

Optical Spectrum Analyzer AQ6330

Full featured optical spectrum analyzer
with compact and lightweight design

GP-IB



It won't weigh you down out

The AQ6330 is like no other optical spectrum analyzer you have ever seen. It is compact, lightweight — very portable. It weighs only 8 kg (18 lbs), yet has all the features you need from a WDM system for field use.



Features

Compact and lightweight

Approx. 300 (W) x 200 (H) x 220 (D) mm, approx. 8 kg (18 lbs).

WDM analysis function

Analyzes wavelength, level and SNR of up to 100 channels.

Long term monitoring

Capable of monitoring wavelength, level and SNR of each WDM channel.

High wavelength accuracy

Accurate to within ± 0.05 nm for wavelength, ± 0.02 nm linearity, within a 1550-nm range.

Internal wavelength calibration

With the built-in wavelength standard, high wavelength accuracy is provided with no need for an exterior light source.

High-level accuracy

High accuracy: ± 0.3 dB.

Low polarization dependency

Polarization dependency has been slashed to ± 0.05 dB, enabling accurate measurement of optical amplifier gain and other critical measurements.

High power measurement: Max. +20dBm (100mW)

Even high-power output from an optical amplifier can be measured directly without an optical attenuator.

Built-in high-speed printer and large color display

A standard high-speed printer is built into this compact unit, and it has an easy-to-read 7.8-inch liquid-crystal display.

