

2016 – 2022

# General information about the company «KVANT Ltd.»

The company was founded in 2016 (from several companies with many years of experience in the electronics industry).

Production facilities are located in Zelenograd – plant Kvant, and in Voronezh – plant Videophone.

Both plants were among the most capital-intensive projects of the Soviet electronic industry.



The company specializes in the production of LCD TVs 24" – 75" (60 – 190 sm) of well-known brands such as DEXP, AMCV, LUMUS, STARWIND, TCL, Hisense, Haier, Philips, Xiaomi, SUPRA, AKAI, AKIRA, HUNDAI, LEBEN, BBK, ORION, YUNO, FUSION, ECON, Hi, etc.



# General information about the company «KVANT Ltd.»

In the process of production development, we have established:

- own production of printed circuit boards (automated SMT-mounting line),
- casting and painting of plastic parts,
- stamping and powder coating of metal products,
- production of packaging (styrofoam liners),
- production of network cords.



Total area of production premises:

- Zelenograd 5 500 m<sup>2</sup> (including warehouses 1 200 m<sup>2</sup>),
- Voronezh 29 540 m<sup>2</sup> (including warehouses 2 000 m<sup>2</sup>).

The number of employees is:

- 170 people in Zelenograd,
- 635 people in Voronezh.

# Certificates and licenses of the Kvant company

Currently, Kvant LLC is the only domestic TV manufacturer registered in the «Unified Register of Russian Radio-electronic Products» (in accordance with the Decree of the Government of the Russian Federation No. 878 of 10.07.2019). Seven TV models (43" and 75") they have already been entered into the register with confirmation of the status of Russian products according to PP878, dozens of models are in the process of confirmation.



Since mid-2020, Kvant LLC has been included in the register of authorized economic operators Eurasian Economic Union (AEO NPP, certificate of the Federal Customs Service of the Russian Federation No. RU/0150/TYPE 1 dated 06/29/2020). The AEO status simplifies the customs procedures of the EAEU, which has a positive effect on logistics deadlines.

Kvant LLC is an authorized partner of MTK (MediaTek Inc.) and Telink (Telink Semiconductor Co Ltd), maintaining close cooperation with these companies in terms of design and production of smart TV boards and smart remotes.



For each TV produced by Kvant LLC, a license for the use of two-channel Dolby decoders (Digital Consumer Decoder and Digital Plus Consumer Decoder) is registered.

The status of «Certified HDMI® Adopter» has been officially registered for Kvant Ltd., which allows using the current HDMI® specification in manufactured devices.



The status of «HDCP 2.x Licensed Adopter» has been officially registered for Kvant Ltd., the status provides a license to use HDCP Specification Revision 2.x in manufactured devices.

Kvant Ltd. is officially registered as a licensed client of «CI Plus» in the «Device Manufacturer Host» group, this allows you to fully use the technology CI+ in devices manufactured by the company.





## Legal data of the company (company card)

*Full name:* **Limited Liability Company «KVANT»**

*Abbreviated name:* **KVANT LLC**

*Name in English:* **KVANT Ltd.**

**OGRN 1167746532667**

**TIN / IEC 7735153253 / 773501001**

*Postal and legal address:* **124460, Moscow, Zelenograd,  
Proezd No. 4801, house 7, bld.5.**

*Bank details (in rubles)* **ac. No. 40702810240000037351  
in Sberbank, Russia, Moscow  
c/a No. 30101810400000000225  
BIC 044525225**

*Separate division:* **LLC «KVANT» OP «KVANT-Voronezh»  
OGRN 1167746532667  
TIN / IEC 7735153253 / 366145001**

*The address of the OP:* **394033, Voronezh, Planetnaya str., 26**

*The authorized capital of the Company (as of 06/28/2019): **86 448 397,21 rubles** (Eighty-six million four hundred forty-eight thousand three hundred ninety-seven rubles 21 kopecks)*

# Assembly lines for TVs and LCD panels



At the moment there are  
4 assembly lines in Voronezh  
with a total capacity of up to 4,000 TV per shift



The number of assemblers in Voronezh is 320 people





# LCD panel production and repair lines

Kvant operates production facilities in the «Clean Room» class, where the LCD display is assembled and repaired, as well as for SAMSUNG, LG, TPV companies.

Purity class ISO 5, the package delivery format is an SKD TV and an Open Cell.





