Customer Guide – Software and Process Plans

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1   Software and Process Plans – General Information

EOS offers a complete solution for additive manufacturing: industrial 3D printers ("EOS Systems") equipped with industry-leading technologies, proven processes, consulting services and software solutions to prepare, optimize, control and monitor the various aspects of the additive manufacturing process.

With a subscription-based license model, EOS Plans offer a flat rate of validated and ready-to-use material processes, as well as an automatic in-situ process control for reduced supports and increased productivity.

Take control of your machine park, offering deep insight into machine-generated data for improved machine utilization.

1.1   Supported EOS Systems

In general, all EOS systems based on the machine software EOSYSTEM are supported by the EOS Plans.

	EOS Build Plan	EOS Build+ Plan	EOS Smart Monitoring Plan	EOS Data Insights Plan
EOS M 290	✓	✓	✓	✓
EOS M 300-4	✓	✓	✓	✓
EOS M 404-4	✓	✓	✓	✓
EOS M 400	✓	✓		✓
FOMRIGA P 110 FDR	EOSPRINT for FORMIGA			
FOMRIGA P 110 Velocis	EOSPRINT for FORMIGA			
EOS P 396				✓
EOS P 500	EOSPRINT Polymer			✓
EOS P 710				✓
EOS P 810				✓
AMCM M 290-2	✓	✓		

(June 2023)

1.2   Compatibility of EOS Plans with Existing EOS Systems

1.2.1   EOS Build Plan Compatibility

The EOS Build Plan and EOS Build+ Plan are working with machines based on software edition 05.23 (tested) . Please refer to the EOSPRINT release notes for more details on compatibility.

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1.2.2 EOS Smart Monitoring Plan Compatibility

EOS Smart Monitoring can run with the following existing systems:

	SI–Nr.	Hardware upgrades needed			Smart Monitoring
		RFS	Network	IPC	
M 290	546 – 1724	Not compatible			
	1865 – 3711	+	–	+	✔
	3712 – 4245	–	–	+	✔
	from 02014246	–	–	–	✔
M 300–4	from 4471	–	–	–	✔
	from SI10020023	OT hardware included "Smart Monitoring Ready"			✔
M 400–4	2249 – 2967	Not compatible			
	3393 – 3634	+	+	+	✔
	3885 – 3944	–	–	+	✔
	from 04013945	–	–	–	✔
	from SI04014100	OT hardware included "Smart Monitoring Ready"			✔

"+" marks required hardware upgrade

Please ask your EOS account manager for more details if you plan to subscribe to? EOS Smart Monitoring Plan for an existing machine in your machine park.

1.2.3 EOS Data Insights Plan Compatibility

EOS Data Insight Plan requires a license of the software EOSCONNECT Core and EOSTATE PowderBed. Please make sure this software is licensed and installed on your EOS System? and workstations. Systems purchased later than the second half of 2023 will have EOS System Suite (incl. EOSCONNECT Core and EOSTATE PowderBed) installed.

EOS Data Insights requires asoftware edition 10.19 (on premises) or software edition 05.22 for the cloud-based SaaS version of EOS Data Insights Plan.

1.3 New Customers

New customers are customers who are purchasing products from EOS for the first time.

When purchasing an EOS System, new customers select one of the available EOS plans. As a minimum, a 1-year subscription of the EOS Build Plan is required. After the mandatory first year,

customers can choose to opt-out from the subscription and thus default to EOS Build Inactive.

1.4 Existing Customers

Existing customers are customers who have already purchased machines and software from EOS before the EOS plans were introduced.

1.4.1 EOSPRINT Users

Customers who have purchased EOSPRINT, EOSPRINT Premium, any EOS material sets or associated products before the EOS Build/Build+ plans were introduced, can continue using these products. They are not required to migrate to an EOS Build/Build+ plan.

Note that beginning with software edition 11.22, upcoming releases of EOSYSTEM shall remain compatible with EOSPRINT 2.13. EOSPRINT is the last version of EOSPRINT before the introduction of the EOS Plans. Therefore, when upgrading EOSYSTEM software on the machine or when purchasing new machines that come with EOSYSTEM versions from a later software edition, it may be an option to continue using EOSPRINT 2.13.

For more details on the software compatibility, please refer to the EOSPRINT and EOSYSTEM release notes. on http://my.eos.infoNew features will be provided only with the EOS Plans.

If you decide to migrate to the EOS Plans, please contact your EOS account manager.

1.4.2 Migration of Jobs and Material Sets to the Latest Version

Material sets (.eospar) and jobs (.openjz) that were used with an older version of EOSPRINT will automatically be migrated when loading them in a newer version of EOSPRINT.