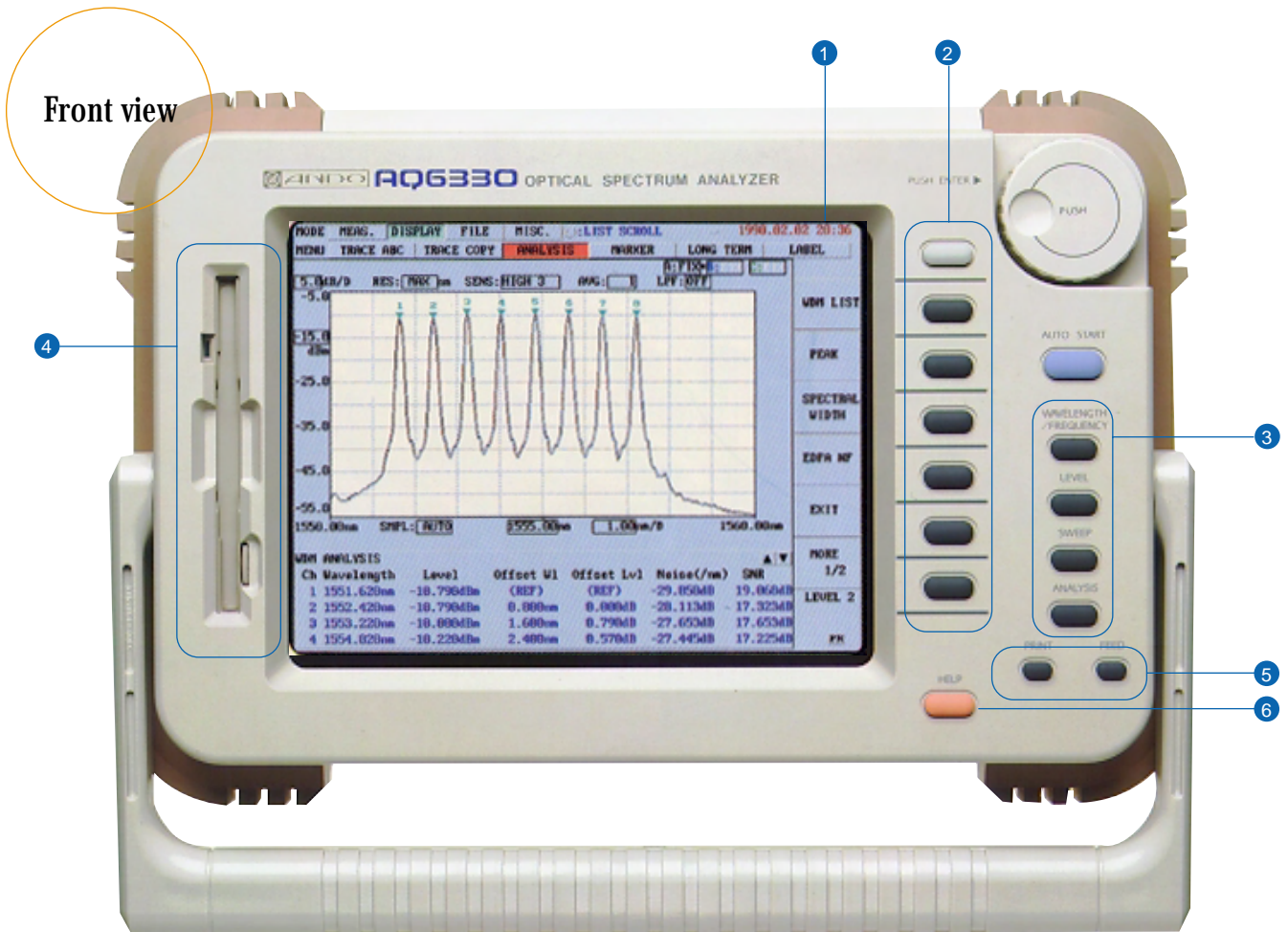
Useful interfaces

3.5-inch FDD, GP-IB, PCMCIA, RS-232C, keyboard, mouse, VGA and printer ports are provided.

there in the field



Instruction manual-free operation



① 7.8-inch color LCD

Displays all information such as measurement waveforms, measurement conditions and measured data.

② Soft keys to select displayed menu items

Press a key to select the desired function.

③ Common function keys

Used to execute common functions.

④ 3.5-inch floppy-disc drive

To store text (binary, ASCII) or graphics files (BMP, TIFF) in 1.44-MB format.

⑤ Copy key

To print out data with the built-in printer or an external printer.

⑥ Help key

Used to display the actions of various function keys.

⑦ Universal type optical connector

⑧ Interfaces

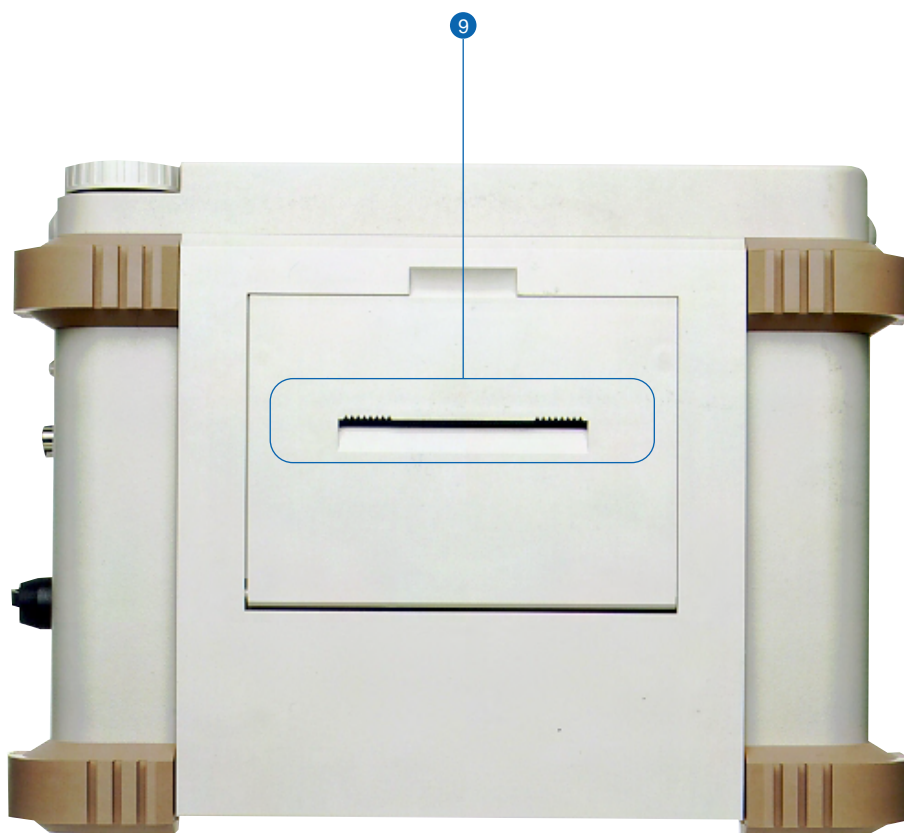
RS-232C, GP-IB, keyboard, mouse, video, printer, and PCMCIA ports are provided.

