (W) x 244 (H) x 307 (D) (pads on corners included but not other projections)
Weight	Mainframe only: 10.5kg or less Mainframe, 1 optional unit & 12 AP11-101s: 13.5kg or less

## Main Unit & Accessories

Item	Model	Specifications
Logger Station	DL2800	

### Input Amplifier Unit

Item	Model	Specifications
2ch High Resolution DC Amp	AP11-101	Input: $\pm 100$ mV to $\pm 500$ V, A/D resolution: 16 bits
2ch FFT Amp	AP11-102	Anti-aliasing filter (72dB/OCT), with power supply for sensor
2ch High Speed DC Amp	AP11-103	Input: $\pm 100$ mV to $\pm 500$ V, A/D resolution: 12 bits
2ch AC Strain Amp*1	AP11-104A	Frequency characteristic: 2kHz, Bridge power: 5kHz
Event Amp	AP11-105	Input: 8 logic (voltage/contact)
2ch TC/DC Amp	AP11-106A	Input: R, T, J, K, W ( $\pm 100$ mV to $\pm 50$ V), A/D resolution: 15 bits
TC/DC Amp	AP11-107	Input: R, T, J, K ( $\pm 10$ mV to $\pm 50$ V), A/D resolution: 14 bits
F/V Converter	AP11-108	Input: 1Hz to 10kHz
2ch Vibration/RMS Amp	AP11-109	Input: $\pm 100$ mV to $\pm 500$ V, with power supply for sensor
2ch DC Strain Amp	AP11-110	Input: 800 $\mu$ e to 20k $\mu$ e (BV=5V), 2k $\mu$ e to 50k $\mu$ e (BV=2V)
2ch Zero Suppression Amp	AP11-111	Input: $\pm 100$ mV to $\pm 500$ V, A/D resolution: 16 bits

\*1 Optional AC Bridge Power Unit (RA23-116) is required.

### Optional Unit

Item	Model	Specifications
Remote Unit	RA23-112	Use external signals to start/stop recording and to control other functions
RS-232C Unit	RA23-114	For control by communication command or for shutdown by UPS
AC Bridge Power Unit	RA23-116	AC bridge power unit for 2ch AC Strain Amp (AP11-104A)
Synchronization Unit	RA28-111	For multiple DL2800 synchronization (up to 10 units)

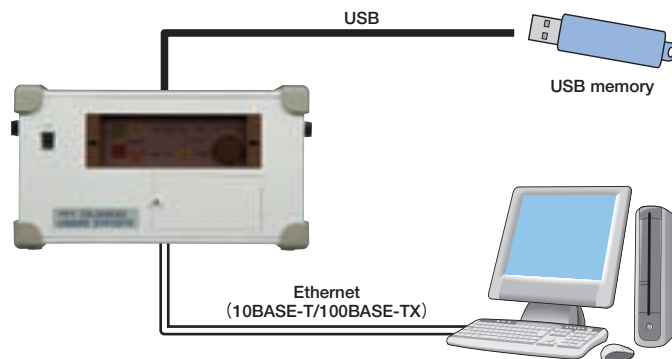
### PC Software: Unifizer

Item	Model	Specifications
Online Basic Set	NS3100-P01	For RA1000/2000 series and L2800
Offline Set	NS3200-P01	Compatible with Windows 2000 & XP

\*Contents of this catalog including specifications are subject to change without prior notice.

## Connection with PC

Data recorded on DL2800 can be transferred to the PC via USB memory or Ethernet. The optional PC software 'Unifizer' allows users to do calculation, report generation and file conversion of the data.



## Recordable Time on Memory Devices

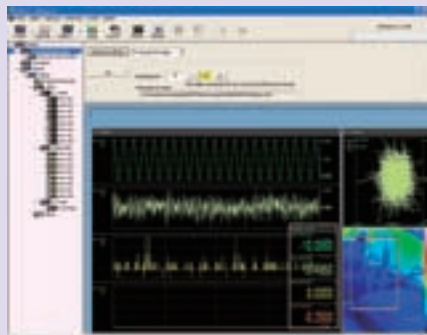
Sampling Speed	Internal memory (32MW)		HDD (35GB)*1		USB memory (512MB)*1	
	w/ 1ch	w/ 32chs	w/ 1ch	w/ 32chs	w/ 1ch	w/ 32chs
2 $\mu$ s	1.1min	2.1sec	9.7hrs	—	—	—
5 $\mu$ s	2.8min	5.2sec	24hrs	—	—	—
20 $\mu$ s	11min	21sec	4days	3hrs	—	—
50 $\mu$ s	28min	52sec	10days	7.6hrs	—	—
100 $\mu$ s	56min	1.8min	20days	15hrs	—	—
500 $\mu$ s	4.7hrs	8.7min	101days	3.2days	—	—
1ms	9.3hrs	17min	203days	6.3days	3days	2hrs
50ms	19days	15hrs	28years	316days	148days	4.6days
100ms	39days	29hrs	56years	1.7years	296days	9.3days

Above data is calculated value.

\*1: Value at sample filing by integers. At peak filing, the recordable time becomes half of above data.

## PC Software

### Unifizer: NS3100 Series



- Enables remote control of DL2800 by PC.
- Real-time data transfer from DL2800 to the PC via Ethernet. (Max speed: 100  $\mu$ s. Up to 8 DL2800s can be connected.)
- Display of replayed data (waveform, X-Y, physical data)
- Recorded data can be converted to CSV and output to report easily.
- Various math functions: Calculations between channels, power, square root, absolute value, common logarithm, exponential, RMS, trigonometric function, moving average, etc.



## CAUTION FOR SAFETY

Please read "WARNING" & "CAUTION" in the operation manual attached to the product carefully for proper operation before using the product.

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