


Broad Connectivity and Easier Control



- 1 Ethernet (optional)
- 2 GO/NO-GO output terminal
- 3 RGB video signal output terminal
- 4 USB-PC connection terminal
- 5 USB peripheral connection terminal
- 6 External trigger input
- 7 Trigger output
- 8 GP-IB connection terminal (optional)
- 9 Probe power terminal (optional)

1000BASE-T/100BASE-TX/10BASE-T compliant adapters (hubs and routers)

Sends waveform, screen, and settings data
Remote control
Mail transmission (GO/NO-GO action)

USB (standard on rear panel)

Sends waveform, screen, and settings data
Remote control

Ethernet (/C10, /C11 options)

Supports USB storage, USB mouse and keyboard.

On PCs
DLM2000's internal storage can be recognized by a PC as an external USB storage device. Transferring files is easy even when a USB thumb drive can't be used.

Software Control

<http://tmi.yokogawa.com/ea/products/oscilloscopes/oscilloscopes-application-software/>

Free Software

Optional Software Trial version available

Off-line waveform display and analysis

XviewerLITE –Basic check–
Zoom, V-cursor, conversion to CSV format

Xviewer –Advanced Analysis–
Advanced and useful functions are supported. Good for precise, off-line waveform analysis.

Waveform monitoring on a PC

XWirepuller
Remote monitor and operation
Transferring image files

- Waveform observation and analysis
- Cursor, Parametric Measure
- Statistical Analysis
- Multiple file display
- Advanced waveform operations
- Comment, marking, printing and making report
- Optional Math computation feature
- Remote monitor
- Instruments communication function
- Transferring waveform & image files

Data transfer to a PC

Command control
Custom software development

Control library "TMCTL" For Visual Studio

MATLAB Tool Kit

DL-Term Interactive tool **LabVIEW instrument driver**

Remote control from MATLAB and data file importing.

Main Specification

Models			
Model name	Frequency bandwidth	Input terminal	Max. sample rate
DLM2022 (710105)	200 MHz	2 analog channels	1.25 GS/s (interleave mode off) 2.5 GS/s (interleave mode on)
DLM2032 (710115)	350 MHz		
DLM2052 (710125)	500 MHz		
DLM2024 (710110)	200 MHz	4 analog channels or 3 analog channels + 8 bit logic	
DLM2034 (710120)	350 MHz		
DLM2054 (710130)	500 MHz		

Analog Signal input	
Input channels	DLM20x2: CH1, CH2
Analog input	DLM20x4: CH1 to CH4 (CH1 to CH3 when using logic input)
Input coupling setting	AC, DC, DC50 Ω, GND
Input impedance	
Analog input	1 MΩ ±1.0%, approximately 20 pF
	50 Ω ±1.0% (VSWR 1.4 or less, DC to 500 MHz)
Voltage axis sensitivity setting range	1 MΩ 2 mV/div to 10 V/div (steps of 1-2-5) 50 Ω 2 mV/div to 500 mV/div (steps of 1-2-5)
Max. input voltage	1 MΩ 150 Vrms 50 Ω Must not exceed 5 Vrms or 10 Vpeak
Max. DC offset setting range	1 MΩ 2 mV/div to 50 mV/div ±1 V 100 mV/div to 500 mV/div ±10 V 1 V/div to 10 V/div ±100 V 50 Ω 2 mV/div to 50 mV/div ±1 V 100 mV/div to 500 mV/div ±5 V
Vertical-axis (voltage-axis)	
DC accuracy ¹	±(1.5% of 8 div + offset voltage accuracy)
Offset voltage accuracy ¹	2 mV to 50 mV/div ±(1% of setting + 0.2 mV) 100 mV to 500 mV/div ±(1% of setting + 2 mV) 1 V to 10 V/div ±(1% of setting + 20 mV)