That means, all existing material sets and jobs can be used under EOS Build and EOS Build+ without manual interaction.

Please read the EOSPRINT release notes carefully to be aware of any changes that might affect the building process.

1.4.3 EOSTATE Exposure OT Users

EOSTATE Exposure OT users can migrate to the EOS Smart Monitoring Plan at any time to use features like Smart Fusion. EOS Smart Monitoring Plan requires an active EOS Build Plan.

Please contact your EOS account manager for more details and to discuss the different options.

2 Software and Process Plans – Benefits

2.1 General Subscriber Benefits

You will be entitled to the subscriber benefits that EOS makes generally commercially available to subscription users. Subscriber benefits include,

- Regular software updates with innovative features for software and EOS material sets,
- all EOS Plans include the flexibility to cancel the subscription and work with an inactive plan with a reduced feature set as described. Th customer can subscribe to the EOS Plan again at any time without any extra fees.

2.2 Benefits of EOS Build Plan and EOS Build+ Plan

2.2.1 Seats

EOS Build Plan: 3 licenses of EOSPRINT for 3 users

EOS Build+ Plan: 10 licenses of EOSPRINT for 10 users

2.2.2 Features and EOS Material Sets

The EOS Build/Build+ plans grant flat rate access to the entire EOS material process portfolio. Multiple users can simultaneously prepare jobs for EOS systems, calculate building time, preview and optimize hatching, and develop material processes using EOSPRINT's cutting-edge exposure strategies. Other benefits include access to selected Additive Minds Academy learning paths and the synchronization and deployment of material sets via the EOSPRINT Cloud.

EOS Build and Build+ plans are licensed per production site, which means you license it only once for an entire machine park.

EOS Build Plan:

- Build preparation, preview and building time estimation for all supported systems
- Standard EOS material sets
- Standard parameter editing capabilities
- EOSPRINT Cloud access for managing material sets across your organization
- Trainings "New to Industrial 3D Printing" and "EOSPRINT" (for up to 5 users)

Additionally, the EOS Build+ Plan offers:

- High-productivity material sets, including the newest 80µm material sets with low-angle buildability options; all designed for optimized performance in the first run
- Advanced exposure algorithms for achieving best quality and build rate. Includes e.g., Pulsed Wave Emission and Laser Center Dependent Vector Ordering and Direction.
- Advanced preview and building time estimation features
- Training "Parameter Editor Metal for EOSPRINT" training (for up to 5 users),
- EOSPRINT Software Development Kit (SDK) for automation purposes

Detailed feature lists and feature comparison sheets including the list of provided EOS material sets are available in the following PDF: *EOS_Plans_ Feature_Comparisons*

2.2.3 Cloud-based Material Set Management in EOSPRINT

EOS GmbH – Electro Optical Systems

Robert-Stirling-Ring 1
D-82152 Krailling / München

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With the EOS Build Plan and the EOS Build+ Plan, EOS offers a centralized material set management as a cloud-based synchronization service for sharing and controlling material sets (.eospar) across the organization.

To connect EOSPRINT to the EOSPRINT Cloud, customers need to log in under the EOSPRINT settings.

EOSPRINT Cloud Access and Account

To gain access to the EOSPRINT Cloud, customers apply for an EOSPRINT Cloud Admin User.

Please email licensing@eos.info with your name, company email address and time zone.

The Admin User can then create additional accounts for the EOSPRINT Cloud to other people within the same organization.

Web: http://hub.eos.cloud/

With signing in you agree to:

Cookie Policy

EULAS

Terms of Use

Privacy Policy

The access to the cloud-based material set management in EOSPRINT is only available with an active EOS Build/Build+ plan. Even with an active plan, the use of the EOSPRINT cloud is entirely optional and EOSPRINT remains fully functional without a connection to the cloud.

2.3   Benefits of EOS Smart Monitoring Plan [1]

EOS Smart Monitoring uses Exposure OT to make build monitoring and analysis more thorough and cost-effective — but doubles down on the cutting edge with Smart Fusion. This automated power adjustment tool operates in close conjunction with EOS Build/Build+ to ensure heat never exceeds standards established in the parameter set.

