TELEDYNE LECROY
Everywhereyoulook™

WaveJet Touch Oscilloscopes
350 MHz / 500 MHz

Key Features

- **350 MHz and 500 MHz bandwidths**
- **Up to 2 GS/s sample rate**
- **Long Memory – up to 5 Mpts**
- **7.5" touch screen display**
- **26 measurement parameters**
- **Replay mode**
- **Standard Pass/Fail Mask and Measurement testing**
- **Standard I²C, SPI, and UART serial triggers**
- **Standard USB Host, USB Device, GPIB, and LAN connectivity**
- **Multi-language user-interface and help**
- **Ultra-quick boot time**

The WaveJet Touch provides the performance, features, and touch screen user interface to simplify operation and shorten debug time. The compact design features a 7.5" touch screen, providing the convenience of touch operation in a portable design. With up to 5 Mpts of memory and 2 GS/s, every detail of the waveform can be captured and easily measured. The all-inclusive WaveJet Touch delivers maximum value for minimum investment.

Touch Screen Control

Touch screen operation simplifies how all aspects of the oscilloscope are controlled, increasing productivity and decreasing setup time. Intuitively touch controls instead of navigating confusing soft keys.

Shorten Debug Time

Intricate signals can be quickly acquired by combining a long capture time with a variety of complex triggers, including triggers for I²C, SPI, and UART. Pass/fail mask and measurement testing enables deeper analysis and performs characterization and validation testing with ease. Scroll back in time to view previous waveforms and isolate anomalies using Replay mode.