# Production of electronic modules SMT (Surface Mount Technology)



A fully automated line for surface mounting of electronic modules on printed circuit boards (SMT technology) has been installed, adjusted and launched at the Kvant plant.

The production capacity of the line is up to 4000 boards per day.

The line uses:

- Kiheung KVML-900XX automatic PCB loader,
- high-speed precision screen printer SJ Inno Tech HP-520SII,
- high-speed automatic component installers  
DECAN F2, DECAN S2, SM471 and SM481 PLUS,
- conveyor furnace of convection reflow TSM N70-i 103SH,
- Mirtec MV-7Xi an automatic optical inspection system  
of printed circuit boards is installed at the output control,
- conveyor line for mounting output components,  
the Maker Ray AIS201 automatic optical inspection unit  
is used to control the packing of components,
- double wave solder furnace HW E450 (lead-free soldering),
- complex of automatic electro-thermal testing (ET) CPET-CP3901,
- functional testing and visual inspection area  
with ZW-H3800 electron microscopes.





# Production lines for plastic parts

Injection molding of plastic parts is made in Voronezh in thermoplastics machines (TPA).  
The production area is 2000 m<sup>2</sup>, the number of employees is 65 people.  
The workshop uses 21 injection molding machines with a closing force from 40 to 1800 tons.



## Available injection molding machines (TPA)

Model	Quantity, pcs	Volume, cm <sup>3</sup>	Effort, tons	Power, kW	Manufacturer
JSW100 SS	1	163	100	29	Japan
JSW150 SS	1	300	150	34	Japan
JSW220	1	349	220	47	Japan
JSW450SS	1	1 360	450	89	Japan
JM650-C3-SVP/2	1	2 704	650	102	Taiwan
JW650SP	1	3 769	650	113,5	Taiwan
JW150SP	1	300	150	27	Taiwan
JW180SP	1	350	180	35	Taiwan
JW220SP	1	400	220	46	Taiwan
JW850SP	1	4 561	850	138	Taiwan
ID1050HM	2	5 000	1 050	166	Korea
ID1300HM	3	6 040	1 300	195	Korea
ID1800HM	1	7 750	1 800	205	Korea
JTT350	2	100	40	6,2	China
JM800-C3-SVP/2	1	2 926	800	122	Taiwan
JM800-MK-6	2	2 704	800	163	Taiwan



# Workshop for painting plastic parts and pad printing

Workshop for painting, drying and pad printing on plastic and metal parts.

Area of the painting area: 600 m<sup>2</sup>

Capacity: 30,000 pcs. per month.

Painting, drying and pad printing  
on plastic and metal parts.

There are 4 pad printing machines available:

WINON -160A (1 color, 100x225) – 1 pc

WINON -160AE (1 color, F86) – 3 pcs

Number of employees: 35 people.

Currently, the second painting line with an area  
of 800 m<sup>2</sup> is being equipped  
and is being prepared for launch.



## Robotic metal stamping line

In order to localize and reduce the cost, an automated metal stamping line has been installed and launched. Output capacity of products (TV back covers and microwave housings) – 2,000,000 pcs. per year. The line is equipped with high-performance Yangli hydraulic presses of the JH25 and JM36 series.

Equipment	Quantity	Effort, kN	Moves in min.	Engine power, kW	Air pressure, Mpa
Press JH25-250	3	2 500	20-35	30	0,55
Press JH25-315	2	3 150	20-35	37	0,55
Press JM36-500	1	5 000	15-20	55	0,55