2.3.1   Features

- A high-resolution near-infrared camera records and measures the energy input in real time — regardless of part size. The long exposure time of the camera facilitates better analysis of the build's individual layers
- Based on analysis algorithms (uniquely adjustable to meet individual project requirements), EOSTATE Exposure OT provides a toolbox to determine process flaws

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[1] requires an active Build/Build+ Plan

- This allows you to forgo destructive testing and is less expensive than other non-destructive testing methods, such as X-ray and CT scanning. Thus, you can eliminate the need for costly downstream quality assurance and can ultimately reduce your scrap rate and percentage of build failures
- Insights derived from EOSTATE Exposure OT are important for future production cycles and to speed up product development
- **Smart Fusion –** The automated feature adjusts laser power levels to match the standards established in pre-processing, making corrections during the build as needed. Exposure OT's heat distribution monitoring is critical to the process, as its data informs Smart Fusion's power corrections during the build. Smart Fusion reduces the likelihood of overheating and helps ensure fewer part iterations. AM designers who know Smart Fusion, can craft part designs optimized for supportless building.

2.4 Benefits of EOS Data Insights Plan [2]

The EOS Data Insights Plan offers insights into machine performance, either individually or as a whole park of devices. As a web-based subscription platform, it's available on-premises or via the cloud, with a UI for desktop and mobile devices.

The EOS Data Insights Plan offers two deployment options to cater to the specific IT infrastructure and cybersecurity policies of customers:

- On-premises: The EOS Hub can be installed on a local Windows server along with a SQL database. By deploying EOS systems within the customer network, no data is transmitted outside the customers' premises.
- SaaS (Software as a Service): Customers can acquire a dedicated tenant within EOS Hub on the EOS cloud. This approach ensures a fully secure and separate environment for each tenant. EOS systems connect to the EOS Hub cloud service, enabling customers to maintain complete access to all their data. Furthermore, to enhance system analytics and provide improved services, EOS is granted access to anonymous metadata.

By offering both on-premises and SaaS options, the EOS Data Insights Plan provides flexibility for customers to align with their specific infrastructure and security requirements while ensuring data privacy and system performance.

2.4.1 Features

EOS Hub- the Big-Picture View platform: Through its open API, other software types (MES, CAQ, ERP, IIoT) can easily integrate with EOS machine data via a single interface.

Machine State App: With a comprehensive dashboard, the app provides real-time insights on the status of your machines, including all system messages, graphs of the sensor data for quick error analysis. The App offers remote control capabilities, allowing you to stop or pause a build job from anywhere using your mobile device.

Machine Performance App is focused on monitoring the utilization and uptime of machines. The App allows users to make data-driven decisions that can drive operational efficiencies and

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[2] requires EOS System Suite or EOSCONNECT Core and EOSTATE PowderBed

strengthen overall performance.

Machine Condition App is designed for machine park managers seeking to optimize equipment performance and reduce downtime. It allows them to determine whether the machine is production-ready or if there are any issues that must be addressed.

3   Subscription term

EOS offers different terms of the software and process plans to give customers options for budgeting.

The subscription starts with the delivery of the license. At the same time the license fee for the first year is due.

For subscriptions concluded for an *indefinite* period, an email is sent to the registered customer contact one months before the end of the contractual term, notifying that the contract will be renewed for another year if it is not cancelled at least one week before the current term ends. Upon such automatic renewal, invoice and license key will be issued accordingly.

For subscriptions concluded for a term longer than one year, billing and license key renewal are managed on an annual basis: a notification is sent to the registered customer contact one months before the license key expires, announcing the upcoming invoice and license renewal.

If applicable, the existing PO number will be referenced on the invoice but may be exchanged for a different PO number at the customer's request.

For prepaid articles concluded for a *fixed* period of time, an email will be sent to the registered customer contact one months before the license expires advising that license expiry is imminent, and no automatic renewal will occur.

3.1   1–year plan

The license for a 1-year plan entitles the customer to use the software, the material sets and the associated services for one year. The 12 months period starts from the moment of delivery of the license key to the customer. At the same time the fee is charged for the respective term.

The 1-year plan is concluded for an indefinite period of time and thus subject to automatic renewal.

3.2   3–year plan: annual payment with 3 year commitment

The license for a 3-year plan entitles the customer to use the software, the material sets and the associated services for 3 years.

The 3-year plan cannot be terminated within the 3-year term. The 3-year plan includes an annual payment (12 months) and an annual renewal of the license keys. EOS will inform the customer about its automatic renewal and, if necessary, agree upon a separate purchase order number to use on invoices for subsequent years.

The 3-year plan is concluded for an indefinite period of time and thus always subject to automatic renewal for a further year.

As of today, EOS can't offer a prepaid payment option for the 3-year plan (June 2023).

4 Cancellation of an EOS Plan – "Inactive Plan"

4.1 How to Cancel an EOS Plan

EOS Plans can be cancelled on an annual base, while respecting the contractual term. E.g., a 3-year plan can be cancelled after 3-years. The EOS Smart Monitoring Plan must at least run 2 years after the initial order.