Frequency characteristics (-3 dB attenuation when inputting a sinewave of amplitude ±3div) ^{1,2}					
		DLM202x	DLM203x	DLM205x	
1 MΩ (when using passive probe)	100 mV to 100 V/div	200 MHz	350 MHz	500 MHz	
	20 mV to 50 mV/div	150 MHz	300 MHz	400 MHz	
50 Ω	10 mV to 500 mV/div	200 MHz	350 MHz	500 MHz	
	2 mV to 5 mV/div	150 MHz	300 MHz	400 MHz	
Isolation between channels	Maximum bandwidth: -34 dB (typical value)				
Residual noise level ³	The larger of 0.4 mV rms or 0.05 div rms (typical value)				
A/D resolution	8 bit (25 LSB/div) Max. 12 bit (in High Resolution mode)				
Bandwidth limit	FULL, 200 MHz, 100 MHz, 20 MHz, 10 MHz, 5 MHz, 2 MHz, 1 MHz, 500 kHz, 250 kHz, 125 kHz, 62.5 kHz, 32 kHz, 16 kHz, 8 kHz (can be set for each channel)				
Maximum sample rate	Real time sampling mode	Interleave OFF	1.25 GS/s		
		Interleave ON	2.5 GS/s		
	Repetitive sampling mode	125 GS/s			
Maximum record length (Points)		Repeat	Single	Single Interleave	
	2 ch model	/M1S	6.25 M	25 M	62.5 M
		/M1	6.25 M	25 M	62.5 M
	4 ch model	/M2	12.5 M	62.5 M	125 M
/M3		25 M	125 M	250 M	
Ch-to-Ch deskew	±100 ns				
Time axis setting range	1 ns/div to 500 s/div (steps of 1-2-5)				
Time base accuracy ¹	±0.002%				
Max. acquisition rate ⁴	Approx. 20000 waveform/sec/ch (Accumulation mode)				
Dead time in N Single mode	Approx. 2.2 μs (approx. 450000 waveforms/sec/ch)				

Logic Signal Input (4 ch model only)

Number of inputs	8 bit (excl. 4 ch input and logic input)	
Maximum toggle frequency ¹	Model 701988: 100 MHz, Model 701989: 250 MHz	
Compatible probes	701988, 701989 (8 bit input) (701980, 701981 are available)	
Min. input voltage	701988: 500 mVp-p, 701989: 300 mVp-p	
Input range	Model 701988: ±40 V, Model 701989: threshold ±6 V	
Max. nondestructive input voltage	±40 V (DC + ACpeak) or 28 Vrms (when using 701989)	
Threshold level setting range	Model 701988: ±40 V (setting resolution of 0.05 V) Model 701989: ±6 V (setting resolution of 0.05 V)	
Input impedance	701988: Approx. 1 MΩ/approx. 10 pF 701989: Approx. 100 kΩ/approx. 3 pF	
Maximum sampling rate	1.25 GS/s	
Maximum record length (Points)	Repeat	Single
	/M1	6.25 M 25 M
	/M2	12.5 M 62.5 M
	/M3	25 M 125 M

Triggers

Trigger modes	Auto, Auto Level, Normal, Single, N-Single	
Trigger type, trigger source		
A triggers	Edge	CH1 to CH4, Logic, EXT, LINE
	Edge OR	CH1 to CH4
	Edge Qualified	CH1 to CH4, Logic, EXT
	State	CH1 to CH4, Logic
	Pulse width	CH1 to CH4, Logic, EXT
	State width	CH1 to CH4, Logic
	TV	CH1 to CH4
	Serial Bus	I ² C (optional) CH1 to CH4, Logic SPI (optional) CH1 to CH4, Logic UART (optional) CH1 to CH4, Logic FlexRay (optional) CH1 to CH4 CAN (optional) CH1 to CH4 CAN FD (optional) CH1 to CH4 LIN (optional) CH1 to CH4 SENT (optional) CH1 to CH4, Logic PSI5 (optional) CH1 to CH4 User defined CH1 to CH4
AB triggers	A Delay B	10 ns to 10 s (Edge, Edge Qualified, State, Serial Bus)
	A to B(N)	1 to 10 ⁹ (Edge, Edge Qualified, State, Serial Bus)
	Dual Bus	Serial Bus only
Trigger level setting range	CH1 to CH4	±4 div from center of screen
Trigger level setting resolution	CH1 to CH4	0.01 div (TV trigger: 0.1 div)
Trigger level accuracy ¹	CH1 to CH4	±(0.2 div + 10% of trigger level)
Window Comparator	Center/Width can be set on individual Channels from CH1 to CH4	

Display

Display ⁵	8.4-inch TFT color liquid crystal display, 1024 × 768 (XGA)
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Functions

