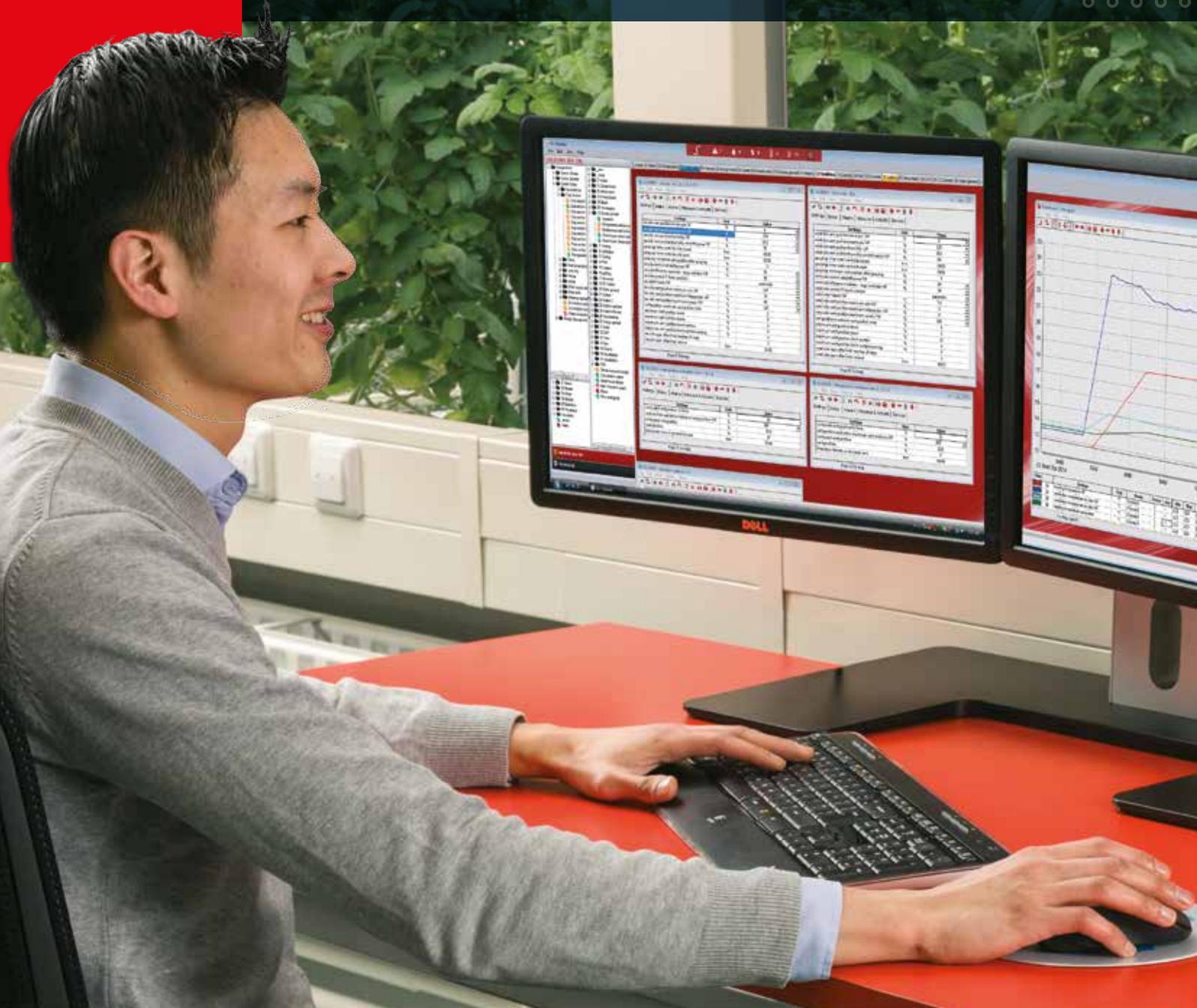


The next generation iSii

State-of-the-art process computer for greenhouse management





The world's smartest process computer

The next generation iSii is the world's smartest greenhouse computer by helping you to increase product quality, maximize yields, save energy, water and fertilizers and to reduce CO₂ loss. This computer also saves you a lot of time providing better results with less effort: that is iSii!





Why Hoogendoorn?

Together with our customers and leading universities we have developed state-of-the-art technology for thousands of growers, breeding companies and universities all over the world. We invest 15% of our annual turnover in new products to ensure these are equipped with the latest technologies.

We focus on long-term relationships with our customers, partners and cooperating initiatives. We accomplish this through our local offices and worldwide partner network. Hoogendoorn is a member of the Batenburg Group, a strong and stable holding, listed on the AEX.