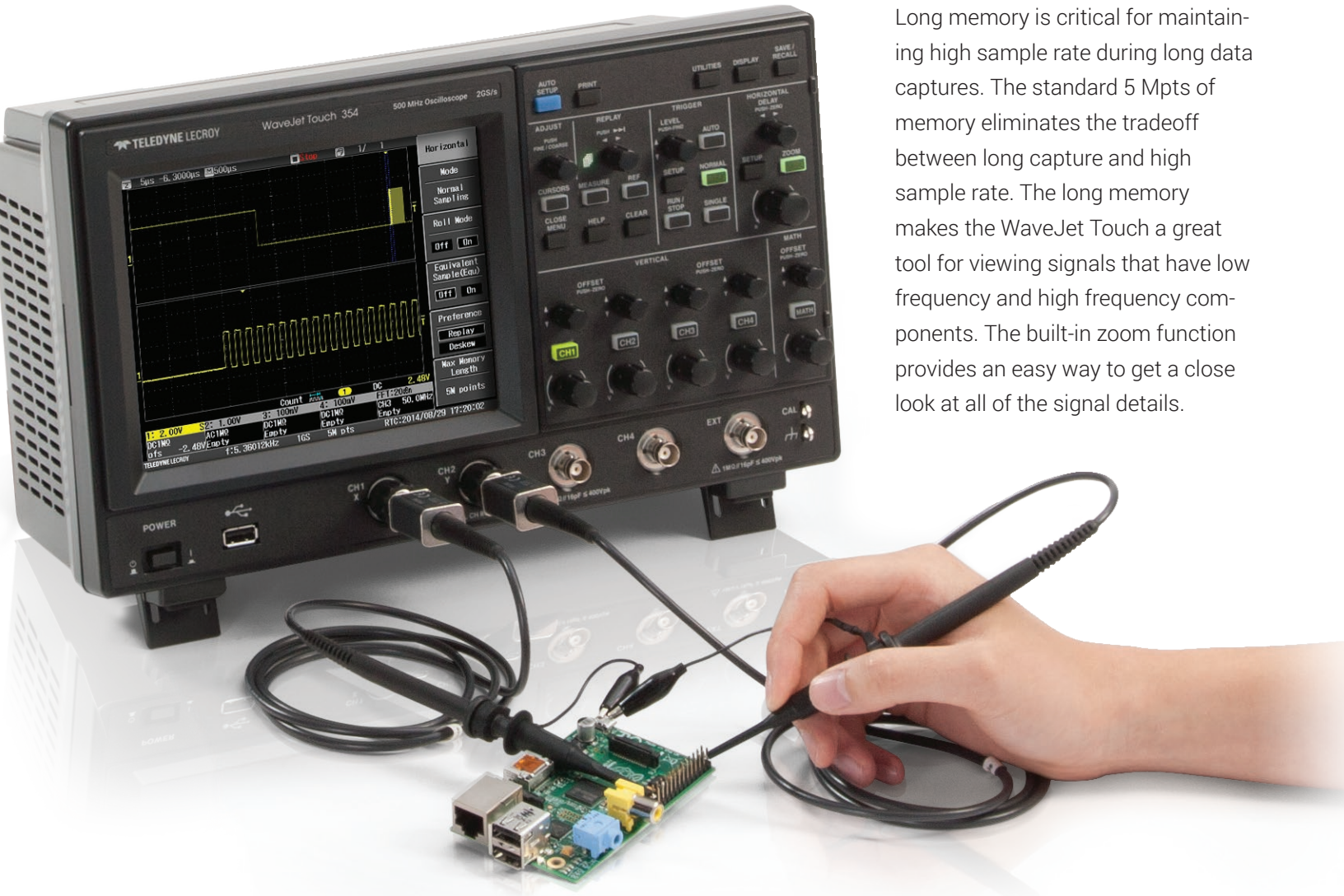
Portable Performance

The small form factor and light-weight design make it easy to carry and use anywhere. Coupled with an ultra-quick boot time, the WaveJet Touch is ready to use when needed. The WaveJet Touch is on and acquiring signals in less than 5 seconds, enabling measurements to begin immediately.

Flexible Connectivity

Easily document results by saving screenshots directly to a memory stick or printer. Standard GPIB, LAN, and USB connections enable easy remote control. Using Teledyne LeCroy's WaveStudio the WaveJet Touch can quickly connect to a PC.

ADVANCED TOOLS FOR WAVEFORM ANALYSIS



Long Capture Time

Long memory is critical for maintaining high sample rate during long data captures. The standard 5 Mpts of memory eliminates the tradeoff between long capture and high sample rate. The long memory makes the WaveJet Touch a great tool for viewing signals that have low frequency and high frequency components. The built-in zoom function provides an easy way to get a close look at all of the signal details.

Advanced Triggering

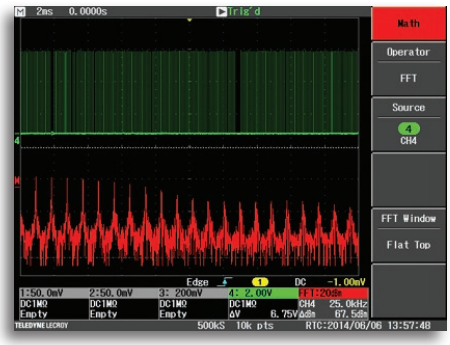
Equipped with a variety of complex triggers, the WaveJet Touch can easily capture intricate signals. Standard I^2C, SPI, and UART triggers allow for comprehensive protocol debug. A pattern logic trigger can trigger the oscilloscope depending upon the state of the four channel inputs.

Digital Filtering

Digital filtering is available on each channel. The Low-Pass, High-Pass, and Simple Moving Average filters allow the oscilloscope to isolate only the desired frequencies. By implementing the filter directly on each channel the math trace is still available for additional analysis.

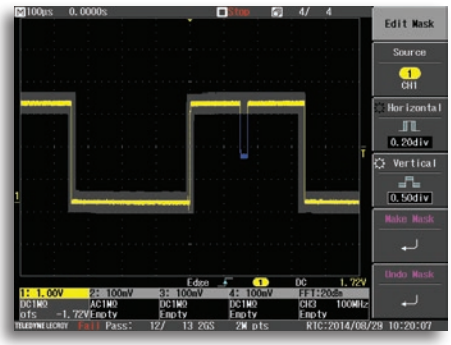
Multiple Acquisition Modes

In addition to normal sampling, the high resolution, peak detect, and average acquisition modes make it easy to capture a wide range of signal types. An Equivalent time sampling rate of 100 GS/s allows for reconstruction of repetitive signal with extreme precision.