Waveform acquisition modes	Normal, Envelope, Average	
High Resolution mode	Max. 12 bit (the resolution of the A/D converter can be improved equivalently by placing a bandwidth limit on the input signal)	
Sampling modes	Real time, interpolation, repetitive sampling	
Accumulation	Select OFF, Intensity (waveform frequency by brightness), or Color (waveform frequency by color) Accumulation time: 100 ms to 100 s, Infinite	
Roll mode	Enabled at 100 ms/div to 500 s/div (depending on the record length setting)	
Zoom function	Two zooming windows can be set independently (Zoom1, Zoom2)	
	Zoom factor	×2 to 2.5 points/10 div (in zoom area)
	Scroll	Auto Scroll
	Search functions	Edge, Edge Qualified, State, Pulse Width, State Width, I ² C (optional), SPI (optional), UART (optional), CAN (optional), CAN FD (optional), LIN (optional), FlexRay (optional), SENT (optional), PSI5 (optional), CXPI (optional)
History memory	Max. data (record length 1.25 k Points, with) /M1 or /M1S: 10000, /M2: 20000, /M3: 50000	
	History search	Select Rect, Wave, Polygon, or Parameter mode
	Replay function	Automatically displays the history waveforms sequentially
	Display	Specified or average waveforms
Cursor	Types	ΔT, ΔV, ΔT & ΔV, Marker, Degree
Snapshot	Currently displayed waveform can be retained on screen	

Computation and Analysis Functions

Parameter measurement	Max, Min, P-P, High, Low, Amplitude, Rms, Mean, Sdev, IntegTY+, IntegTY, +Over, -Over, Pulse Count, Edge Count, V1, V2, ΔT, Freq, Period, Avg Freq, Avg Period, Burst, Rise, Fall, +Width, -Width, Duty, Delay	
Statistical computation of parameters	Max, Min, Mean, σ, Count	
Statistics modes	Continuous, Cycle, History	

Trend/Histogram display of wave parameters	Up to 2 trend or histogram display of specified wave parameters	
Computations (MATH)	+, -, ×, /, Filter (Delay, Moving Avg, IIR Lowpass, IIR Highpass), Integ, Count (Edge, Rotary), user defined math (optional)	
Computable no. of traces	2 (Math1, Math2) (1 trace for 2 ch model)	
Max. computable memory length	/M1, /M1S: 25 MPoints, /M2: 62.5 MPoints, /M3: 125 MPoints	
Reference function	Up to 2 traces (REF1/REF2) of saved waveform data can be displayed and analyzed	
Action-on-trigger	Actions: Buzzer, Print, Save, Mail	
GO/NO-GO	Modes: Rect, Wave, Polygon, Parameter Actions: Buzzer, Print, Save, Mail	
XY	Displays XY1, to XY2 and T-Y simultaneously	
FFT	Number of points: 1.25 k, 12.5 k, 25 k, 125 k, 250 k Window functions: Rectangular, Hanning, Flat-Top FFT Types: PS (LS, RS, PSD, CS, TF, CH are available with /G2 or /G4 option)	
Histogram	Displays a histogram of acquired waveforms	
User-defined math ⁶ (/G2 and /G4 options)	The following operators can be arbitrarily combined in equations: +, -, ×, /, SIN, COS, TAN, ASIN, ACOS, ATAN, INTEG, DIFF, ABS, SQRT, LOG, EXP, LN, BIN, DELAY, P2 (power of 2), PH, DA, MEAN, HLBT, PWHH, PWLL, PWHL, PWLH, PWXX, FV, DUTYH, DUTYL, FILT1, FILT2 The maximum record length that can be computed is the same as the standard math functions.	
Power supply analysis (/G3 and /G4 options) ⁶	Power analysis For Pwr1 and Pwr2, selectable from 4 analysis types Deskewing between the voltage and current waveforms can be executed automatically.	
	Switching loss	Measurement of total loss and switching loss, power waveform display, Automatic measurement and statistical analysis of power analysis items (Wp, Wp+, Wp-, Abs.Wp, P, P+, P-, Abs.P, Z)
	Safety operation area	SOA analysis by X-Y display, using voltage as X axis, and current as Y axis is possible
	Harmonic analysis	Basic comparison is possible with following standard Harmonic emission standard IEC61000-3-2 edition 2.2, EN61000-3-2 (2000), IEC61000-4-7 edition 2
	Joule integral	Joule integral (I ² t) waveform display, automatic measurement and statistical analysis is possible
Power Measurement	Automated measurement of power parameters for up to two pairs of voltage and current waveforms. Values can be statistically processed and calculated.	
	Measurement parameters	Urms, Unm, Udc, Urnm, Uac, U+pk, U-pk, Up-p, Irms, Imn, Idc, Irnm, Iac, I+pk, I-pk, Ip-p, P, S, Q, Z, λ, Wp, Wp+, Wp-, Abs.Wp, q, q+, q-, Abs.q, Avg Freq (voltage, current)

Common Features of Serial Bus Signal Analysis Functions (/F1 to /F11 Options)		
Analysis result display	Decoded information is displayed together with waveforms or in list form.	
Auto setup function	A threshold value, time axis scale, voltage axis scale and other bus-specific parameters such as a bit rate and recessive level are automatically detected. Trigger conditions are set based on the detected result and decoded information is displayed. (The type of a bus signal needs to be specified in advance.)	
Search function	Search of all waveforms for a position that matches a pattern or condition specified by data information.	
Analysis result saving function	Analysis list data can be saved to CSV-format files. Trend data can be also saved for SENT signals.	