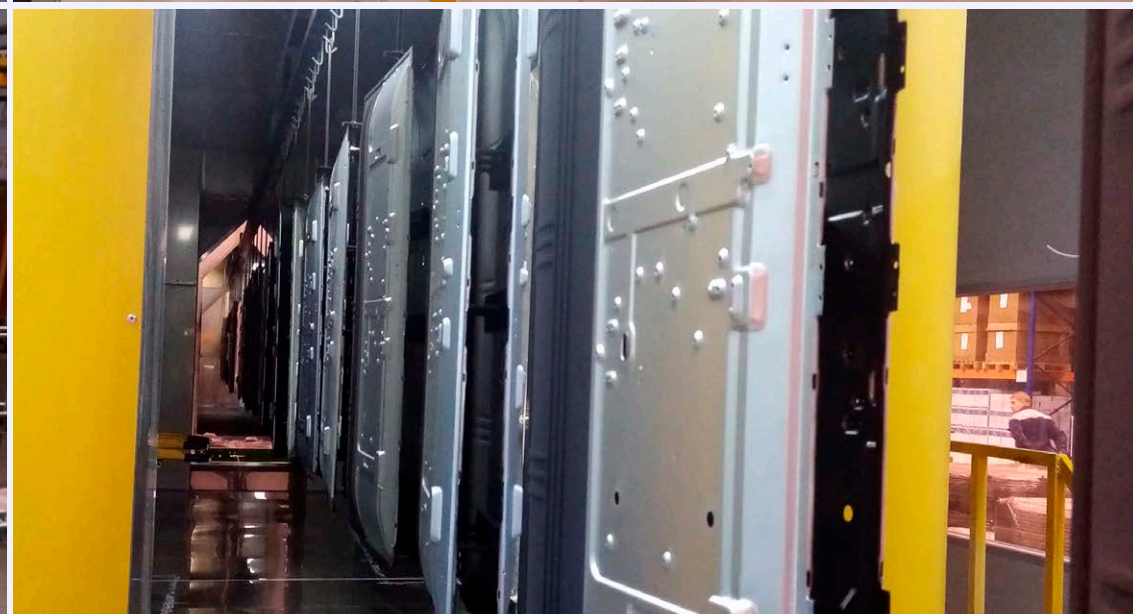
Seven industrial robots YF5B-1500-8-P are used to move the stamping products.





# TBC Automatic Powder Coating Line

In order to localize and reduce the cost, a powder coating conveyor line with a production volume of about 2,000,000 products per year has been installed and launched.





# Production of expanded polystyrene foam liners

The workshop for the production of styrofoam liners is capable to provide 1,500,000 sets of EPS packaging per year.



The workshop is equipped with three KURTZ K 14.5 12S/F molding machines (Shuttle EPS), Atmos ST 90 compressor station and UPE-600 steam generator.



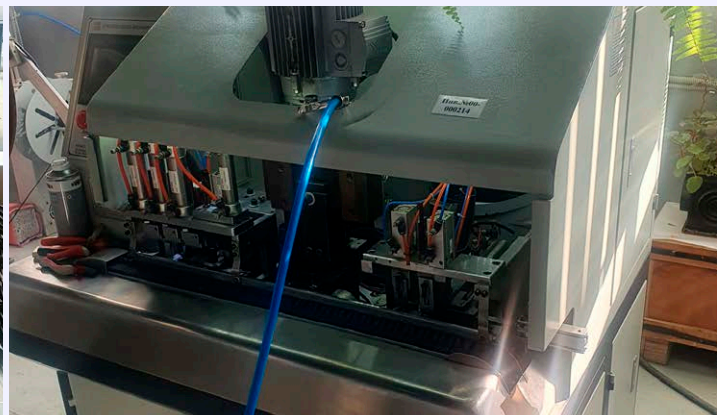
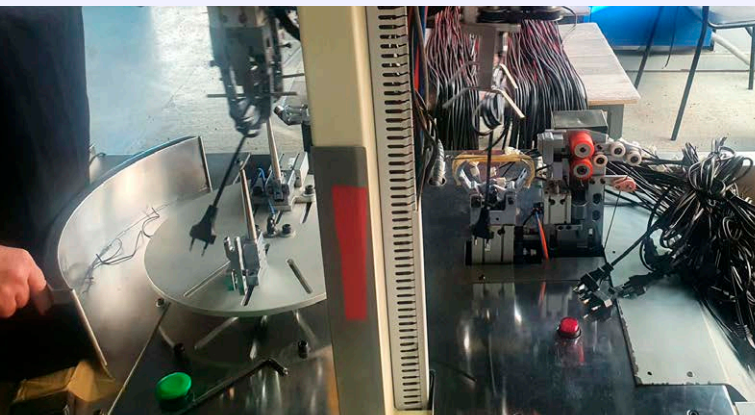
# Production of power cords

In order to deepen the localization and reduce the cost of production, the production of network cords has been launched at the Voronezh, both for their own needs and for possible third-party orders.

Equipment for the production of network cords:

- NC515 wire cutting machine,
- SD-3000DS metal terminal stuffing machine,
- SD-1800S network plug stuffing machine,
- JTT-350 – TPA for casting the limiter (force 40 tons),
- JET-350 – TPA for casting the network plug (force 40 tons),
- installation for testing the network harness for breakdown,
- SD-168BS - machine for rewinding and packaging of the harness.