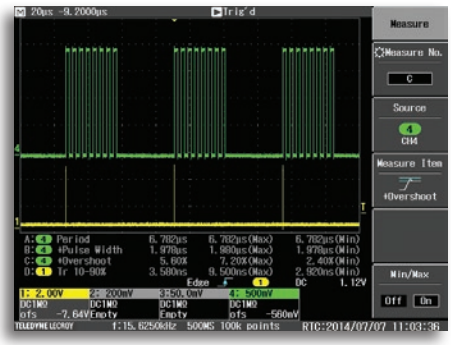
Waveform Math and Analysis

Math operators include basic arithmetic functions and advanced FFT, derivative, and integral functions. Advanced math can be performed on the results of basic math functions. The scaling and offset of the math trace can easily be adjusted with its own dedicated knobs.



Pass/Fail Testing

Waveforms can be tested against a mask or measurement parameters can be assigned pass/fail criteria for validation testing. On a pass/fail condition the oscilloscope can be configured to: stop the acquisition, beep, save the waveform, take a screen capture or output a pulse to another instrument.

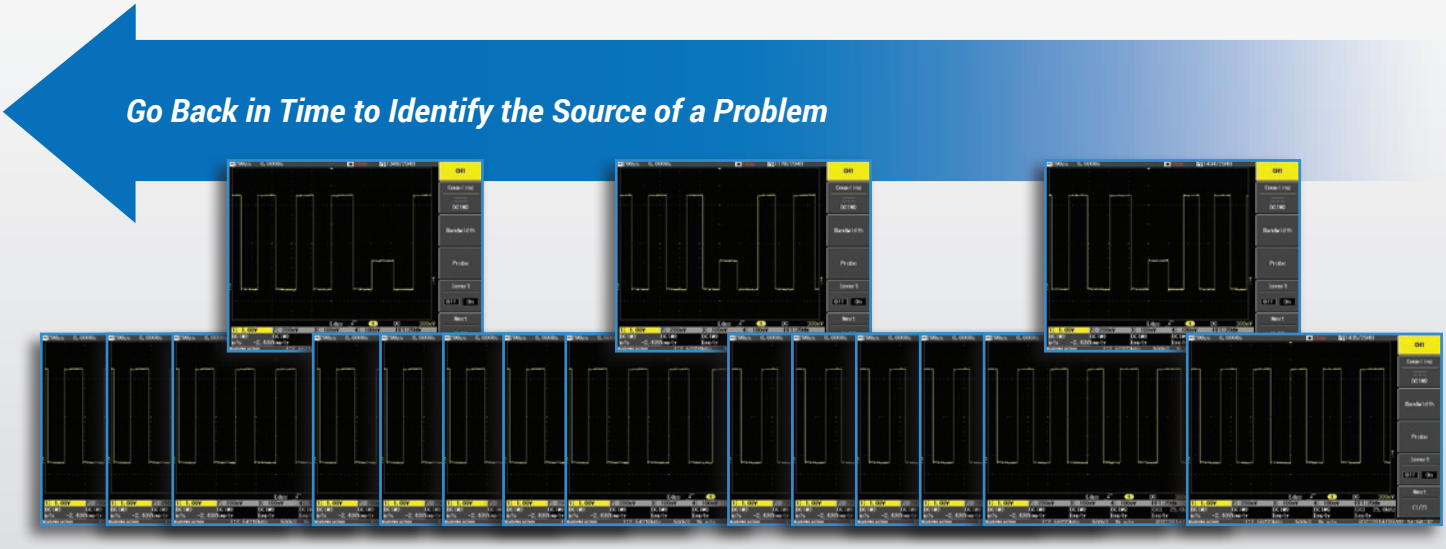


Automatic Measurements

Measure waveforms with up to 26 different automatic parameters and min/max statistics. Display up to four measurements simultaneously. All instance measurements allow the oscilloscope to measure all occurrences of a parameter in a single acquisition.