⑨ Built-in printer

Used to quickly output screen hard copies.

⑩ Power switch

Upper view



Left-side view



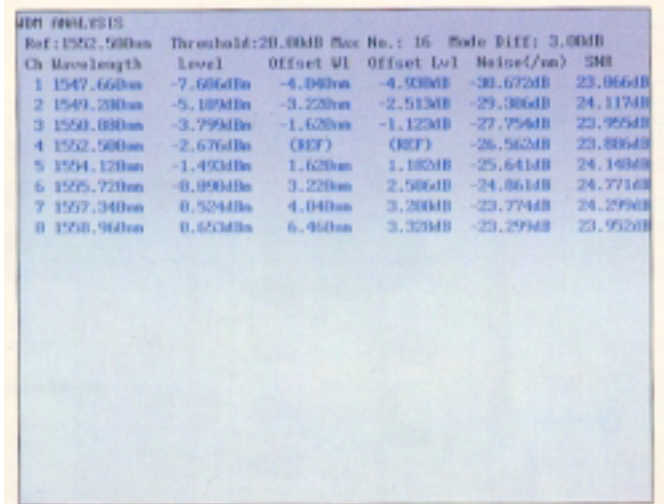
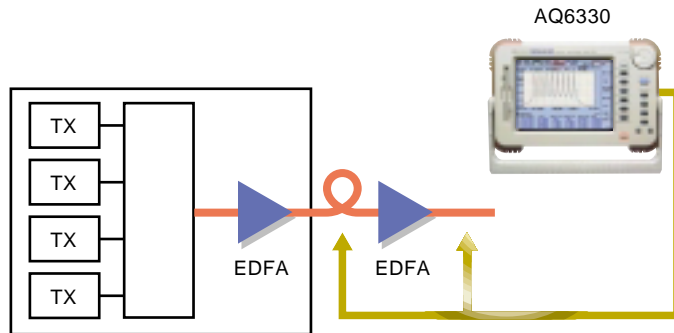
Right-side view



Applications

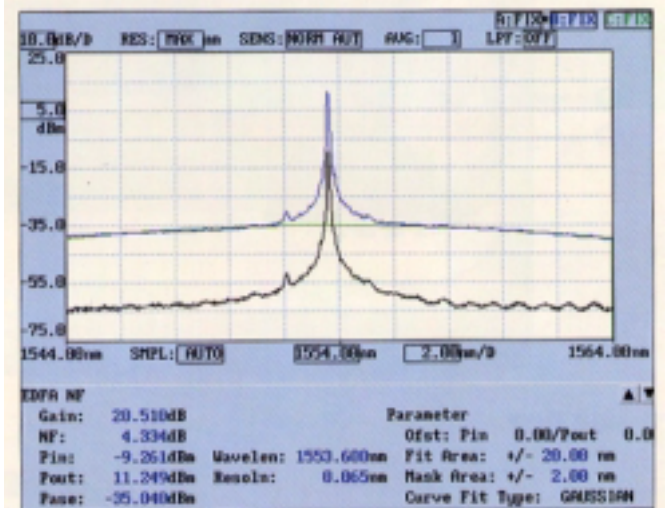
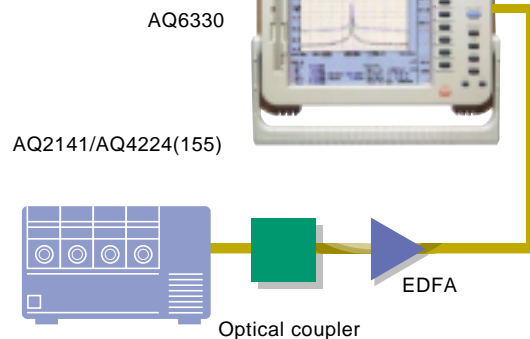
Testing WDM network

Calculates and displays results on a WDM device – peak wavelength, channel spacing, peak level, SNR, etc. – for up to 100 channels, from the spectrum of transmitted light.