I²C Bus Signal Analysis Functions (/F2 and /F3 Options)⁶		
Applicable bus	I ² C bus	Bus transfer rate: 3.4 Mbit/s max. Address mode: 7 bit/10 bit
	SM bus	Complies with System Management Bus
Analyzable signals	CH1 to CH4, Logic input, or M1 to M2	
I ² C Trigger modes	Every Start, Address & Data, Non-Ack, General Call, Start Byte, HS Mode	
Analyzable no. of data	300000 bytes max.	
List display items	Analysis no., time from trigger position (Time (ms)), 1st byte address, 2nd byte address, R/W, Data, Presence/absence of ACK, information	

SPI Bus Signal Analysis Functions (/F2 and /F3 Options)⁶		
Trigger types	3 wire, 4 wire After assertion of CS, compares data after arbitrary byte count and triggers.	
Analyzable signals	CH1 to CH4, Logic input, M1 to M2	
Byte order	MSB, LSB	
Field definition	Field size (4 to 32 bits), Enabled bit range	
Analyzable no. of data	300000 bytes max.	
List display items	Analysis no., time from trigger position (Time (ms)), Data 1, Data 2	

UART Signal Analysis Functions (/F1 and /F3 Options)⁶		
Bit rate	115200 bps, 57600 bps, 38400 bps, 19200 bps, 9600 bps, 4800 bps, 2400 bps, 1200 bps, User Define (an arbitrary bit rate from 1 k to 1 Mbps with resolution of 100 bps)	

Analyzable signals	CH1 to CH4, logic input, or M1 to M2
Data format	Select a data format from the following 8 bit (Non Parity), 7 bit Data + Parity, 8 bit + Parity
UART Trigger modes	Every Data, Data, Error (Framing, Parity)
Analyzable no. of frames	300000 frames max.
List display items	Analysis no., time from trigger position (Time(ms)), Data (Bin, Hex) display, ASCII display, and Information.

CAN Bus Signal Analysis Functions (/F4, /F6, /F7 and /F8 Options)⁶

Applicable bus	CAN version 2.0A/B, Hi-Speed CAN (ISO11898), Low-Speed CAN (ISO11519-2)
Analyzable signals	CH1 to CH4, M1 to M2
Bit rate	1 Mbps, 500 kbps, 250 kbps, 125 kbps, 83.3 kbps, 33.3 kbps User Define (an arbitrary bit rate from 10 kbps to 1 Mbps with resolution of 100 bps)
CAN bus Trigger modes	SOF, ID/Data, ID OR, Error (Error Frame, Stuff, CRC), Message and signal (enabled when loading physical values/symbol definitions)
Analyzable no. of frames	100000 frames max.
List display items	Analysis no., time from trigger position (Time (ms)), Frame type, ID, DLC, Data, CRC, presence/absence of Ack, information
Auxiliary analysis functions	Field jump functions

CAN FD Bus Signal Analysis Functions (/F7 and /F8 Options)⁶

Applicable bus	CAN FD (ISO 11898-1:2015 and non-ISO)
Analyzable signals	CH1 to CH4, M1 to M2
Bit rate	Arbitration 1 Mbps, 500 kbps, 250 kbps, User Define (an arbitrary bit rate from 20 kbps to 1 Mbps with resolution of 100 bps) Data 8 Mbps, 5 Mbps, 4 Mbps, 2 Mbps, 1 Mbps, 500 kbps, User Define (an arbitrary bit rate from 250kbps to 10Mbps with resolution of 100 bps)
CAN FD bus trigger modes	SOF, ID, ID OR, Error Frame, Message (enabled when loading physical values/symbol definitions)
Auto setup function	Auto setting of bit rate, recessive Level, threshold value, time axis scale, voltage axis scale, and display of analysis results
Analyzable no. of frames	50000 frames max.
List display items	Analysis no., time from trigger position (Time (ms)), Frame type, ID, DLC, Data, CRC, presence/absence of Ack, information
Auxiliary analysis functions	Field jump functions

