



USTER® *QUANTUM EXPERT*

The connected yarn quality assurance system

Technical Data

April 2021

USTER® QUANTUM EXPERT

The connected yarn quality assurance system

Uster Quantum Expert is the ultimate tool for management of quality and productivity in winding.

It is a software system that is connected to the CCUs of Uster Quantum 2, Uster Quantum 3 and Uster Quantum 4.0 installations and

- Collects the production and quality data as well as the settings and configurations
- Stores all this information in a database
- Reports the results according to the user's customized reports
- Reports the positions that exceed the defined limits on a number of monitored categories of data
- Edits and configures articles and their settings and then distributes them in the networked CCUs
- Connects remotely to the CCUs and allows remote handling of the settings and articles in the winder
- Compares the clearing limits and the YARN BODY™ for the articles that are produced in different production places
- Displays the run state of the machine for the whole monitored period
- Monitors the current production

The Uster Quantum Expert has all those features that are necessary for a spinning mill to manage and report the data from the yarn clearers in the winding room in a professional way. In addition, it contains features that are necessary for a spinning mill to utilize all the advanced functions of the clearer and benefit from the advantages of a modern analysis and reporting system.

It is designed to keep the focus on:

1. Ergonomics
2. Ease of use
3. Future oriented architecture

USTER® QUANTUM EXPERT

The connected yarn quality assurance system

Feature overview

Real time communication and control

- Remote handling of CCUs

Security of settings

- Articles management
- Modify, store and download article settings
- Clearing curve comparison

Advanced analysis

- Run/stop diagram for machines
- Classification matrix combined with quality data
- Collection of scatter plots
- Chart reports
- YARN BODY™ comparison

Intuitive reporting

- Exceptions handling and reporting
- Set of predefined role-oriented reports
 - Production, settings
 - Cuts, special cuts, classification
 - Quality, alarms
- Report editor
- Machines monitoring

Automated data management

- Automatic export of data every 5 min
- Shift calendar
- Uploading articles' data
- Data storage in a database
- User management – authorization

Enhanced connectivity and support

- Connect to Uster Quality Expert, the Quality Management Platform
- Connect to older clearer generations
- Monitor all installations from one workplace
- System self-diagnosis tool
- Remote support and control tools
- Service logs

Database safety

- Automated data backup
- Automated data maintenance

USTER® QUANTUM EXPERT

The connected yarn quality assurance system

Hardware types suitable for connection and types of connection

Yarn clearer types	CCU type	Connection type
USTER® QUANTUM 2 USTER® QUANTUM 3 USTER® QUANTUM 4.0	SG2000 CCU2006 CCU6 CCU7	Ethernet port

The CCU must be updated to the latest software edition available.

Languages and Units

Dialog languages German, English, Chinese, Turkish, Italian, Spanish, Vietnamese, French, Russian, Portuguese, Japanese

Units

Productivity	Length	Weight	Clearer cuts counter	Yarn count	Time	Yarn package
m/min yd/min	m km yd ky	g kg lbs	/100 km absolute	Nec Nm tex	minutes hours shift week month year	bobbin cones

Scope of supply

The product package that the customer receives includes:

- A dongle key
- The operating instructions manual
- Product Option Key(s) for the activation of the respective CCU(s), when applicable (for Uster Quantum 2 and Uster Quantum 3)

USTER® QUANTUM EXPERT

The connected yarn quality assurance system

PC requirements (minimum)

Hardware specification for Standard Server (Dedicated PC)

CPU	Intel® Core i5 (7th generation) or similar
RAM	8 GB
Hard disk	2 disks of 160 GB SATA Type (one as backup)
Drives	2x USB 2.0 port (free ports)
Network	2x Gigabit Ethernet adaptors
Display & Graphics hardware	Monitor (Resolution: 1,920 x 1,080) Full HD, Direct -X 9.0 Support
Internet connection	Broadband connection (for remote support)
Operating system	Windows 10 version >1909 professional (64 bit)
Other 1	Uninterruptable Power Supply (recommended)
Other 2	Web browser version newer than 3 years (Edge, IE or Chrome)

Above specification is for installation size up to 2,000 winding positions.
For larger installations please consult USTER service or PCT@uster.com

USTER® QUANTUM EXPERT

The connected yarn quality assurance system

Hardware specification for Client (minimum)

CPU	Intel® Core i5 (7th generation) or similar
RAM	4 GB
Network	LAN connection
Display & Graphics hardware	1,920x1,080 resolution, DirectX 9.0 support
Internet connection	Broadband connection (for remote support)
Operating system	Windows 10 version >1909 professional or higher (32 or 64 bit)
Other 1	Web browser version newer than 3 years (Edge, IE or Chrome)

Uster Technologies AG does not supply the PC, printer, monitor and modem; rather, the customer obtains these devices locally.

The installation and maintenance of the LAN is entirely in the responsibility of the customer. The network is an important prerequisite for correct and continuous operation of the Uster Quantum Expert system.

USTER® QUANTUM EXPERT

The connected yarn quality assurance system

Application Software for USTER® QUANTUM EXPERT

- Monitoring**
 - All the machines that are connected are displayed at this screen. The machines are divided into their physical groups with a color indication to distinguish among the articles that are processed at each group
 - A set of parameters to control can be chosen from the left-hand sliding window
- Reports**
 - The software comes with a large set of pre-defined reports. Reports are configured by selection of key columns, data and filter. The time selector defines the reference period for the report. Reporting is designed in a way that ensures smart and at the same time easy data analysis
 - The data is reported in different kinds of representations; tables and charts. There are some special report types such as classification matrix, scatter plots and run/stop diagram. The user is also in position to alter the format of a report by selecting any available parameter and save this report as a favourite or customized report
- Articles**
 - The articles that are available in the CCUs and also at the Expert server can be shown here. The user can select an article and compares its settings with another article, change the clearing limits, download to one CCU, all CCUs with the same clearer configuration or only selected CCUs
 - The visualization of the clearing limits is easy and smart; the user can see all the information in one screen and also edit a setting parameter on the same screen
- Configuration**
 - The system has been setup by configuring the CCU that are to be connected; the only thing that is necessary is to specify the IP address range and the EXPERT is taking care of the scanning and finding of the machines
 - The general units to be used for the data reporting are defined here
 - User/Role configuration. The users of the system and the access level are configured here
 - Shift plans
 - The limits that will be applied for the control of the exception group or positions can be set. Different limit sets can be created, stored and assigned to articles
- Tools**
 - Service logs
 - Self-diagnosis
 - Database backup (if the client is executed on the server machine)
 - Access to the operating instructions
 - User switch
 - Remote access to the CCU
 - Language change

Uster Technologies has made all possible efforts to ensure that all information is accurate at the time of publication. Hereby it is declared that alterations to the product may be possible at any time. In these cases the information contained in this technical datasheet is subject to change without notice.

April 2021



Uster Technologies AG

Sonnenbergstrasse 10

8610 Uster

Switzerland

T. +41 43 366 36 36

F. +41 43 366 36 37

sales@uster.com

www.uster.com