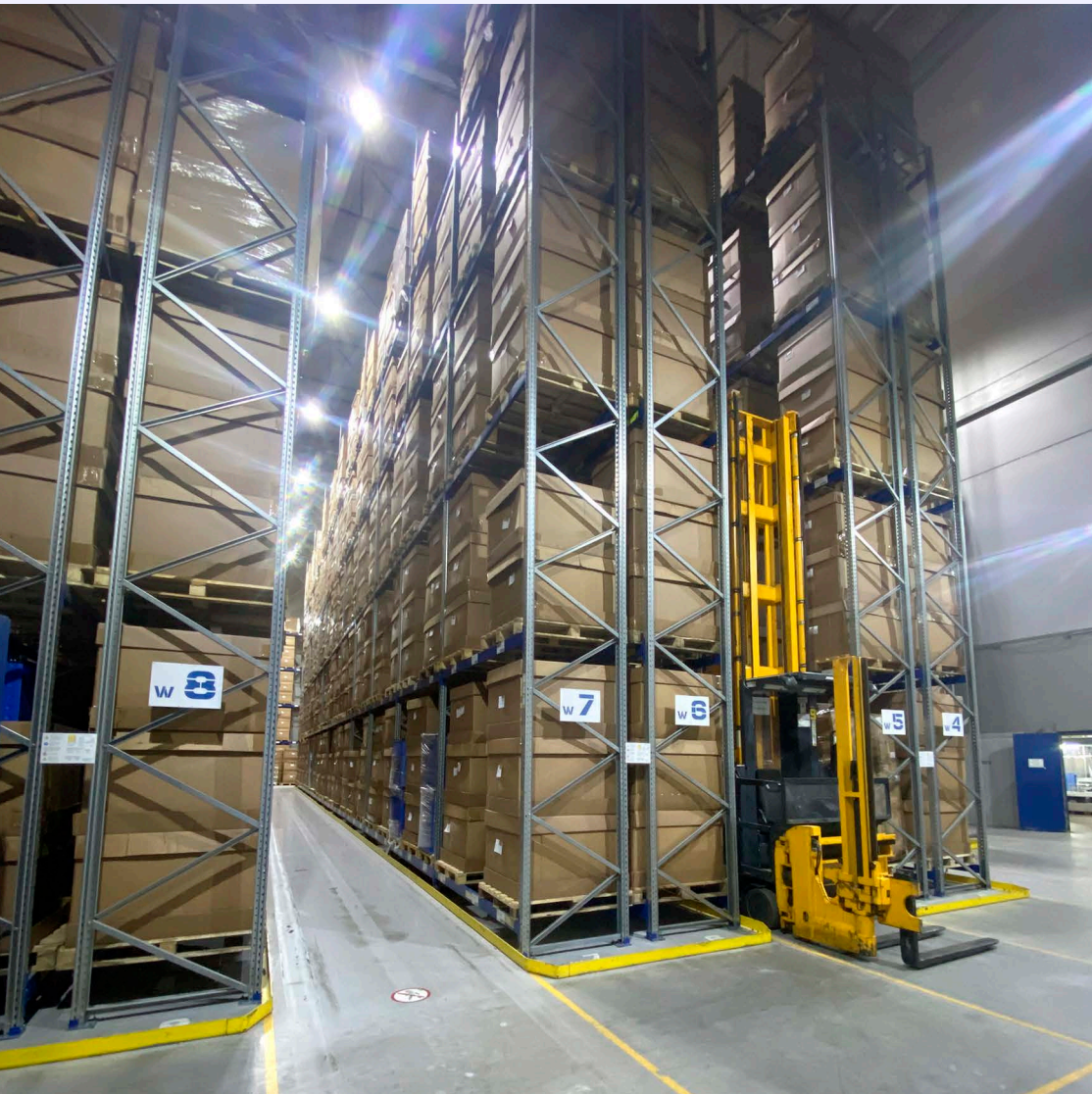
The power of the equipment allows to produce up to 2 000 000 power cords per year.





# Storage facilities

The storage facilities are 1,200 pallets in Zelenograd and 2,500 pallets in Voronezh. Warehouses are equipped with Jungheinrich, Komatsu FB15RL-12 narrow-pass lift truck and EMS E3000P electric stackers.