The most advanced process computer

In 1974 Hoogendoorn introduced the world's first digital horticulture computer. Continuous innovation has led us to develop the most advanced process computer: the next generation iSii. iSii provides intelligent system software available for managing greenhouse climate, irrigation, energy and data.

The iSii all-in-one system has been developed for innovative growers, who seek to maximize yields and product quality, regardless of outside weather conditions, while ensuring a sustainable production. It has been developed to save you time and money while providing you with new insights in order to maintain food safety and increase food security. So, you can take your knowledge of horticulture to a higher level and contribute to a better world.

"For me iSii is the best system on the market. Since we are using iSii, we have been able to realize a much more stable climate, with higher energy savings."

Wim Oudhuis, Techni-Gro [CAN]



Future-proof

The iSii software has built in modules and can be completely tailored to your desires. This saves costs, since you only invest in software that is relevant for your company. In addition, iSii is even prepared for your organization's growth. If new departments are added to your company in the future, your existing iSii can easily be expanded. This makes iSii a future-proof investment.

Ultimate greenhouse control at your fingertips

With the cutting-edge iSii software you are able to analyze, manage and control all irrigation, energy and climate processes at your fingertips. Thanks to its intelligent controls, such as pre-control, adaptive control, local weather forecast and graphical settings, iSii will maintain a stable greenhouse climate at all times and reduce operational costs and CO₂ emission.

iSii's unique pre-control feature responds pro-actively to changes in weather conditions instead of making corrections afterwards. In case the outside temperature drops, the iSii automatically reacts by e.g. increasing the heating to prevent a fall in temperature in the

greenhouse. On the other hand, this also means that iSii turns the heating down in advance to compensate for an emerging sun to prevent temperature overshoot. The result: a uniform climate for healthy crop growth and energy savings.

Adaptive controls

Also unique is iSii's ability to learn from previous experiences, e.g. how much energy is needed in order to get the desired climate results. This way important parameters in the software are automatically adjusted, so less manual intervention is needed.

Local weather forecast

iSii can be expanded with an integrated weather forecast from Meteo Group, which is available for all countries via a subscription. The weather forecast is updated every hour, up to seven days ahead. This enables you to anticipate on the consequences of expected weather conditions. For example the artificial lighting can be switched off earlier if a sunny day is expected.

Graphical settings

With intelligent graphical set points (VIPs) you can fine-tune your own strategy, using any parameter you desire. For example: the ventilation and heating control can be integrated with screen control automatically, simply by using screen position as an influence in the VIP settings for heating and ventilation. You can select up to nine influences for each setting, making iSii the most flexible system available.

Weather dependent ventilation

The automatic ventilation temperature band (automatic P-band) in iSii considers the outside conditions. This means that e.g. on warm, sheltered sunny days the p-band automatically decreases to obtain a quick and decisive way of ventilation.



Special iSii modules

Next to our standard modules, Hoogendoorn offers special software modules to be able to manage the processes in your greenhouse in a better way. Below you can find special modules, that save time, reduce energy use and increase crop yields.

- **iSii + TO Control:** the right balance between light sum and average 24-hour temperature.
- **iSii + CO₂:** efficient distribution of CO₂ from various sources.
- **iSii + PAR:** optimum control of PAR light according to plant's needs (very suitable for e.g. Phalaenopsis).

- **iSii + Active Air:** well-run control of various equipment used in (semi) closed greenhouses integrated with basic controls like heating and ventilation.
- **iSii + Condensation:** automatic correction on ventilation, the moisture gap in the energy screen and heating to reduce condensation to a minimum.
- **iSii + Aquabalance:** plants growing on slabs receive 24/7 the right amount of water and fertilizer at the right time.

Please visit www.hoogendoorn.nl or contact the nearest Hoogendoorn office for more information.



"I find the iSii process computer very easy to use. The software is built in a graphic way, so it works in a visual manner, and I like that a lot."

Rob Lowe, El Rosal [MEX]

Always actual insight into your greenhouse

In professional horticulture, installations are becoming more and more complex. To work efficiently, you need a clear overview of the current situation in your greenhouse. With its user-friendly software, available in 13 languages, iSii responds to these requirements.

Hoogendoorn has put much effort into the development of a clear and accessible user interface. The iSii worksheets for example only display the information that you choose to see, including summaries, settings lists and graphs

composed as you wish. Even names and colors can be assigned to the worksheets. In this manner you can more easily recognize and classify departments and nurseries.