EOS Licensing Licensing@eos.info must be notified by email at least 4 weeks before the renewal date to cancel or pause the subscription. EOS Licensing will manage the license change accordingly with you.

4.2 Transition to an Inactive Plan

After cancellation EOS will update your licenses according to your specifications. e.g. selected Material. EOS Licensing will take care of getting the necessary information from you.

4.3 Re-activating an EOS Plan

After you have canceled your EOS Plan you can re-subscribe at any time. Please contact EOS Licensing Licensing@eos.info to request to activate your EOS Plan again. When you re-active the plan you will subscribe again to a 1-year or 3-years term. Changes to the renewal date must be requested individually.

If you decide to cancel your paid subscription, your plan is converted to an "Inactive Plan". The inactive plan contains limited capabilities and features.

EOS provides a detailed feature list and feature comparison sheet of the EOS Plans (see chapter EXHIBIT A – Feature Comparison of Inactive EOS Build, EOS Build and EOS Build+ ; EXHIBIT B – Feature Comparison of Inactive EOS Smart Monitoring and EOS Smart Monitoring ; EXHIBIT C – Feature Comparison of Inactive EOS Data Insights and EOS Data Insights).

The EOS Plans can be cancelled after the following period of time:

> EOS Build Plan –
>> 1-year plans can be cancelled after 1 year,
>> 3-year plans can be cancelled after 3 years
>
> EOS Build+ Plan –
>> 1-year plans can be cancelled after 1 year,
>> 3-year plans can be cancelled after 3 years
>
> EOS Smart Monitoring Plan – can be cancelled after 2 years

EOS Data Insights Plan – can be cancelled after 1 year

After cancellation customers can re-subscribe at any time.

4.4 Inactive plan of EOS Build and Build+

The EOS Build Plan can be cancelled on a yearly/3-yearly base. After cancellation EOS provides you the capabilities of the EOS Build Plan Inactive.

The EOS Build Plan Inactive contains 1 license for 1 user of EOSPRINT.

The EOS Build Plan Inactive enables you to print existing or new jobs on your EOS system with **1 selected EOS material**.

Customers can select one Material of the following list (June2023):

1.2709	17-4PH	20MnCr5
254	316L	316LVPro
Al2139AM	AlF357	AlSi10Mg
AlSi10Mg200C	CM55_AR	CM55_N2
Cu	CX	GP1
H13	HAYNES282	HX
IN625	IN718	IN939
MP1	MS1	PH1
SuperDuplex	Ti64	Ti64ELI
Ti64Grade5	Ti64Grade23	TiCP

You will get the included EOS material sets of the selected EOS Material.

After cancellation EOS will ask you to select 1 EOS Material and we will provide you with the licenses of the associated material sets and one single license of the EOSPRINT version with limited features. EOSPRINT features are reduced to process settings only (no exposure parameter editing).

The EOSPRINT with reduced feature set enables you to prepare jobs based on the selected material and adjust the process settings. Adjusting the exposure sets of the material set is not possible with EOS Build Inactive.

EOS provides a detailed feature list and feature comparison sheet of the EOS Build Plan (see chapter EXHIBIT A – Feature Comparison of Inactive EOS Build, EOS Build and EOS Build+).

Cloud-based Material Set Management

After cancellation customers don't have access to the cloud-based service to synchronize and manage the material sets anymore. As all material sets are still stored and saved on the EOSPRINT workstations, there's no need to download the material sets (.eospar-files) from the EOSPRINT Cloud. All materials sets are saved locally for a later usage. If customers decide to re-subscribe to the EOS Build Plan and re-connect to the cloud-based material set management, all material sets on the EOSPRINT workstations will be automatically synchronized with EOSPRINT Cloud again.

4.5   Inactive Plan of EOS Smart Monitoring Plan

The EOS Smart Monitoring Plan can be cancelled earliest after 2 years of the initial order. After cancellation EOS provides you the capabilities of the inactive plan of EOS Smart Monitoring Plan Inactive.

The EOS Smart Monitoring Plan Inactive still contains Exposure OT but building jobs with Smart Fusion is not available in the EOS Smart Monitoring Plan Inactive.

EOS provides a detailed feature list and feature comparison sheet of the EOS Smart Monitoring Plan (see chapter EXHIBIT B – Feature Comparison of Inactive EOS Smart Monitoring and EOS Smart Monitoring).

4.6   Inactive Plan of EOS Data Insights Plan

The EOS Data Insights Plan can be cancelled on a yearly base. After cancellation EOS provides you the reduced capabilities of the EOS Data Insights Plan inactive.