Replay Mode Waveform Playback

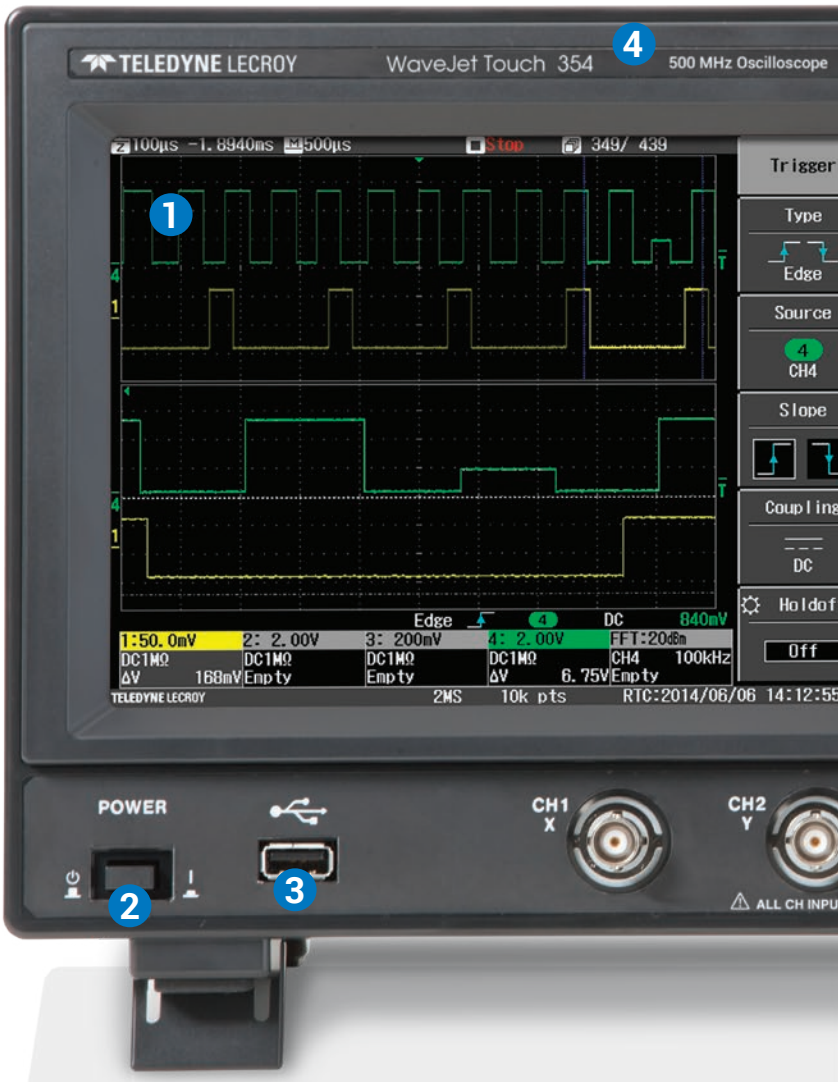
Scroll back in time using Replay mode to view previous waveforms and isolate anomalies. Use cursors and measurement parameters to quickly find the source of problems. Replay mode is always active so there is no need to worry about turning it on.



WAVEJET TOUCH

The WaveJet Touch delivers the performance, features, and touch screen user interface to simplify operation and shorten debug time.

1. **7.5" Touch Screen –** Directly touch the display for a simplified user experience.
2. **Ultra-quick Boot Time –** The WaveJet Touch is on and ready to acquire waveforms in less than 5 seconds.
3. **Connectivity –** Documenting results is easy using the front-mounted USB port. Simply press the Print button on the front panel to quickly save screen images.
4. **Portability –** The small footprint and light weight of the WaveJet Touch means it is easy to carry and use anywhere, even when bench space is limited.
5. **Local Language User Interface and Help –** Select from 7 different language preferences.
6. **Auto Setup –** Quickly configure vertical, horizontal, and trigger settings with a push of a button.