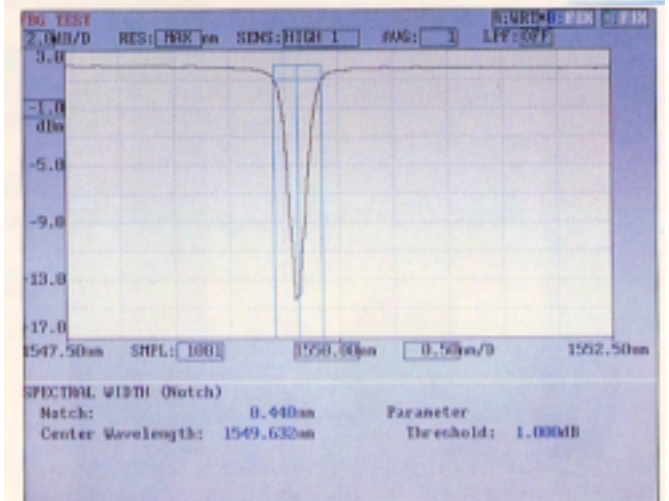
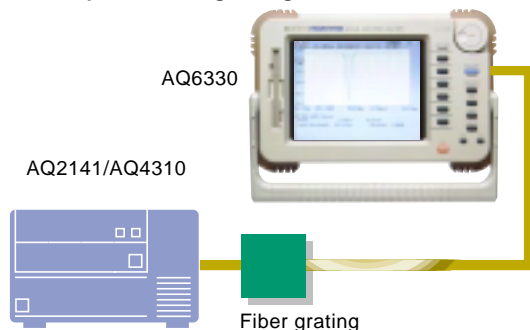
Evaluating optical fiber amplifiers (EDFA)

Parameters such as gain and NF of an optical fiber amplifier are easily measured (uses the ASE interpolation method).



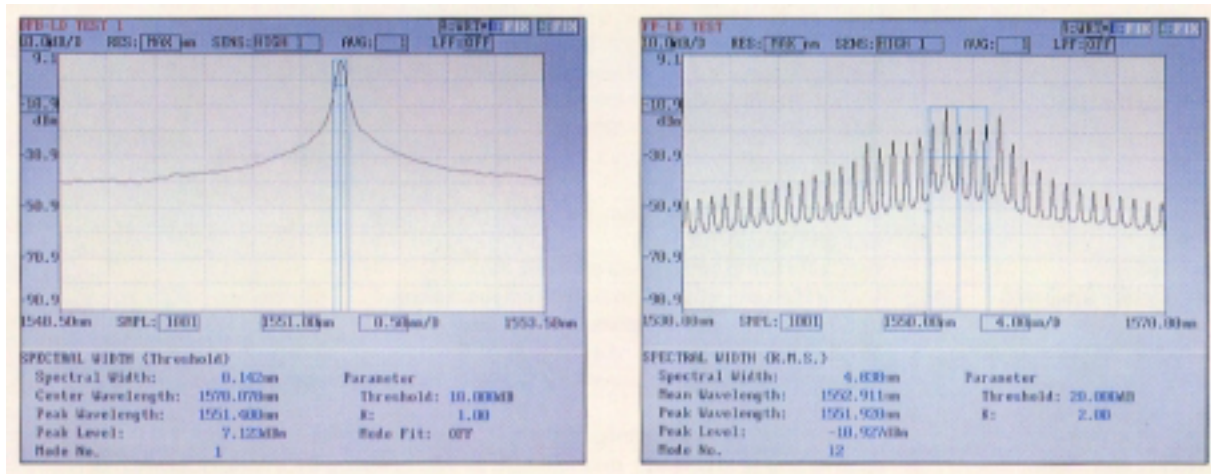
Evaluating fiber grating

By connecting the AQ4310 ASE Unit (with AQ2141 Optical Multimeter Expansion Frame), characteristics such as the notch widths of transmitted spectra produced by the fiber grating can be evaluated.