EOS provides a detailed feature list and feature comparison sheet of EOS Data Insights Plan (see chapter EXHIBIT C – Feature Comparison of Inactive EOS Data Insights and EOS Data Insights).

4.7   Trials of EOS Plans

4.7.1   Trials of EOS Build and Build+

Customers can ask for a trial version of EOS Build or EOS Build+ for maximum of 3 months. Please contact your account manager to request a trial.

4.7.2   Trials of EOS Smart Monitoring Plan

Customers purchasing an EOS M 300-4 or EOS M 400-4 or customer which already have EOSTATE Exposure OT installed can request a 6-month free trial of the EOS Smart Monitoring plan. After the 6 months the customer must decide to subscribe to an EOS Smart Monitoring Plan.

On acceptance and payment of the plan the customer is obligated to send the RaC-license file from the machine license dongle to Licensing@eos.info to get an updated set of licenses which enable all features of the Smart Monitoring Plan.

5   Change of renewal date of EOS Plans

Subscription starts from the moment of delivery of the license key to the customer. Automatically the renewal date will be set 12 months later.

On request customers can change the renewal date of the respective EOS Plan. Please request the change of the renewal date latest 4 weeks before the renewal date of your plan at EOS Licensing Licensing@eos.info.

For administrative reasons, you can only choose a new renewal date that is further in the future. It is not possible to shorten the licensing period. EOS will charge you the difference amount for the extend months.

6 Invoicing and billing

6.1 New EOS Plans as Part of a New EOS System Purchase

Customers will get an invoice about the entire EOS system with all hardware components and the subscription fee for first year.

6.2 Renewal of EOS Plans

At the latest 1 month before the license expires, EOS will inform the customer about its automatic renewal and, if necessary, align about the purchase order number to put on the invoice for the renewal fee. EOS will then send the invoice and the license keys.

7 Upgrading from EOS Build to EOS Build+

EOS offers the EOS Build plan and the EOS Build+ plan with advanced capabilities and high productivity material sets.

You can switch from the EOS Build plan to the EOS Build+ plan at any time. Please contact EOS Licensing Licensing@eos.info to order the switch to EOS Build+ Plan. When you switch to the EOS Build+ Plan EOS Licensing will update your licenses accordingly. The renewal date of your existing plan doesn't change. EOS will charge you the difference amount between the EOS Build Plan to the EOS Build+ Plan for the remaining months.

8 Availability of Software and Material Sets

8.1 Availability of Software in EOS Build and EOS Build+

The software EOSPRINT as part of the EOS Build Plan is available for download in myEOS ([https://my.eos.info).](https://my.eos.info)
On myEOS you always find the latest version. In addition, you can download all previous versions, which can be installed in parallel with the latest version of EOSPRINT.

Also available on myEOS is the user documentation for EOSPRINT and the release notes where all changes are documented version by version.

8.2 Availability of EOS Material Sets

EOS material sets are delivered and installed with EOSPRINT. New EOS material sets come with the latest version of EOSPRINT.

In some cases, EOS delivers EOS material sets between the 6-month release cycles of the EOS software editions. These material sets will also be made available for download via myEOS as well as via the EOSPRINT Cloud.

8.3   Availability of EOS Smart Monitoring

The EOS Smart Monitoring Plan consists of

- Hardware to be installed in the system:
  - The OT camera
  - OT IPC (for EOS M 300-4/EOS M 400-4 installed within the machine cabinet, for EOS M 290 withing a separate terminal outside of the system)
- Software running on the system IPC for image acquisition, process control (Smart Fusion) and data transfer to OT IPC
- Software running on the OT IPC for data analytics
- Software running on a workstation for running analytics and data visualization
- ELearnings for OT and Smart Fusion

For EOS M 300-4 from second half of 2023 and EOS M 400-4 from second half of 2023 the OT hardware is already installed on every new system. For existing systems, the hardware can be retrofitted.

New software versions for the system IPC and OT IPC are installed by an EOS service technician and can be initiated via a service call by customers.

The latest version of the workstation software is made available via myEOS.

Also available on myEOS is the latest version of the release notes and software manuals.

8.4   Availability of EOS Data Insights

The EOS Data Insights Plan offers two deployment options to cater to the specific IT infrastructure and cyber-security policies of customers:

- On-premises: To access the latest version of EOS Hub (on-premises), customers can conveniently download it via myEOS. Additionally, the configuration app includes a workflow that assists in the licensing process.
- SaaS (Software as a Service): Access to EOS Hub is granted on a per-machine basis upon subscribing to the EOS Data Insights Plan.