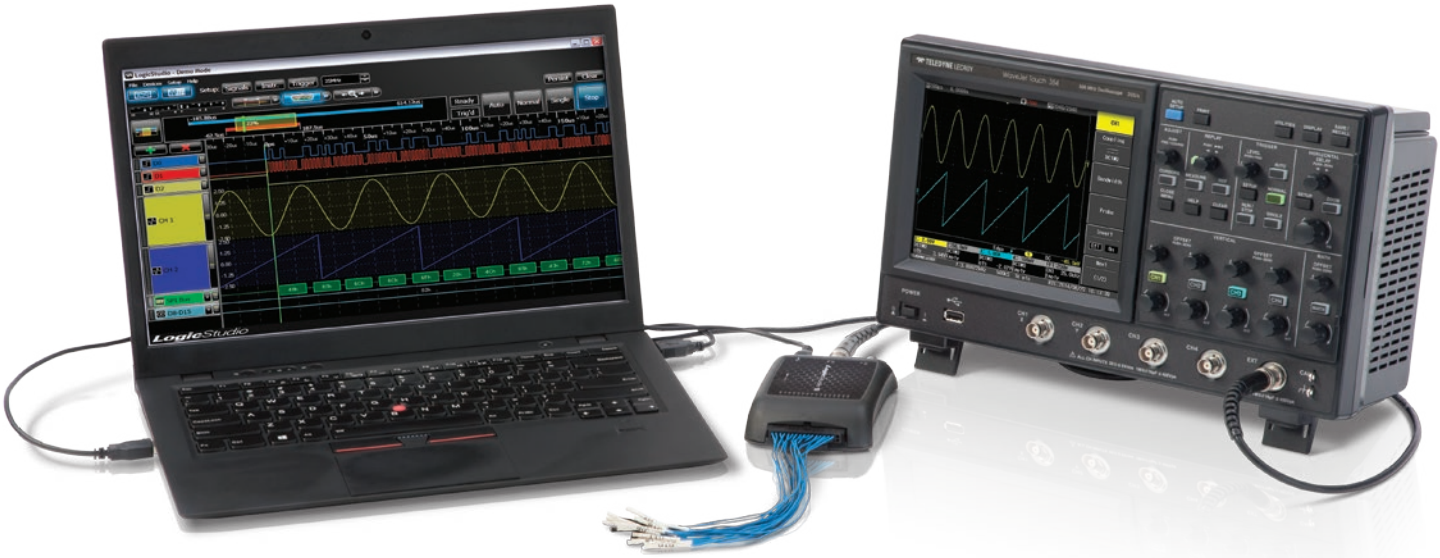


7. **Replay Control –** Rotate to see a history of captured waveforms.
8. **Independent Vertical Controls –** Quickly change the vertical scale of any channel.
9. **Push Knobs –** Push the Offset knobs to automatically zero the channel offset or push the Delay knob to center the trigger point on the screen.
10. **GPIB and LAN Ports –** Standard connectivity for easy remote control and data transfer.
11. **USB Host Port –** Can be configured to print a hardcopy or an interface for remote control.
12. **Auxiliary Output –** Send a trigger out or pass/fail pulse to another instrument.

ACCESSORIES

LogicStudio

The WaveJet Touch can be paired with Teledyne LeCroy's LogicStudio 16 to turn your PC into a mixed signal oscilloscope with tools for capturing, viewing, and measuring analog, digital, and serial signals in one place. LogicStudio offers 16 channels, 100 MHz, and up to 1 GS/s logic analysis with I^2C, SPI, and UART triggering and decoding which can all be displayed alongside the analog waveforms captured on WaveJet Touch. When only digital debug is needed disconnect the WaveJet Touch and use LogicStudio as a standalone logic analyzer.



Soft Carrying Case

The small form factor of the WaveJet Touch lends itself to being conveniently transported. The WJT-SOFTCASE provides an easy way to carry the oscilloscope and all of its accessories. It is equipped with a custom foam insert to ensure the oscilloscope is secure and protected during transport.

Rack Mount Kit

The WaveJet Touch can easily be integrated into a test rack using the WJT-RACK accessory. The sturdy rack mount is simple to assemble and converts the oscilloscope to a 6U rack-mounted package. With standard pass/fail mask and measure testing, the WaveJet Touch is a natural fit for production line testing.