LIN Bus Signal Analysis Functions (/F4, /F6, /F7 and /F8 Options)⁶

Applicable bus	LIN Rev. 1.3, 2.0, 2.1
Analyzable signals	CH1 to CH4, M1 to M2
Bit rate	19.2 kbps, 9.6 kbps, 4.8 kbps, 2.4 kbps, 1.2 kbps User Define (an arbitrary bit rate from 1 kbps to 20 kbps with resolution of 10 bps)
LIN bus Trigger modes	Break Synch, ID/Data, ID OR, and Error trigger
Analyzable no. of frames	100000 frames max.
List display items	Analysis no., time from trigger position (Time (ms)), ID, ID-Field, Data, CheckSum, information
Auxiliary analysis functions	Field jump functions

CXPI Bus Signal Analysis Functions (/F4, /F6, /F7 and /F8 Options)⁶

Applicable bus	CXPI JASO D 015-3:2015
Analyzable signals	CH1 to CH4, M1 to M2
Bit rate	19.2 kbps, 9.6 kbps, 4.8 kbps, User Define (an arbitrary bit rate from 4 kbps to 50 kbps with resolution of 10 bps)
Analyzable no. of frames	10000 frames max.
List display items	Analysis no., time from trigger position (Time (ms)), ID, DLC, W/S, CT, Data, CRC, error information, Wakeup/Sleep

FlexRay Bus Signal Analysis Functions (/F5, /F6 and /F8 Options)⁶

Applicable bus	FlexRay Protocol Version 2.1
Analyzable signals	CH1 to CH4, M1 to M2
Bit rate	10 Mbps, 5 Mbps, 2.5 Mbps
FlexRay bus Trigger modes	Frame Start, Error, ID/Data, ID OR
Analyzable no. of frames	5000 frames max.
List display items	Analysis no., time from trigger position (Time(ms)), Segment (Static or Dynamic), Indicator, FrameID, Payload length, Cycle count, Data, Information

SENT Signal Analysis Functions (/F9 and /F11 Options)⁶

Applicable standard	J2716 JAN2010 and older
Analyzable signals	CH1 to CH4, logic input, or M1 to M2
Clock period	1 us to 100 us with resolution of 0.01 us
Data type	Fast channel Nibbles/User Defined Slow channel Short/Enhanced
SENT trigger modes	Start of fast channel
Analyzable no. of frames	100000 frames max.
List display items	Fast channel Analysis no., time from trigger position (Time (ms)), Sync/Cal period, Tick, Status & Comm, Data, CRC, frame length, information

Slow channel	Analysis no., time from trigger position (Time (ms)), ID, Data, CRC, information
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Auxiliary analysis functions Trend functions (up to 4 trend waveforms)

PSI5 Signal Analysis Functions (/F10 and /F11 Options)⁶

Applicable standard	PSI5 Airbag (V2.2) ⁷
Analyzable signals	CH1 to CH4, M1 to M2
Bit rate	189 kbps, 125 kbps, User Define (10.0 k to 1000.0 kbps, with resolution of 0.1 kbps)
PSI5 Trigger modes	Sync, Start Bit, Data
Analyzable no. of frames	400000 frames max.
List display items	Analysis no., time from trigger position, time from Sync, slot no., Data, Parity/CRC, Information
Auxiliary analysis function	Trend functions (up to 4 trend waveforms)

GP-IB (/C1 and /C11 Options)

Electromechanical specifications	Conforms to IEEE std. 488-1978 (JIS C 1901-1987)
Protocol	Conforms to IEEE std. 488.2-1992

Auxiliary Input

Rear panel I/O signal	External trigger input (DLM20x2: front panel), external trigger output, GO-NOGO output, video output
Probe interface terminal (front panel)	2 terminals (DLM20x2), 4 terminals (DLM20x4)
Probe power terminal (rear panel)	2 terminals (/P2 option), 4 terminals (/P4 option)

Internal Storage (Standard model, /C9 Option)

Capacity	Standard model: 300 MB, /C9 option: 7.2 GB
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Built-in Printer (/B5 Option)

Built-in printer	112 mm wide, monochrome, thermal
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USB Peripheral Connection Terminal

Connector	USB type A connector × 2 (front panel × 1, rear panel × 1)
Electromechanical specifications	USB 2.0 compliant
Supported transfer standards	Low Speed, Full Speed, High Speed
Supported devices	USB Printer Class Ver. 1.0 compliant EPSON/HP (PCL) inkjet printers USB Mass Storage Class Ver. 1.1 compliant mass storage devices* Please contact your local YOKOGAWA sales office for model names of verified devices