# Logistics routes

We use several alternative routes for the delivery of components from China to Russia:

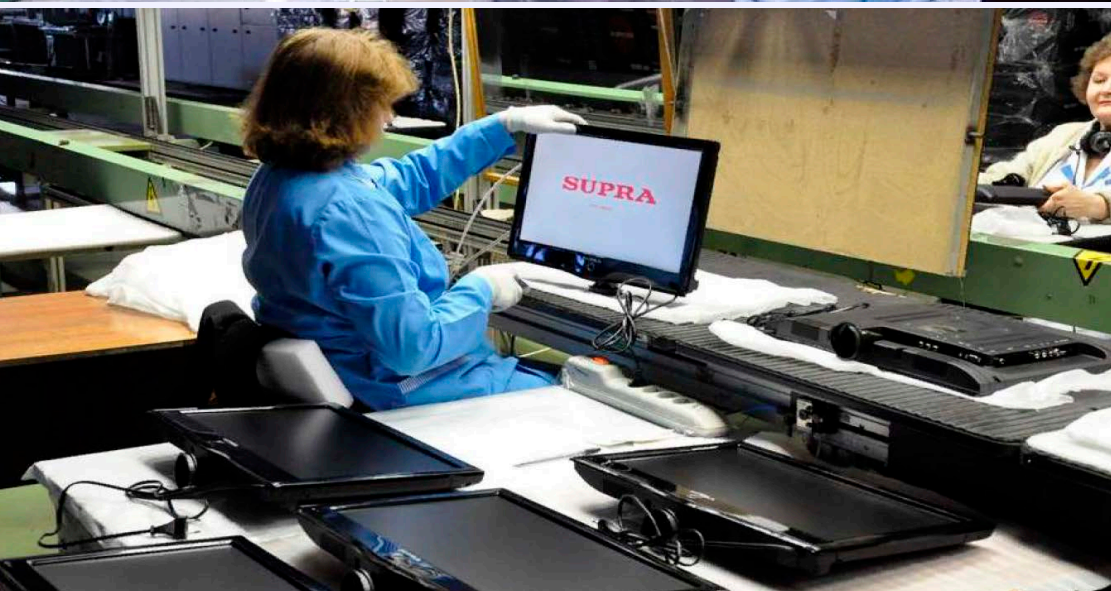


- By sea from Hong Kong to the port of Ust-Luga (near St. Petersburg), then by truck to Zelenograd or Voronezh.  
*The delivery time is 45-49 days.*
- By sea from Hong Kong to the port of Novorossiysk (South of Russia), then by truck to Zelenograd or Voronezh.  
*The delivery time is 28-32 days.*
- By sea from Hong Kong to the port of Vostochny (East of Russia), then by railway transport to Vorsino station (M0), then by truck to Zelenograd or Voronezh.  
*The delivery time is 25-30 days.*
- By railway from Nanjing or Guangzhou to Moscow, then by truck to Zelenograd or Voronezh.  
*The delivery time is 15-20 days.*



# Our partners

Long-term and in-depth cooperation with the world's leading companies is the key to continuous growth of competence and tracking modern trends in design and technology.  
Joint ventures with partners are the main vector of the project development.



Directions	Partners
LCD panel	<ul style="list-style-type: none"><li>• LGD</li><li>• BOE</li><li>• CEC-Canway</li><li>• Konka</li></ul>
TV main board	<ul style="list-style-type: none"><li>• CVTE, CultraView</li><li>• MediaTek, TeLink</li><li>• Yandex, SberTV (Software)</li></ul>
Back-light systems	<ul style="list-style-type: none"><li>• WHS (Wang Hao Sheng)</li></ul>
Logistics	<ul style="list-style-type: none"><li>• Maersk</li><li>• TransContainer</li><li>• ZIM</li></ul>
Design	<ul style="list-style-type: none"><li>• HiteVision</li></ul>
Main customers	<ul style="list-style-type: none"><li>• M-video / Eldorado</li><li>• DNS</li><li>• BBK</li><li>• Xiaomi</li></ul>



# Current indicators and dynamics of development

Indicator	2017/2018	2019	2020	2021
Production area, thousand m <sup>2</sup>	8 / 10	15	20	20
Production lines, pcs.	2 / 3	4	5	6
Production staff, people.	200 / 500	700	900	1 100
Processing depth, %	10 / 18	26	30	33

The development of the project is impossible without the expansion of production, both due to new production areas and assembly lines, and due to the deepening of processing based on the development of new competencies.