SPECIFICATIONS

	WaveJet Touch 334	WaveJet Touch 354
Vertical		
Bandwidth (@50 Ω)	350 MHz	500 MHz
Rise Time	1 ns (typical)	750 ps (typical)
Input Channels	4	
Vertical Resolution	8-bits	
Sensitivity	50 Ω: 2 mV/div – 2 V/div; 1M Ω: 2 mV/div – 10 V/div	
DC Gain Accuracy	±(1.5% of + 0.5% of Full Scale)	
Bandwidth Limiting Filter	200 kHz, 2 MHz, 20 MHz, 100 MHz	
Maximum Input Voltage	50 Ω: 5 Vrms; 1M Ω: 400 Vpk CAT I	
Input Coupling	50 Ω: DC, GND; 1M Ω: AC, DC, GND	
Input Impedance	50 Ω: ±1.0 %; 1M Ω: ±1.0% || 16 pF (typical)	
Offset Range	2 mV/div - 50 mV/div: ±1 V, 50.2 mV/div - 500 mV/div: ±10 V, 502 mV/div - 10 V/div: ±100 V	
Offset Accuracy	2 mV/div - 50 mV/div: ±(0.5% of offset value + 0.5% FS + 1 mV) 50.2 mV/div - 500 mV/div: ±(0.5% of offset value + 0.5% FS + 10 mV) 502 mV/div - 10 V/div: ±(0.5% of offset value + 0.5% FS + 100 mV)	
Acquisition		
Sampling Rate (Single Shot)	2 GS/s (interleaved), 1 GS/s (all channels)	
Sampling Rate (Equivalent Time)	100 GS/s	
Record Length	5 Mpts/Ch (interleaved), 2.5 Mpts/Ch (all channels)	
Acquisition Modes	Real Time, Peak Detect, Average, High Resolution	
Real Time Timebase Range	1 ns/div - 50 s/div	500 ps/div - 50 s/div
Roll Mode Timebase Range	50 ms/div - 50 s/div	
Peak Detect Period	1 ns	
Timebase Accuracy	10 ppm (typical)	
Probes		
Standard Probes	10:1 Passive Probe (one per channel)	
Probing System	BNC with Probe Sense Ring	
Trigger System		
Modes	Auto, Normal, Single, Stop	
Sources	Any input channel, External, Ext/10, or line	
Coupling	DC, AC, HFREJ, LFREJ, Noise Reject	
Trigger Types	Edge, Edge ALT, Edge OR, Pulse Width, Period, Pulse Count, Dropout, TV, Logic, I^2C, SPI, UART	
I^2C	Trigger on START, RESTART, STOP, ADDR, DATA, ADDR+DATA, Data Length, or Missing ACK. 7 or 10-bit ADDR are supported with full Read, Write, or R/W = "Don't Care". DATA conditions support <=, <, =, >, >=, <>, in range, out of range, and don't care (EEPROM mode only). DATA can be setup in Hexadecimal (1-5 bytes supported). Full range of bit rates supported for Standard, Fast, Fast-Mode Plus, and High speed mode. Bit rate is auto-detected. Trigger on any analog channel, EXT, or EXT/10.	
SPI	Trigger on DATA. DATA can be setup in Binary (any combination of 0, 1, or X for 4-96 bits). All bit rates are supported and are auto-detected. Trigger on any analog channel, EXT, or EXT/10.	
UART / RS-232	Trigger on START, STOP, DATA, or Parity ERROR. DATA can be setup in Hexadecimal (1 byte supported) or Binary (any combination of 0, 1, or X for 5-8 bits). All bit rates are supported between 1 kb/s and 1 Mb/s. Trigger on any analog channel, EXT, or EXT/10.	
Measure, Zoom, Math and Replay Mode		
Measure	Base, Cycle Mean, Cycle RMS, Duty Cycle, Fall Time (90-10%), Fall Time (80-20%), Frequency, Integral, Maximum, Mean, Minimum, Number of +Pulses, Number of -Pulse, +Overshoot, -Overshoot, Peak-Peak, Period, +Pulse Width, -Pulse Width, Rise Time (20-80%), Rise Time (10-90%), RMS, Skew, Skew@level, Top, Top-Base	
Zoom	Use front panel QuickZoom button to zoom all waveforms in a separate zoom grid	
Math	Sum, Difference, Product, Integral, Derivative, FFT (up to 8 kpts with Rectangular, Von Hann, or Flat Top windows)	
Replay Mode	Look back at the history of waveform acquisitions (maximum 2,048 acquisitions)	
Display System		
Display Size	7.5" TFT-LCD Touch-Screen	
Display Resolution	640 x 480 VGA	

