



TruServices

Monitoring
for TruPrint

Intelligent digitalization enables complete transparency for your machinery

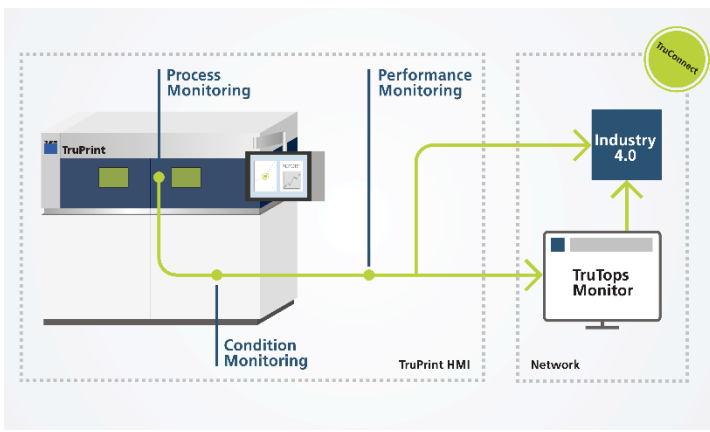
Keeping an eye on everything
Using production key figures and condition monitoring to keep an overview of your equipment

Increased efficiency
Optimize your processes long-term with better transparency

Individual analysis
Only view the key figures relevant for your build job and analyze these

Produce reliably and cheaply
Early error detection and notification enable a fast reaction

Quality verification
Benefit from information available for verification of build part quality



Efficient production thanks to comprehensive monitoring

Monitoring software from TRUMPF allows the visualization and evaluation of sensor-supported data. This includes the solutions Process, Condition and Performance Monitoring. The results are displayed directly on the HMI.

With TruTops Monitor you not only get access within the network but also the possibility of remote access to the machine. Alternatively you can use the standardized OPC UA Monitoring interface for the connection to your own software.

Process Monitoring

Verification of build part quality

Process Monitoring focuses on the build process. **Powder Bed Monitoring** monitors the powder bed during the scanning process. This provides monitoring of the build part quality - layer-by-layer. Fast automatic error identification increases production efficiency. An integrated high-resolution camera and automatic image processing monitor the powder bed and enable a precise view of each powder layer.

With the **Melt Pool Monitoring** the melting pool of each laser is monitored by means of sensors. This allows you to detect process deviations at an early stage and visualize critical areas on the parts.

Condition Monitoring

Maintaining an overview of the machine conditions and process environment

A wide variety of data concerning the current condition of the TruPrint machines is gathered by Condition Monitoring. This is documented and can be used for quality control purposes. Analyze only information that is relevant for the application. Indicators for the build chamber such as moisture and protective gas speed, or for the ambient conditions such as temperature or oxygen level are recorded.

Performance Monitoring

Generating productivity analyses and individual reporting

Use Performance Monitoring to keep an overview of all of the key productivity figures, status and consumption data for the TruPrint machine. Assess the machine performance right at the machine HMI and benefit from the complete overview of the LMF process. The key figures help to achieve profitable production. For every build job, you can configure an individual report and have it displayed at the HMI.

Connectivity with TruTops Monitor

Flexibility by monitoring in the network

TruTops Monitor provides total transparency of machines and enables remote access. Observe and control your TruPrint machines easily from your desktop or on a mobile device using the MobileControl App. Analysis of live machine data and machine utilization reports will enhance your industrial additive manufacturing operations. Error notifications via e-mail allow you to adapt your process as quickly as possible.



OPC UA Monitoring interface

Monitoring with your own software thanks to an integrated interface

With the OPC UA monitoring interface you have the possibility of flexible connections of TruPrint Performance Monitoring data to individual software programs. All of the Performance Monitoring data is transmitted live over a standardized interface.

This product range and information may vary depending on the country. Please get in touch with your local contact person, if the product is available in your country.