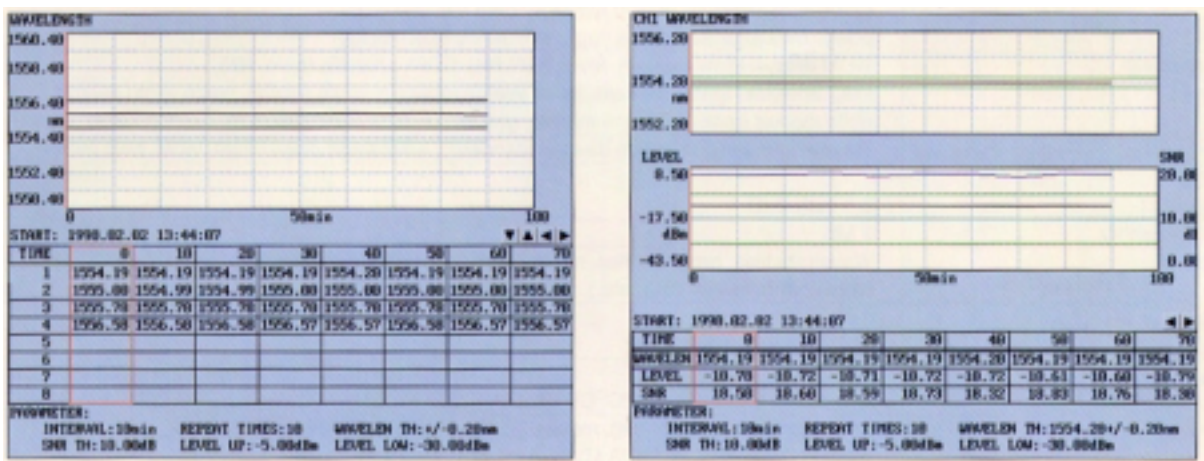
Parameter measurements of FP-LD and DFB-LD

One-touch evaluation of parameters such as FP-LD and DFB-LD spectral width.



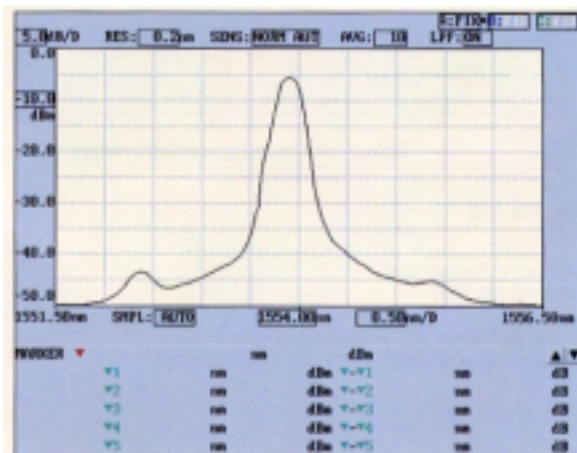
Long-term monitoring

Capable of monitoring wavelength, level and SNR of each WDM channel.



Pulsed light measurement

Pulsed light can be measured by using LPF (low pass filter).