USB-PC Connection Terminal

Connector	USB type B connector × 1
Electromechanical specifications	USB 2.0 compliant
Supported transfer standards	High Speed, Full Speed
Supported class	USBTMC-USB488 (USB Test and Measurement Class Ver. 1.0)

Ethernet (/C10 and /C11 Options)

Connector	RJ-45 connector × 1
Transmission methods	Ethernet (1000BASE-T/100BASE-TX/10BASE-T)
Supported services	Server: FTP, HTTP, VXI-11 Client: FTP, SMTP, SNMP, LPR, DHCP, DNS

General Specifications

Rated supply voltage	100 to 240 VAC
Rated supply frequency	50 Hz/60 Hz
Maximum power consumption	170 VA
External dimensions	226 (W) × 293 (H) × 193 (D) mm (when printer cover is closed, excluding protrusions)
Weight	Approx. 4.2 kg. With no options
Operating temperature range	5°C to 40°C

*1 Measured under standard operating conditions after a 30-minute warm-up followed by calibration.

Standard operating conditions: Ambient temperature: 23°C ±5°C
Ambient humidity: 55 ±10% RH

Error in supply voltage and frequency: Within 1% of rating

*2 Value in the case of repetitive phenomenon. The frequency bandwidth of a single-shot phenomenon is the smaller of the two values, DC to sampling frequency/2.5 or the frequency bandwidth of the repetitive phenomenon.

*3 When the input section is shorted, the acquisition mode is set to Normal, accumulation is OFF, and the probe attenuation is set to 1:1.

*4 Acquisition rate does not vary with an increase or decrease in channels.

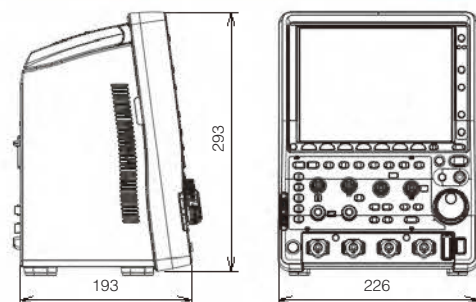
*5 The LCD may include a few defective pixels (within 4 ppm over the total number of pixels including RGB).

*6 For 4 ch model only.

*7 Sync signal from ECU and the signal from sensors are analyzed.

*8 If the trigger function is required, please contact our sales representative.

External Dimensions



Unit: mm

Model and Suffix Codes

Model	Suffix code	Description
710105		Digital Oscilloscope DLM2022 2ch, 200MHz
710110 ¹		Mixed Signal Oscilloscope DLM2024 4ch, 200MHz
710115		Digital Oscilloscope DLM2032 2ch, 350MHz
710120 ¹		Mixed Signal Oscilloscope DLM2034 4ch, 350MHz
710125		Digital Oscilloscope DLM2052 2ch, 500MHz
710130 ¹		Mixed Signal Oscilloscope DLM2054 4ch, 500MHz
Power cord	-D	UL/CSA standard
	-F	VDE standard
	-Q	BS standard
	-R	AS standard
	-H	GB standard
Language	-N	NBR standard
	-HE	English Menu and Panel
	-HC	Chinese Menu and Panel
	-HK	Korean Menu and Panel
	-HG	German Menu and Panel
Option	-HF	French Menu and Panel
	-HL	Italian Menu and Panel
	-HS	Spanish Menu and Panel
	/LN	No switchable logic input (4 ch model only)
	/B5	Built-in printer (112 mm)
/M1 ²	(standard)	Memory expansion option (4 ch model only) During continuous measurement: 6.25 Mpoints; Single mode: 25 Mpoints (when interleave mode ON: 62.5 Mpoints)
	/M2 ²	Memory expansion option (4 ch model only) During continuous measurement: 12.5 Mpoints; Single mode: 62.5 Mpoints (when interleave mode ON: 125 Mpoints)
/M3 ²	(standard)	Memory expansion option (4 ch model only) During continuous measurement: 25 Mpoints; Single mode: 125 Mpoints (when interleave mode ON: 250 Mpoints)
	/M1S	Memory expansion option (2 ch model only) During continuous measurement: 6.25 Mpoints; Single mode: 25 Mpoints (when interleave mode ON: 62.5 Mpoints)
/P2 ³		Probe power for 2 ch models
/P4 ³		Probe power for 4 ch models
/C1 ⁴		GP-IB Interface
/C10 ⁴		Ethernet Interface
/C11 ⁴		GP-IB + Ethernet Interface
/C9		Internal storage (7.2 GB)
/G2 ⁵		User defined math (4 ch model only)
/G3 ⁵		Power supply analysis function (4 ch model only)
/G4 ⁵		Power supply analysis function (includes /G2) (4 ch model only)
/F1 ⁶		UART trigger and analysis (4 ch model only)
/F2 ⁶		I ² C + SPI trigger and analysis (4 ch model only)
/F3 ⁶		UART + I ² C + SPI trigger and analysis (4 ch model only)
/F4 ⁷		CAN + LIN trigger and analysis + CXPI analysis ¹³ (4 ch model only)
/F5 ⁷		FlexRay trigger and analysis (4 ch model only)
/F6 ⁷		CAN + LIN + FlexRay trigger and analysis + CXPI analysis ¹³ (4 ch model only)
/F7 ⁷		CAN + CAN FD + LIN trigger and analysis + CXPI analysis ¹³ (4 ch model only)
/F8 ⁷		CAN + CAN FD + LIN + FlexRay trigger and analysis + CXPI analysis ¹³ (4 ch model only)
/F9 ⁸		SENT analysis (4 ch model only)
/F10 ⁸		PSI5 analysis (4 ch model only)
/F11 ⁸		SENT+PSI5 analysis (4 ch model only)
/EX22 ⁹		Attach two 701946 probes (For 2ch, 200 MHz models)
/EX24 ⁹		Attach four 701946 probes (For 4ch, 200 MHz models)
/EX52 ¹⁰		Attach two 701946 probes (For 2ch, 350/500 MHz models)
/EX54 ¹⁰		Attach four 701946 probes (For 4ch, 350/500 MHz models)