## Expansion of the nomenclature

Continuous expansion of the product range is an indispensable condition for sustainable development.

Products	2019	2020	2021
LCD TVs	120 models (24"-55")	150 models (24"-60")	180 models (32"-75")
Interactive whiteboards	2 models (83")	4 models (80"-85")	6 models (80"-90")
Microwave ovens	4 models	8 models	12 models
Household appliances	–	5 models	9 models



## Deepening of processing (localization of components)

Localization of the production of the main components in Russia is designed not only to reduce the cost of production, but also to increase the sustainability of the business while responding more quickly to changing customer needs.

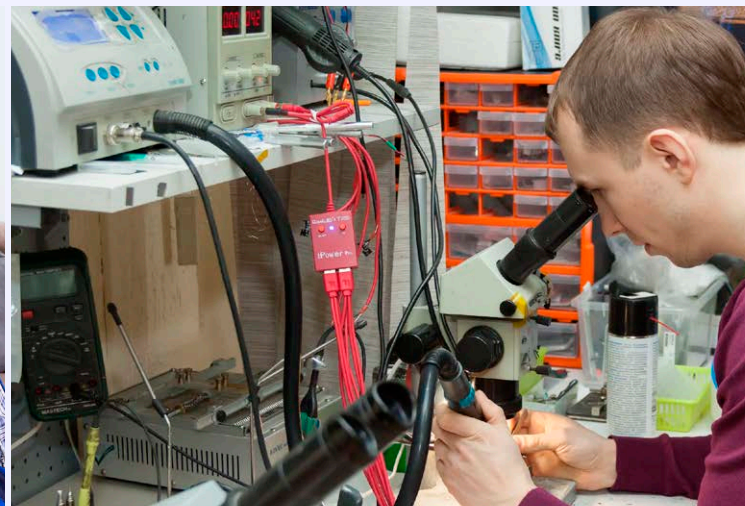
Components	2019
Plastic parts	Casting of the front frame 50", back cover 50", liquid coloring of plastic
Metal parts	Stamping of the back cover 32" - 43", powder coating of metal (in the launch stage)
Power cords	Production of power cords (launched)
PS inserts	Production of expanded polystyrene liners (launched)
LCD panels	Production and repair
Components	2020 – 2021
Main board	SMT mounting of the main board, together with CultraView
Plastic parts	Casting of the front frame 55", back cover 55", liquid coloring of plastic
Metal parts	Stamping of the back cover 50" - 55", powder coating
Software	Integration of artificial intelligence elements from YandexTV, SberTV
LED bars	Casting of LED bars

# Customer Service of Kvant-Service LLC

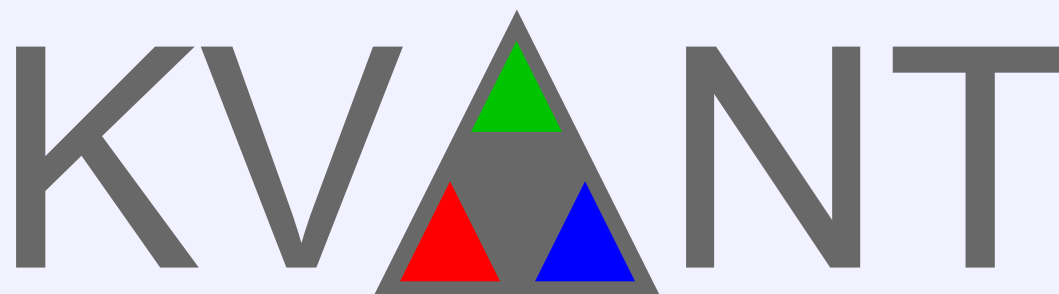
To ensure warranty repairs, repairs after the expiration of the warranty period, as well as to provide technical support to consumers and trading organizations, on the basis of the manufacturer of television equipment, Kvant LLC has created its own Service Department, Kvant-Service LLC.

The technical (service) department of Kvant-Service LLC performs the following service functions:

- Organization of a service network on the territory of Russia. Direct service contracts have been concluded with regional authorized Service Centers.
- Technical support for consumers, trading organizations and employees of authorized Service Centers.
- Customer Service hotline.
- Own service software that allows online monitoring and management of all repairs, applications, acts in authorized Service Centers.
- Sending spare parts for repair of warranty and post-warranty devices.







**Thank you for your attention.**

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