Alarm app

The iSii has been extended with an Alarm app, available for iOS, Android and Windows. This app will send you detailed alarm notifications e.g. in case of deviant greenhouse temperatures. This way you can respond quickly, wherever you are, from any device with an internet connection. It is easy-to-use and it gives you extra security and peace of mind.



3D visualizations

Customized 3D visualizations display the status of all your installations and processes in clear illustrations. With only one finger tap or mouse click you can change your settings.

Remote control

iSii can be controlled remotely via pc, tablet or smart phone. You can e.g. view all reports and graphics and change settings. Multiple iSii systems can even be linked to act as a single process computer. Planning for a business trip or holiday perhaps? You can always take the iSii with you, wherever you go.

Floor plan

A personalized floor plan gives you a complete overview of every greenhouse, crop section, installation and technical room. If you wish to check or change set points, the floor plan makes it easy to select the right section.

Multiple users

Multi-user functionality allows more people to use the iSii software simultaneously. With an iSii computer the administrator can assign user rights to other users. Restricted users can only change what they are allowed to change, which is highly favored by universities and breeding companies.

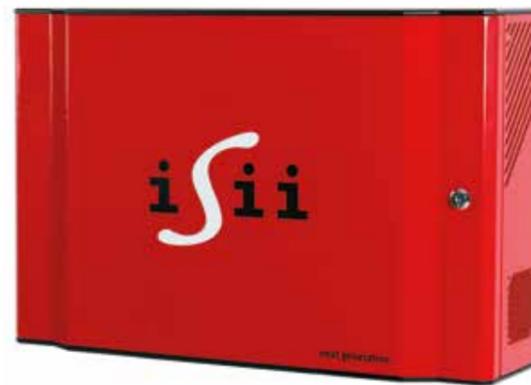
Data registration & export

All calculated values are automatically stored with a 5 minute interval for a period of two years. These graphs can be exported to different spreadsheet programs for calculations and data comparison.

Extremely reliable and durable hardware

iSii comes in a smooth hardware casing that allows natural ventilation. This reduces maintenance and increases lifespan. The system is equipped with industrial hardware components that are worldwide available, including a solid-state drive, fast dual core processors and back up facilities.

iSii consists of two separate computers for extra safety and reliability. The iSii base station is used for settings and analysis. The other computer, the iSii control station, contains the process software and controls all communication in the greenhouse between sensors, data point I/O modules and technical installations.



Wide range of sensors

In order to maintain the optimal climate and highest savings, it is important to know what is happening in and around the greenhouse. For this reason, Hoogendoorn offers a wide range of sensors that comply to high quality and accuracy standards. These include:

Aquabalance

The Aquabalance system calculates and measures the current weight and the saturation weight of hydroponics. This provides insight into the water requirement, activity of the crop and the water content of the slabs. iSii uses this information to determine the proper time for the next drip cycle. You can sleep peacefully, assured that your plants will develop a healthy root system and that nutrients are taken up optimally.



PAR sensor

The PAR sensor measures growth light and provides insight into the plant's photosynthesis process. This enables iSii to optimize e.g. lighting, CO₂ dosage and shading screen controls.



Accurate I/O system

Data point I/O modules for measurements and actuations improve reliability and save costs, because only one cable is needed in the greenhouse. You can add extra data points or other standard industrial components at any time, which makes the hardware future-proof. The digital CANbus protocol ensures high accuracy readings and makes it easy to integrate 3rd party technologies. LED indicators in the data points give instant feedback about the hardware performance and control actions.



"Via graphical settings we use different parameters at the same time. This allows much freedom in programming and enables us to set our own strategy."

Davy Clement, Clement (FR)

iSii, thousands of satisfied users

Hoogendoorn is the first choice of top growers, breeding companies and research stations worldwide. We expect to keep and even strengthen this position with our iSii process computer. It is tremendously easy-to-use, versatile, self-learning, time and money saving, reliable, sustainable and therefore a long-term investment.

Whether you are investing in a new greenhouse with basic or high-end technology: iSii will fulfill every need of your plants. They will receive the right amounts of light, heat, water, nutrients and CO₂ at the right time, regardless of the weather conditions. This will result in higher yields and better quality at lower costs, thanks to the all-in-one system. Wherever your greenhouse in the world may or will be located, and whatever type of cultivation you may have, iSii will make it perform to the max.

"The controls in iSii are very accurate. We save energy by a better use of the screens and we realize a higher production. We are very pleased with these results."