9   Licensing

9.1   License Technology

CodeMeter is a product of WIBU Systems, a software manufacturer specializing in software licensing and digital rights management. EOS uses CodeMeter for licensing of all its software products.

All EOS software products automatically install the **CodeMeter Runtime**, including the **CodeMeter ControlCenter**, which enables you to monitor and manage all your CodeMeter software licenses.

By default, EOS issues licenses to a dedicated USB device called "EOS USB Dongle". On request EOS can alternatively provide an "EOS Soft Dongle" which doesn't require the USB hardware and is bound to an individual computer. This computer can be a server or a workplace computer, virtual or physical.

Note that EOS recommends floating software licenses to workplace computers via a dedicated license server. Using separate dongles for separate workstations is not recommended! See document How to set up a License Server.pdf for instructions on how to set up a license server.

The **CodeMeter WebAdmin**, which is accessible via the CodeMeter ControlCenter allows for monitoring and managing the licenses within your local network.

For any issues with your software or material set licenses please contact EOS Licensing (licensing@eos.info).

For license updates, EOS Licensing may ask you for a license-context-file (RaC-file, file extension .WibuCmRaC) and provide license updates in form of a license-update-file (RaU-file, file extension .WibuCmRaU).

9.2   EOS USB Dongle

With the installation of your EOS system (machine) EOS provides you with an EOS USB Dongle to store all licenses for workstation software such as e.g., EOSPRINT.

The main benefit of EOS USB Dongles is, that they are not bound to a specific computer. The USB Dongle can be unplugged from one computer and moved to another, without affecting the validity of its licenses.

9.3   EOS Soft Dongle

As an alternative to EOS USB Dongles EOS offers the "EOS Soft Dongle". It does not require a USB device and is solely file-based. This can be of particular benefit for software virtualization or when USB devices are generally banned from a company, e.g., due to security policies. However, the EOS Soft Dongle is bound to a specific computer and can be moved to another computer by using the EOS WEBDEPOT and your ticket number.

Please note that mixing EOS USB Dongle and EOS Soft Dongle licenses is discouraged, because it will likely lead to confusion and licensing problems. EOS software can only consume licenses from either EOS USB Dongle or EOS Soft Dongle, but not from both simultaneously.

If you prefer working with EOS Soft Dongles instead of EOS USB Dongles, please contact EOS Licensing (licensing@eos.info) for setting it up.

To activate an EOS Soft Dongle EOS Licensing will provide a ticket number for your licenses, which you can activate from the EOS WEBDEPOT. EOS Licensing will provide detailed instruction how to activate, update and, if necessary, move your EOS Soft Dongle licenses.

Note that EOS Soft Dongles require software edition 11.21 (EOSPINT 2.11) or higher.

Note that in order to use EOS Soft Dongles, the Windows environment variable EOS_LICENSING must be set to UNIVERSAL on all client computers running EOS software. Since software edition 05.23 (EOSPRINT 2.14), this environment variable is configured during the software installation. For older versions it must be set manually (see instructions "How to activate an EOS Soft Dongle").

Note: Mixed use of EOS Soft Dongle and EOS USB Dongle does not work. So please decide to use the EOS Soft Dongle or the EOS USB Dongle. Please do not use them in parallel.

9.4   License Server

In theory, the EOS USB Dongle and the EOS Soft Dongle can both be activated and used on a personal workstation computer. However, this is discouraged as it only works as long as there is only a single person running EOS software and it does not scale well. Instead, EOS recommends setting up a centralized license server that floats all EOS licenses to client computers within your organization. All EOS software and material set licenses are floating licenses. EOSPRINT workstations (clients) must be connected to the centralized license server to access the licenses. The license server can use an EOS USB Dongle or an EOS Soft Dongle.

See document How to set up a License Server.pdf for instructions on how to set up a license server. Additionally, EOS Licensing (licensing@eos.info) can help when configuring a license server with the WIBU CodeMeter Control Center. In case of problems, also consider contacting the WIBU CodeMeter helpdesk, accessible from the WIBU homepage https://www.wibu.com/.

10 Training

The EOS Plans include various online courses and certification programs to acquire the skills to work with the software and the EOS systems.

EOS Build Plan contains 5 seats of an EOSPRINT online course and the certification program New to Industrial 3D Printing.

Additionally, the EOS Build+ Plan gives you access for 5 people to the online course Parameter Editor Metal for EOSPRINT.

