Tablet Recorder

Taking signals from PLC and other devices...

And logging by Tablet Recorder.

Bring your own tablet to view trend graphs!

What is Tablet Recorder?

Tablet Recorder is a recorder without a screen. Tablets or PCs with built-in browsers are used for the display. Users monitor information generated by Tablet Recorder using browser software on the display terminal. Tablet Recorder is connected to the display terminal via Wi-Fi or wired LAN, or other IP networks such as the Internet.
The tablet recorder offers
A highly cost-efficient

A wide variety of signals can be connected!

This is the functional block diagram of the unit.

1 I/O signals
I/O modules directly added to the unit

Add as many I/O modules as you need!

Devices connected via Ethernet

Wired LAN Ethernet (Modbus/TCP)

Remote I/O
R3 Series
R5 Series
R6 Series
R7 Series
R9 Series

PLC

Wireless device

See page 6 regarding PLCs and wireless devices.

1-c PLC

1-d Wireless device

1-a I/O modules

1-b Remote I/O

2 Sampling at a maximum speed of 5 ms.

Sampling at a maximum speed of 5 ms.

Maximum 120-channel trend data is sampled at intervals of 5 ms to 1 second (corresponding to the recording cycle). Additionally, event data such as alarm and device start-up/stop times is detected.

3 15 types of operations are available.

Function operations are applicable to collected data such as:
Addition and subtraction / multiplication / division / square root / moving average / delay buffer / exp / common logarithm / natural logarithm / peak/valley hold / analog accumulation / power / F value calculation / inverse logarithm / scaling

4 The data is recorded here.

A maximum of 120 channels (pens) of trend data and 3,000 events can be recorded to the main memory. The trend data storing rate can be selected from the following:

5/10/50/100/500 ms
1/2/5/10 seconds
1/2/5/10/15/30 minutes, 1 hour

The recorded data is transferred to the SD memory from the main memory as a file at specified cycles (one hour to 1 month).
an abundance of functionalities.
IoT-era recorder.

What is a browser?
The software usually used to look at websites on the Internet. For that reason, it’s also called a Web browser.

Screen Display

Data recorded in the main memory is written onto an SD card for storage.
Main memory data is stored onto an SD card as a TRD (binary data) or CSV file.
- Storage time indicator (SD capacity 4GB): 10 years (at 32 data inputs, 1-minute recording cycle)

Web display information is generated here.
The recorded trend data or event data is supplied as variables and combined with background graphic data etc.

Communication control function terminology

a Simple Web server
This function makes Web display information available on tablets, PCs, or smartphones.

b-1 FTP server
This function transfers data files within the SD memory at requests from client devices such as PCs.

b-2 FTP client
This function transfers data files within the SD memory to local servers or cloud servers connected via Internet.

c-1 Modbus/TCP slave
I/O data handled by Tablet Recorder can be monitored by a PC-based SCADA or other Modbus master devices.

c-2 Modbus/TCP master
This function collects I/O data from remote I/O and wireless devices, PLCs, or other Modbus slave devices.

d SMTP client
This function is used to transmit e-mails to a designated e-mail server.
All you need is a tablet with a web browser! The TR30 unit generates the Web screens.

Benefits of bright display and superb operability of a tablet are all yours. Trend screen can be monitored and controlled on any display terminal browser. Special software application is not needed. All data is stored in Tablet Recorder.

Move to the historical trend
Transition to the historical trend is seamless with a downward flick.

Zoom out on graphs
The time span over the graph area can be widened while staying in the recording state by pinching in the screen along the time axis.

Zoom in on graphs
Fine changes in the graph can be enlarged by pinching out the screen along the graph amplitude axis.

Move graphs
A specific channel graph can be selected and moved to separate overlapping graphs for clear view.

Users can receive direct benefits from the advanced functionality and superb operability of a tablet. The trend screen can be freely controlled by familiar motions like flicking and pinching in/out. More standard functions of the tablet are applicable such as screenshots taken and attached to e-mails, comment entry by voice command.

Use the pinching in and pinching out functions as is!
Host network variations

Network fee is free when using Wi-Fi to connect with a tablet.

Trend screens can be accessed from faraway locations.

Tablet Recorders installed at multiple locations can be monitored by a PC connected via LAN.

I can monitor all data sitting at my desk.

Users can view trend screens and work on reporting forms in other buildings by connecting Tablet Recorder to the company LAN.
Data recording can be added to an existing PLC system.

New sensor wiring is not needed when polling data from a PLC.

Tablet recorder basic configuration

A web browser is all you need to display data.

Display terminal

PC

Laptop PC

Smartphone

Tablet

Signals can be received from a variety of devices.

Host network

Tablet Recorder TR30

Built-in I/O by R30 Series remote I/O

Various R30 Series modules are selectable.

The I/O modules are mounted on the Base.

Compact modular solution combining Tablet Recorder with built-in I/O modules. Free combination of I/O modules in accordance with the application. A maximum of 16 slots can be added.

Remote I/O signals

Select Ethernet communication for remote I/O!

Wire-saving monitoring system combining Tablet Recorder with remote I/O. Various types of remote I/O are selectable, from the compact, space-saving block type to the mixed signal modular type, allowing the most efficient configuration.
All you need is a tablet with a web browser!
The TR30 unit generates the Web screens.

Move to the historical trend and zoom in on graphs and zoom out on graphs for a clear view.

Benefits of bright display and superb operability of a tablet. The trend screen can be freely controlled by familiar motions like flicking and pinching in and pinching out functions.

New sensor data recording and attached to e-mails, comment entry by voice command.

Tablet Recorder can poll data from various PLCs, via Modbus or a gateway module converting various fieldbus protocols to Modbus.

Introducing wireless input system with Tablet Recorder is an economical and easy-to-build solution. Regardless of the point count, signals in distant locations can be easily taken into the system via wireless network.
Tablet Recorder solutions for IoT use with equipment and devices such as:

**Plants and assembly processing factories**
- Heat exchangers
- Curing tanks
- Lime kilns
- Electric furnaces
- Beverage-filling machines
- Packaging machines
- Conveying equipment
- Robots
- Injection molding machines
- Tire vulcanization

**Machine tools**
- NC equipment
- Press equipment
- Forges
- Machining centers
- Turning centers
- Grinders/polishers
- Electron beam welders
- Vacuum coating equipment
- Electro-discharge machining equipment
- Laser machining equipment

**Utility**
- Compressors
- Freezers
- Transformers
- Cogeneration equipment
- Water purification equipment
- Seawater desalination equipment
- Wastewater processing equipment
- Heat pumps
- PSA equipment
- Desulfurization and denitrification equipment

**Others**
- Small-scale water supply equipment
- Weather observation equipment
- Wind-power generators
- Greenhouses
- Poultry farms
- Brewing equipment
- Aquaculture farms
- Park facilities
- Hot springs
- Care facilities

Introducing Tablet Recorder TR30 sister products

**Web Logger**
Model: DL30 - JAPANESE VERSION ONLY

**Tablet Recorder**
Model: TR30

**Basic Functions**
- Simple Web server (Trend view, etc.)
- Data logging
- Mail function
- FTP function
- Modbus/TCP communication function

**Features**
- Report form generation (daily/weekly/annual)
- Extended I/O points (with function operations)
- Enhanced PLC communication function

**With added functions**

**Basic functions of the DL8 Series**

**With added functions**

Specifications are subject to change without notice. When ordering, use the latest data sheets available at M-System web site: www.m-system.com