Standard Main Unit Accessories

Power cord (1 set), Passive probe¹¹, Protective front cover (1 set), Soft carrying case for probes (1 set), Printer roll paper (for /B5 option) 1 roll, User's manuals¹²

¹: Logic probes sold separately. Please order the model 701988/701989 accessory logic probes separately.

²: One of these must be selected.

³: Specify this option when using current probes or other differential probes that don't support probe interface.

⁴: * to *8: Only one from the each note can be selected at a time.

⁵: The 701938 probes are not included when this option is selected.

⁶: The 701939 probes are not included when this option is selected.

⁷: 701938 (for 710105 and 710110) or 701939 (for 710115, 710120, 710125 and 710130), per number of channels.

When either /EX22 or /EX24 option is selected, no 701938 is included. When either /EX52 or /EX54 option is selected, no 701939 is included.

⁸: Operation guide as the printed material, and User's manual as CD-ROM are included.

⁹: The 701938 probes are not included when this option is selected.

¹⁰: The 701939 probes are not included when this option is selected.

¹¹: The 701939 probes are not included when this option is selected.

¹²: Operation guide as the printed material, and User's manual as CD-ROM are included.

¹³: If the trigger function is required, please contact our sales representative.

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Additional Option License for DLM2000¹

Model	Suffix code	Description
709810	-G2	User defined math (4 ch model only)
	-G3	Power supply analysis function (4 ch model only)
	-G4	Power supply analysis function (includes G2) (4 ch model only)
	-F1	UART trigger and analysis (4 ch model only)
	-F2	I ² C + SPI trigger and analysis (4 ch model only)
	-F3	UART + I ² C + SPI trigger and analysis (4 ch model only)
	-F4	CAN + LIN trigger and analysis + CXPI analysis ² (4 ch model only)
	-F5	FlexRay trigger and analysis (4 ch model only)
	-F6	CAN + LIN + FlexRay trigger and analysis + CXPI analysis ² (4 ch model only)
	-F7	CAN + CAN FD + LIN trigger and analysis + CXPI analysis ² (4 ch model only)
	-F8	CAN + CAN FD + LIN + FlexRay trigger and analysis + CXPI analysis ² (4 ch model only)
-F9	SENT analysis (4 ch model only)	
-10	PSI5 analysis (4 ch model only)	
-11	SENT+PSI5 analysis (4 ch model only)	
-X1	F4 -> F7/F6 -> F8 (add CAN FD)	

¹: Separately sold license product (customer-installable).

²: If the trigger function is required, please contact our sales representative.

