

## ST8956 MULTI-FUNCTION RECORDER (MFR) SYSTEM

Powerful, scalable single module data acquisition solution.

Stack's NEW data recording system consists of a single multi-function module containing hardware already installed to provide a wide variety of data acquisition functions. The module has the basic functions available out of the box: the advanced functions can be made operational simply by PIN code activation.

The STACK ST8956 multi-function system is available in 3 versions:

- Clubman
- Semi-Pro
- Pro

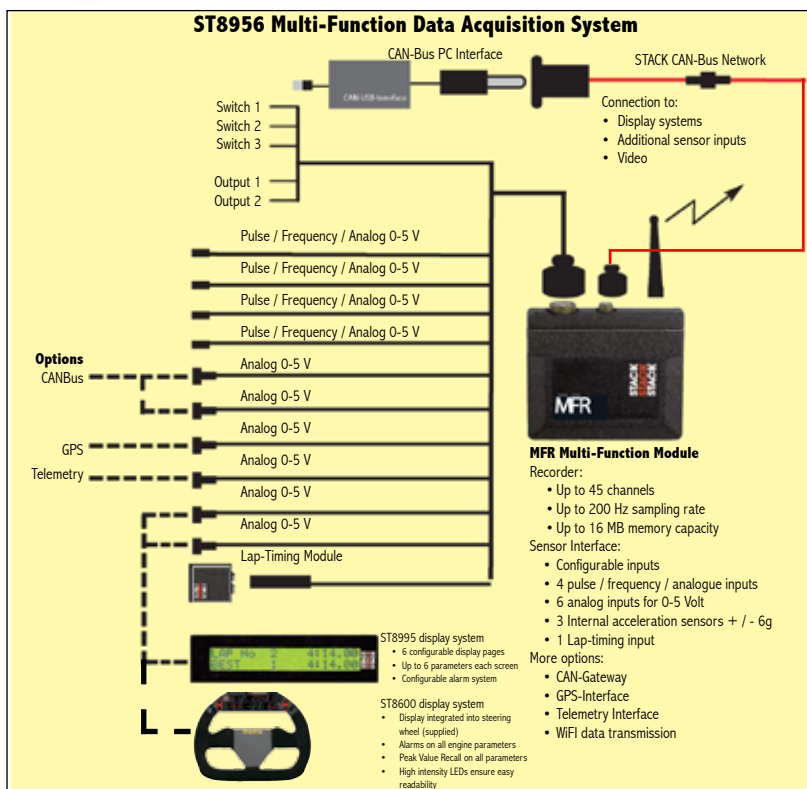
The "Clubman" function is perfect for the novice, the "Semi pro" system for more advanced requirements and the "pro" system for extensive measuring tasks.

Pin-code activation means upgrading is problem-free and can be done at any time.

The system can be used in conjunction with either Stack's slimline LCD display or Stack's Steering Wheel display.



- Faster data recorder - up to 200Hz per channel
- Bigger recording memory - 32MB as standard
- Better resolution - 10 bit analogue/16 bit digital inputs
- More sensor inputs - Up to 45, 15 built-in
- Built-in 3-axis +/-6g g-sensor
- Built-in CAN ECU link and GPS interface options
- Built-in real-time telemetry option
- Synchronized video-logging and video-data overlay option



# MFR

# Multi-Function Recorder

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**FEATURES & SPECIFICATIONS** ST8956 MFR Multi-Function Recorder