The EOS Smart Monitoring Plan contains the following online courses:

- EOSTATE Exposure OT Basic Operation
- Advanced EOSTATE Exposure OT
- Advanced Smart Fusion

11 Documentation

EOS provides a comprehensive end-user manual for each software application. The manuals are available as PDF-documents and (partially) as integrated online documentation within the products themselves.

The documentation is available in English and German. The PDF documentation can be downloaded from myEOS.

12 EOS APIs for Developers and EOS Developer Network

EOS is committed to an open software architecture and offers many different software interfaces (API).

There is an API for the following software:

- EOSPRINT SDK (available through EOS Build+ Plan) – please request the EOSPRINT SDK including the PDF documentation at edn@eos.info
- EOSCONNECT Core: OPC/UA and MQTT interface to communicate with the machines.

For more information and details about the APIs for developers please contact: edn@eos.info

EOS Developer Network

To provide developer support and grant access to virtual machines for development and testing, EOS runs the "EOS Developer Network" (EDN). The EDN membership has a yearly membership fee. For details contact edn@eos.info.

13 Virtualization Policy

Many organizations have adopted virtualization practices to keep up with rapidly changing hardware and software requirements. You need fewer physical machines and can pool computer resources. Check the system requirements of your software to be sure it will run in a virtual environment.

EOS Plans allow some form of virtualization. IT Managers can deploy software so that an assigned user can access it from multiple devices, but only one authorized user can access a single license at a time. Named user subscription requires users to sign in to authorize their software access. If your virtual environment does not retain the user's MAC address on restart, the user will be required to sign into every session to access their software.

Network License Servers: You can virtualize the licenses server (WIBU Control Center). Please be aware that a license server can only be virtualized by using EOS Soft Dongle. If you are using EOS USB dongles on your server, please contact EOS to migrate to EOS Soft Dongle.

14 EXHIBIT A – Feature Comparison of Inactive EOS Build, EOS Build and EOS Build+

	EOS Build inactive	EOS Build	EOS Build+
EOS STANDARD material sets	1 material only	✓	✓
EOS ADVANCED material sets Technical: Use a feature that is only usable in Build+ Newer high productive and/or application specific material sets: e.g. low angle buildability optimized, etc.	x	x	✓
Material Set Upgrades	x	✓	✓
Software Upgrades	x	✓	✓
EOSPRINT Users	1	3	10
Access to EOSPRINT and Additive Manufacturing Training	x	New to Industrial 3D Printing Learning Path EOSPRINT Online Training	New to Industrial 3D Printing Learning Path EOSPRINT Online Training Parameter Editor Training

EOSPRINT

	EOS Build inactive	EOS Build	EOS Build+
Process Settings			
RECOATING	✓	✓	✓
RECIRCULATING FILTER SYSTEM	✓	✓	✓
PLATFORM: Platform Temperature	✓	✓	✓
Part specific hatching	✓	✓	✓
DISPENSER	✓	✓	✓
Shrinkage and beam offset Compensation incl. Upload Finetuning	✓	✓	✓
PLATFORM: First Layer	x	✓	✓
EXPOSURE	x	✓	✓
Parameter Editor: Basic Editing Features			
Use all Exposure Types	x	✓	✓
Use all Exposure Patterns	x	✓	✓
Energy Input: Laser Power, Scan Speed, Hatch Distance for all Exposure Types	x	✓	✓
Hatch Option e.g. Hatch Rotation angle,	x	✓	✓

Hatch offset, ..			
Others: Thickness, Corridor	x	✓	✓
Manual Laser Assignment	x	✓	✓
Build Settings	x	✓	✓
Overlap Settings	x	✓	✓
Min Exposure Time	x	✓	✓
Configure first layer	x	✓	✓
Load Balancing (EOS M 300)	x	✓	✓
Skin Core Exposure	x	✓	✓
Smart Fusion	x	✓	✓
Parameter Editor: Advanced Process Features			
Vector Shifting	x	x	✓
Layer Skipping in Core (Skin/Core)	x	x	✓
Change Layer thickness	x	x	✓
Time Optimized Support & Contour (reduced jumps)	x	x	✓
Contour Corridor	x	x	✓
Energy Input Homogenization (Min Vector Time, Power Reduction)	x	x	✓
Laser Center Dependent Scanning Strategy (LCDS)	x	x	✓
Change Edge Definition (Edge Offset, Edge Factor, Threshold, Min Radius Factor)	x	x	✓
Pulsed Wave Emission	x	x	✓
Defocus (M290)	x	x	✓
Skywriting, Flow Optimization (stripes against the flow), Double exposure	x	x	✓
Premium Features:	x	x	✓
Advanced Preview (animated scan paths, jump visualization etc.)	x	x	✓
Visualization of Laser Utilization (exposure time per layer)	x	x	✓
Detailed Exposure Time per Layer	x	x	✓
Protected Printing (second dongle will be provided)	x	x	✓
EOSPRINT Server (BETA)	x	x	✓
EOSPRINT SDK for automation purposes	x	x	✓ (EDN optional)
Material Set Cloud (synchronize & share material sets)	x	✓	✓