Accessory Models

Name	Model	Specification
Logic probe (PBL100)	701988	1 MΩ input resistance, toggle frequency of 100 MHz
Logic probe (PBL250)	701989	100 kΩ input resistance, toggle frequency of 250 MHz
Passive probe ¹	701938	10 MΩ (10:1), 200 MHz, 1.5 m
Passive probe ¹	701939	10 MΩ (10:1), 500 MHz, 1.3 m
Miniature passive probe	701946	10 MΩ (10:1), 500 MHz, 1.3 m
Passive probe (wide temperature range)	702906	10 MΩ (10:1), 200 MHz, 2.5 m -40°C to +85°C
FET probe ¹	700939	DC to 900 MHz bandwidth, 2.5 MΩ/1.8 pF
100:1 voltage probe	701944	DC to 400 MHz bandwidth, 1.2 m, 1000 Vrms
100:1 voltage probe	701945	DC to 250 MHz bandwidth, 3 m, 1000 Vrms
Differential probe	701920	DC to 500 MHz bandwidth, max. ±12 V
Differential probe	701921	DC to 100 MHz bandwidth, max. ±700 V
Differential probe	701922	DC to 200 MHz bandwidth, max. ±20 V
Differential probe (PBDH1000)	701924	DC to 1 GHz bandwidth, 1MΩ, max. ±25 V
Differential probe	701926	DC to 50 MHz bandwidth, 5000 Vrms/7000 Vpeak
Differential probe (PBDH0150)	701927	DC to 150 MHz bandwidth, max. ±1400 V
Differential probe	700924	DC to 100 MHz bandwidth, max. ±1400 V
Differential probe	700925	DC to 15 MHz bandwidth, max. ±500 V
Current probe ²	701917	DC to 50 MHz bandwidth, 5 Arms, High-sensitivity
Current probe ²	701918	DC to 120 MHz bandwidth, 5 Arms, High-sensitivity
Current probe (PBC050) ²	701929	DC to 50 MHz bandwidth, 30 Arms
Current probe (PBC100) ²	701928	DC to 100 MHz bandwidth, 30 Arms
Current probe ²	701930	DC to 10 MHz bandwidth, 150 Arms
Current probe ²	701931	DC to 2 MHz bandwidth, 500 Arms
Deskew correction signal source	701936	For deskew correction
Printer roll paper	B9988AE	Lot size is 10 rolls, 10 meters each
Probe stand	701919	Round base, 1 arm
Soft carrying case	701964	With 3 pockets for storage

¹: Please refer to the Probes and Accessories brochure for probe adapters.

²: Current probes' maximum input current may be limited by the number of probes used at a time.

Accessory Software

Name	Model	Specification
MATLAB tool kit	701991	MATLAB plug-in
Xviewer	701992-SP01	Standard version
	701992-GP01	With MATH functions

Yokogawa's Approach to Preserving the Global Environment

- Yokogawa's electrical products are developed and produced in facilities that have received ISO14001 approval.
- In order to protect the global environment, Yokogawa's electrical products are designed in accordance with Yokogawa's Environmentally Friendly Product Design Guidelines and Product Design Assessment Criteria.

This is a Class A instrument based on Emission standards EN61326-1 and EN55011, and is designed for an industrial environment.
Operation of this equipment in a residential area may cause radio interference, in which case users will be responsible for any interference which they cause.

NOTE



Before operating the product, read the user's manual thoroughly for proper and safe operation.

YOKOGAWA

YOKOGAWA TEST & MEASUREMENT CORPORATION

Global Sales Dept. /Phone: +81-422-52-6237 E-mail: tm@cs.jp.yokogawa.com
Facsimile: +81-422-52-6462

YOKOGAWA CORPORATION OF AMERICA

YOKOGAWA EUROPE B.V.

YOKOGAWA SHANGHAI TRADING CO., LTD.

YOKOGAWA ELECTRIC KOREA CO., LTD.

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YOKOGAWA AMERICA DO SUL LTDA.

YOKOGAWA MIDDLE EAST & AFRICA B.S.C(c)

Phone: +31-88-4641000

Phone: +86-21-6239-6363

Phone: +82-2-2628-3810

Phone: +65-6241-9933

Phone: +91-80-4158-6396

Phone: +7-495-737-78-68

Phone: +55-11-5681-2400

Phone: +973-17-358100

E-mail: tmi@us.yokogawa.com

E-mail: tmi@nl.yokogawa.com

E-mail: tech@ysh.com.cn

E-mail: TMI@kr.yokogawa.com

E-mail: TMI@sg.yokogawa.com

E-mail: tmi@in.yokogawa.com

E-mail: info@ru.yokogawa.com

E-mail: help.ymatmi@bh.yokogawa.com

E-mail: help.ymatmi@bh.yokogawa.com Facsimile: +973-17-336100

<http://tmi.yokogawa.com/>

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Facsimile: +86-21-6880-987

Facsimile: +82-2-2628-3899

Facsimile: +65-6241-9919

Facsimile: +91-80-2852-1442

Facsimile: +7-495-737-78-69