SPECIFICATIONS & ORDERING INFORMATION

Specifications (cont'd)

	WaveJet Touch 334	WaveJet Touch 354
Input/Output Interfaces		
Aux Out	Trigger output or pass/fail output	
USB	USB host port for flash drives, USB device port for connecting to PC and direct printer connection	
LAN	10/100Base-T Ethernet interface (RJ-45 connector)	
GPIB	Supports IEE-488.2	
Physical		
Dimensions (HWD)	7.5"H x 13"W x 4.9"D (190 mm x 330 mm x 124 mm)	
Weight	3.7 kg (8.16 lbs)	
Environment		
Temperature	Operating: 0 °C to 40 °C; Non-Operating: -20 °C to 60 °C	
Humidity	Maximum 80% relative humidity (non-condensing) up to ≤ 30 °C, Upper limit derates to 55% relative humidity (non-condensing) at 40 °C	
Altitude	Operating: 3,000 m (9,843 ft) max at ≤ 25C; Non-Operating: Up to 12,192 meters (40,000 ft)	
Power Requirements		
Voltage	100 - 240 V (± 10%) at 50 / 60 Hz (± 5%), 100 - 120 V (± 10%) at 400 Hz (± 5%)	
Power Consumption (Max)	50 W	
Regulatory		
CE Certification	Low Voltage Directive 2006/95/EC; EN 61010-1:2010, EN 61010-2-030:2010 EMC Directive 2004/108/EC; EN 61326-1:2013, EN61326-2-1:2013; RoHS2 Directive 2011/65/EU	
UL and cUL Listing	UL 61010-1, UL 61010-2-030:2010, 3rd Edition; CAN/CSA C22.2 No. 61010-1-12	

Ordering Information

Product Description	Product Code
WaveJet Touch Oscilloscopes	
350 MHz, 1 GS/s, 4 Ch, 2.5 Mpts/Ch with 7.5" Touch screen Display; 2 GS/s, 5 Mpts Interleaved	WaveJet 334T
500 MHz, 1 GS/s, 4 Ch, 2.5 Mpts/Ch with 7.5" Touch screen Display; 2 GS/s, 5 Mpts Interleaved	WaveJet 354T

Included with Standard Configurations

- Protective Front Cover
- One Passive Probe per Channel
- Getting Started Guide
- Multi-language User Interface and Context Sensitive Help (English, Chinese, French, German, Italian, Japanese, and Russian)
- GPIB, LAN, USB (one host and one device) Ports
- Power Cable for the Destination Country
- Calibration and Performance Certificate
- 3-year Warranty

Product Description	Product Code
General Accessories	
Soft Carrying Case	WJT-SOFTCASE
Rack Mount Accessory	WJT-RACK
16 Channel, 1 GS/s, 100 MHz USB Logic Analyzer	LogicStudio 16
Probes	
10:1 500 MHz 10Ω Passive Probe	PP006A
700 V, 15 MHz High-Voltage Differential Probe	AP031
10:1/100:1 200/300 MHz, 50 MΩ High-voltage Probe 600 V/1,2 kV Max. Volt. DC	PPE1.2KV
100:1 400 MHz 50 MΩ 2 kV High-voltage Probe	PPE2KV
100:1 400 MHz 50 MΩ 4 kV High-voltage Probe	PPE4KV
1000:1 400 MHz 50 MΩ 5 kV High-voltage Probe	PPE5KV
1000:1 400 MHz 50 MΩ 6 kV High-voltage Probe	PPE6KV

Customer Service

Teledyne LeCroy oscilloscopes and probes are designed, built, and tested to ensure high reliability. In the unlikely event you experience difficulties, our digital oscilloscopes are fully warranted for three years and our probes are warranted for one year. This warranty includes:

- No charge for return shipping
- Long-term 7-year support
- Upgrade to latest software at no charge

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1-800-5-LeCroy
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Local sales offices are located throughout the world.
Visit our website to find the most convenient location.