<b>DATA RECORDING</b>	<b>CLUBMAN</b>	<b>SEMI-PRO</b>	<b>PRO</b>
Number of recording channels	20	30	45
Maximum Sample Rate (Hz)	200	200	200
Individual sample rate on each channel	✓	✓	✓
Total Recorder samples per second	4000	4000	4000
No of channels @ max. sampling rate	20	20	20
Standard memory size (MB)	32MB	32MB	32MB
<b>WIRELESS DATA DOWNLOAD OPTIONS</b>			
System Configuration by direct connection to PC USB Port	✓		
Data Download by direct connection to PC USB Port	✓		
Data Download over Wi-Fi (W-LAN) Wireless Network	Option 27		
Wi-Fi (W-LAN) Compatibility	802.11b/g (Option 27)		
Maximum Wireless Download Range (subject to antennae)	100m / 300ft (Option 27)		
Auto-Alarms on downloaded data	Options 27 & 25		
Multicar Wi-Fi Auto-download Server	Options 27 & 10		
<b>SENSOR INPUT OPTIONS</b>			
Total no of standard input channels	15 (Options 4 & 5)		
Maximum no of input channels supported	45		
Pulse (<3kHz) or 0-5 Volt analogue (10 bit) or thermocouple (using DSP interface)	4 (Options 4 & 5)		
0-5 Volt analogue (10 bit resolution)	6 (Options 4 & 5)		
Internal accelerometers	3 Axis +/- 6g (Lat./Long./Vert.) (Option 4)		
Lap timing input	✓ (Option 5)		
Battery Voltage input channel	✓		
Sensor harness with 19 pin MIL-STD connector	Option 5		
Control switch inputs & outputs	3 & 2 (Option 5)		
CAN interface, e.g. ECU (1 stream, 40 channels) (Up to 3 CAN interface max)	Option 8		
GPS interface (1 stream, 16 channels)	Option 9		
Telemetry interface (supports radio modems or GSM cellular modems)	Option 10		
<b>DISPLAY FEATURE OPTIONS</b>			
Multi-parameter Backlit LCD display	Option 11		
Multi-parameter LED Steering Wheel display	Option 28		
Lap time readout	Option 11 or Option 28		
Peak value tell-tales	Option 11 or Option 28		
Configurable display layout	Option 11		
Configurable Warning Alarms on external Alarm Light	✓ (Plus display alarm messages Option 11)		
Preconfigured display setup library	Option 11 or Option 28		
Shift light external (single stage)	Option 12		
Shift light external (sequential 5-stage)	Option 13 or Option 28		
Predictive Lap Time and Performance Meter Displays	Option 14 & Option 11 or Option 28		
Brake Bias Display (requires 2 x brake pressure sensors on network)	Option 14 & Option 11 or Option 28		
<b>VIDEO INTERFACE OPTIONS</b>			
Synchronized Video Support	Options 15 & 16		
Synchronized Video Compare	Options 15, 16 and 17		
Video Data Overlay Support	Options 15 & 18		
Performance Meter and Predictive Lap Time Displays on Video Overlay	Options 15, 18 & 14		
Max No. of Video Overlay Display channels	20		
Configurable Alarms on Video Data Overlay	Options 15 & 18		
Peak Value Recall on Video Data Overlay	Options 15 & 18		
Auto Camcorder Control (LAN-C)	Option 15		
<b>SENSOR INPUT EXPANSION OPTIONS</b>			
Additional 8 Universal configurable sensor inputs (Expansion 'E' modules)	Options 19 and/or 20		
2nd or 3rd CAN ECU Interface	Option 21		
Network Expansion Harness (required for more than one expansion module)	Option 22		
<b>ANALYSIS SOFTWARE</b>			
DataPro & Designer configuration SW V4 (MS Windows XP compatible)	✓		
DataPro & Designer configuration SW V5 (MS Windows XP & Vista compatible)	Option 23		
Rainbow Maps	Option 24		
Maths Channels	Option 25		
Custom Sensor Manager	Option 26		
Logbook - User-configurable with full search functions	Option 23		
<b>ORDERING OPTIONS</b> Basic System (inc MFR module, Network harness, CAN-USB download cable, DataPro software, user manual)			
Option 1	ST8970-PIN Clubman recorder (PIN)		
Option 2	ST8971-PIN Semi-Pro recorder (PIN)	Option 15	ST8961 VS module (inc video and network harness)
Option 3	ST8972-PIN Pro recorder (PIN)	Option 16	ST8960-PIN Enable Synchronized Video-Logging
Option 4	ST8965-PIN Enable 12 x Sensor Inputs & 3 x Internal accelerometers	Option 17	ST8968-PIN Enable Synchronized-Video Compare
Option 5	ST875-2 Sensor Interface Harness	Option 18	ST8969-PIN Enable Data Overlay on video image
Option 6	ST8967-PIN Enable 10 x Sensor Inputs & 2 x Internal accelerometers	Option 19	ST8891 8 Universal Input 'E1' module (inc sensor harness)
Option 7	ST875 Sensor Interface Harness	Option 20	ST8992 8 Universal Input 'E2' module (inc sensor harness)
Option 8	ST8996 CAN ECU Interface Option - [req. 2 x 0-5 Volt inputs]	Option 21	ST833-2 'G2' CAN Gateway Module & CAN harness
Option 9	ST8964-PIN GPS interface (PIN) - [req. 1 x 0-5 Volt input]	Option 22	ST889 Network Expansion Harness (for 2+ expansion modules)
Option 10	ST8963-PIN Telemetry interface (PIN) - [req.1 or 2 x 0-5 Volt input]	Option 23	ST8184 DataPro V4 to V5 software upgrade
Option 11	ST8995-2 LCD Display Pack (LCD Display, Harness, Switch Kit)	Option 24	ST8198-PIN Rainbow Maps option for DataPro
Option 12	ST536/ST537/ST538 Single stage shift light (White/Red/Amber)	Option 25	ST8199-PIN Math Channel Calculator option for DataPro
Option 13	ST539 5-stage shift light	Option 26	ST8183-PIN Custom Sensor Manager option for DataPro
Option 14	ST8999-PIN Performance Meter, PLT, and Brake Bias Display (PIN)	Option 27	ST8962 Wi-Fi (W-LAN) Wireless Data Download (inc internal Wi-Fi transceiver & bulkhead mount antenna)
		Option 28	ST8600 Multi-parameter LED Steering Wheel Display kit

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