Niu Xiaofang, Beilangzhong (CHI)

Our references

In nearly 50 years we have over 2000 of satisfied customers worldwide. For example, these include:

Universities

- Wageningen Plant Research International (NL)
- C.T.I.F.L. (FR)
- Vineland Research Station (CAN)

Seed & breedings

- Rijk Zwaan (NL/ MEX)
- Syngenta (NL/ UK/ ESP)
- Philip Morris Products S.A. (SUI)

Vegetable productions

- Wonderplant S.A. Hydroponic Products (GRE)
- Flavour Fresh Salads (UK)
- Agricola El Rosal (MEX)

Flowers and pot plant productions

- Chekhov Gardens (RUS)
- Optiflor (NL)
- Cosmic Plants (CAN)

Demonstration projects

- Sera Culture Sustainable Innovation Centre (TUR)
- Olij Roses Solar powered greenhouse (KEN)
- Berg Roses Water Demonstration (KEN)

Key features iSii

- ✓ Suitable for all types of cultivation
- ✓ Local weather forecast for all countries
- ✓ Pro-active controls for a stable greenhouse climate
- ✓ Self-learning and time saving adaptive heating control
- ✓ User-friendly graphics and settings
- ✓ Universal access, anytime, anywhere, any device
- ✓ Alarm notification on your smartphone
- ✓ Industrial standard components
- ✓ Reliable and durable hardware
- ✓ Expandable modular software
- ✓ Available in 13 languages





"The quality of the training provided by the Hoogendoorn instructors is of the highest level!"

Neil van Steekelenburg, CosMic Plants (CAN)

Cutting edge technology and know-how

Hoogendoorn aims to increase knowledge about climate control, energy optimization, water management and plant growth worldwide. With training, workshops and master classes, we help you to take effective advantage of our innovative technology. At the same time we discuss the latest developments in the horticultural sector. This way, you are always up-to-date on the latest technologies and innovations. For this, we cooperate closely with renowned universities and research centers.

The purchase of an iSii process computer includes a basic training so that you can independently manage all your automated processes and systems in an efficient manner. During this iSii Quick Start training, we explain the setting possibilities of the iSii software. We explain this with practical examples and

instruction videos, online or in-company. Quick start videos and instruction manuals are also available in iSii system. Besides basic training for beginners and students, we provide master classes and workshops for experienced users and crop consultants, in groups or individually.

Worldwide support

Hoogendoorn has several offices worldwide and a strong partner network. So, we can provide you with our technology, knowledge and service wherever you are located. In addition, we provide a reliable local service, a 24/7 helpdesk and training.

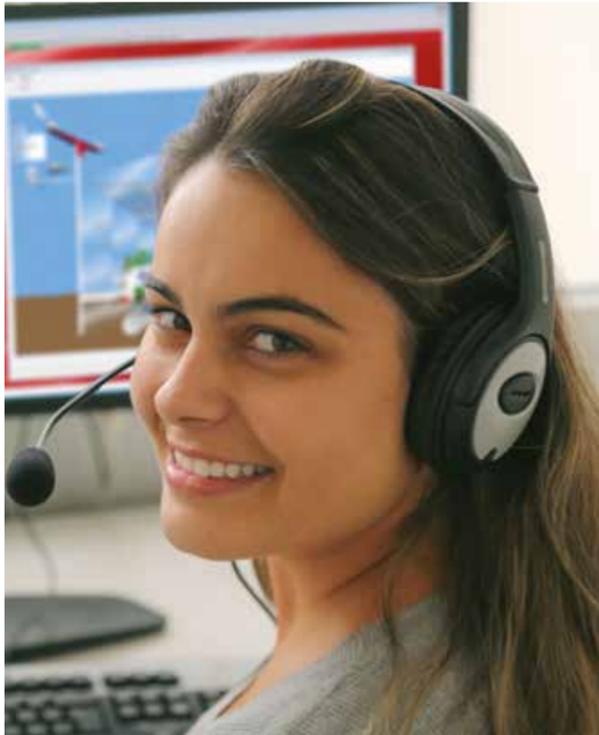
Local service

Hoogendoorn provides local service for growers worldwide. We work closely together with our certified partners who are aware of your climate and business conditions. They can provide local technicians for commissioning, configuration and maintenance of Hoogendoorn systems. Our partners keep spare parts in stock to provide swift service.



24/7 helpdesk

In addition to our local face-to-face service we also provide remote technical support. Our telephone helpdesk is available day and night. If necessary our helpdesk specialists can access your computer system online in order to help you optimize settings or solve any possible issue you might have.



Online training

Webinar is a popular and easy way to increase your knowledge that is relevant to your production, such as plant physiology, software settings, cultivation methods and much more. Our interactive webinars are tailored to our (international) customers. This online training can be scheduled flexibly and can be followed from your own workplace. The only thing you need is a headset and an internet connection.

Worldwide innovator in horticultural automation

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