Specifications

| | |
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| Applicable fiber | Single-mode fiber (10/125 μ m) |
| Measurement wavelength range | 1200 to 1700 nm |
| Wavelength accuracy | ± 0.05 nm (1500 to 1570 nm) ± 0.3 nm (1200 to 1700 nm) |
| Wavelength linearity | ± 0.02 nm (1500 to 1570 nm) |
| Wavelength reproducibility | ± 0.005 nm (for one minute) |
| Wavelength resolution | Minimum resolution: approx. 0.08 nm (1500 to 1600 nm) Resolution settings: max. 0.2, 0.5, 1 nm Resolution accuracy: $\pm 5\%$ (resolution setting: 0.2 nm or more) |
| Measurement level range | -90 to + 20 dBm (1200 to 1600 nm) -80 to + 20 dBm (1600 to 1700 nm) |
| Level accuracy | ± 0.3 dB typ. (at 1310/1550 nm, -30 dBm input, sensitivity: HIGH 1 to 3) |
| Polarization dependency | ± 0.05 dB (1310/1550 nm) |
| Level linearity | ± 0.05 dB (input: 0 to -40 dBm, sensitivity: HIGH 1 to 3) |
| Level flatness | ± 0.1 dB (1500 to 1570 nm) |
| Level reproducibility | ± 0.02 dB (1310/1550 nm, -23 dB input, 1s) |
| Dynamic range (stray-light level) | 40 dB (1523 nm, ± 1.0 nm peak, 0.08 nm resolution) 30 dB (1523 nm, ± 0.4 nm peak, 0.08 nm resolution) |
| Return loss from light input connector | 30 dB or more (1310/1550 nm) |
| Sweep time | Approx. 1s (span: 50 nm, sensitivity: NORMAL HOLD, average: 1, samples: AUTO) |
| Functions | |
| Automatic measurements | Program function (5 programs, 200 steps), long-term monitoring function |
| Measurement conditions | Span setting (0 to 500 nm), measurement sensitivity setting (NORMAL HOLD/AUTO, HIGH 1/2/3), averaging (1 to 1000 times), samples number (11 to 20001, AUTO), automatic scale/condition setting, sweep time between markers, 0-nm sweep function, average measurement of pulsed light |
| Trace display | Level-scale setting (0.1 to 10 dB/div and linear), 3 individual traces (maximum/minimum, rolling average, data calculation), power measurement percentage, frequency axis display |
| Data analysis | WDM analysis (wavelength, level, SNR list), EDFA analysis (gain, NF), PMD analysis, SMSR analysis, peak search, spectral width search, notch width search, delta marker (max. 100), line marker, graphic display of long-term monitoring result |
| Others | Wavelength self-calibration (built-in standard), wavelength/level offset, label, help menu |
| Memory | |
| Built-in FDD | 3.5-inch 2HD |
| Internal memory | 2 MB |
| File format | Waveform files, program files, measurement condition files, text files, (waveform/analysis data, etc.), graphics files (BMP, TIFF) |
| Data output | |
| Printer | Built-in high-speed printer |
| Interfaces | |
| Remote control | Remote operation, RS-232C, GP-IB |
| Others | Keyboard (IBM compatible), mouse (PS/2 compatible), video (VGA), printer (Centronix), PCMCIA (Type 3 x 1 or Type 2 x 2) |
| Display | 7.8-inch color LCD (resolution: 640 x 480 pixel) |
| Optical input connector | FC-PC (standard) |
| Power requirements | AC 100 to 120/200 to 240V, 50/60Hz, approx. 100VA |
| Environmental conditions | Operating temperature: 0 to 50°C, Storage temperature: -20 to 60°C, Humidity: 90% RH or less (no condensation) |
| Dimensions and mass | Approx. 300 (W) x 200 (H) x 220 (D) mm, approx. 8 kg (18 lbs) |
| Accessories | Power cord: 1 ea., printer paper roll: 2 ea., floppy disc: 2 ea., instruction manual: 1 ea. |

*All specifications are for a temperature range of 10 to 35°C with FC-PC connector unless otherwise specified.

Specifications are subject to change without notice.

ANDO ELECTRIC CO., LTD.

19-7, Kamata 4-chome, Ota-ku, Tokyo, 144-0052 Japan Phone: +81(0)3 3733 1151 Fax: +81(0)3 3739 7310

ANDO CORPORATION

HEADQUARTERS: 2021 N. Capitol Avenue, San Jose, CA 95132, U.S.A. Phone: +1 408 941 0100 Fax: +1 408 941 0103

EAST OFFICE: 7617 Standish Place, Rockville, MD 20855, U.S.A. Phone: +1 301 294 3365 Fax: +1 301 294 3359

ANDO EUROPE B.V.

HEADQUARTERS: "Vijverdam", Dalsteindreef 57, 1112XC Diemen, The Netherlands Phone: +31(0)20 698 1441 Fax: +31(0)20 699 8938

NIEDERLASSUNG DEUTSCHLAND: Nymphenburger Straße 119 B, D-80636 München, Germany Phone: +49(0)89 143 8150 Fax: +49(0)89 143 81555

ANDO ELECTRIC SINGAPORE PTE. LTD.

19 Kim Keat Road #05-03, Jumbo Industrial Building, Singapore 328804 Phone: +65 251 1391 Fax: +65 251 1987

ANDO ELECTRIC INC.

7F-1, No. 346 Pei-Ta Road, Hsin Chu, Taiwan Phone: +886 35 28 4168 Fax: +886 35 28 4110

Please visit our website for more information: www.ando.com

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