EOS material sets

EOS system	EOS Material Set	EOS Build inactive	EOS Build	EOS Build+	date
EOS M 290	1.2709_040_HiPerM291_101	selectable	✔	✔	June 2023
EOS M 290	17-4PH_020_FlexM291_101	selectable	✔	✔	June 2023
EOS M 290	17-4PH_040_StainlessM291_101	selectable	✔	✔	June 2023
EOS M 290	20MnCr5_040_CoreM291_102	selectable	✔	✔	June 2023
EOS M 290	254_040_CoreM291_101	selectable	✔	✔	June 2023
EOS M 290	254_060_CoreM291_101	selectable	✔	✔	June 2023
EOS M 290	316LVPro_060_HiProM291_101	selectable	✔	✔	June 2023
EOS M 290	316L_020_SurfaceM291_111	selectable	✔	✔	June 2023
EOS M 290	316L_040_080_CoreM291_120	selectable	✔	✔	June 2023
EOS M 290	316L_040_FlexM291_110	selectable	✔	✔	June 2023
EOS M 290	Al2139AM_060_CoreM291_111	selectable	✔	✔	June 2023
EOS M 290	AlF357_030_M291_101	selectable	✔	✔	June 2023
EOS M 290	AlSi10Mg_030_FlexM291_202	selectable	✔	✔	June 2023
EOS M 290	AlSi10Mg_060_CoreM291_101	selectable	✔	✔	June 2023
EOS M 290	Cu_020_CoreM291_103	selectable	✔	✔	June 2023
EOS M 290	CX_030_HiPerM291_101	selectable	✔	✔	June 2023
EOS M 290	HX_020_SurfaceM291_111	selectable	✔	✔	June 2023
EOS M 290	HX_040_PerformanceM291_214	selectable	✔	✔	June 2023
EOS M 290	IN625_020_SurfaceM291_101	selectable	✔	✔	June 2023
EOS M 290	IN625_040_PerformanceM291_111	selectable	✔	✔	June 2023
EOS M 290	IN625_040_PerformanceM291_201	selectable	✔	✔	June 2023
EOS M 290	IN718_020_SurfaceM291_101	selectable	✔	✔	June 2023
EOS M 290	IN718_040_PerformanceM291_212	selectable	✔	✔	June 2023
EOS M 290	IN939_040_HiPerM291_101	selectable	✔	✔	June 2023
EOS M 290	MP1_020_SurfaceM291_101	selectable	✔	✔	June 2023
EOS M 290	MP1_040_PerformanceM291_111	selectable	✔	✔	June 2023
EOS M 290	MS1_020_SurfaceM291_101	selectable	✔	✔	June 2023
EOS M 290	MS1_040_PerformanceM291_201	selectable	✔	✔	June 2023
EOS M 290	MS1_050_SpeedM291_201	selectable	✔	✔	June 2023
EOS M 290	PH1_020_SurfaceM291_202	selectable	✔	✔	June 2023
EOS M 290	Ti64ELI_030_PerformanceM291_111	selectable	✔	✔	June 2023
EOS M 290	Ti64Grade23_040_HiPerM291_101	selectable	✔	✔	June 2023
EOS M 290	Ti64Grade23_080_CoreM291_101	selectable	✔	✔	June 2023
EOS M 290	Ti64Grade5_040_HiPerM291_101	selectable	✔	✔	June 2023

EOS system	EOS Material Set	EOS Build inactive	EOS Build	EOS Build+	date
EOS M 290	Ti64Grade5_080_CoreM291_101	selectable	✓	✓	June 2023
EOS M 290	Ti64_030_PerformanceM291_111	selectable	✓	✓	June 2023
EOS M 290	Ti64_060_SpeedM291_111	selectable	✓	✓	June 2023
EOS M 290	TiCP_030_FlexM291_101	selectable	✓	✓	June 2023
EOS M 300-4	17-4PH_040_CoreM304_101	selectable	✓	✓	June 2023
EOS M 300-4	316L 40µm M300-4	selectable	✓	✓	June 2023
EOS M 300-4	AlSi10Mg_060_CoreM304_104	selectable	✓	✓	June 2023
EOS M 300-4	IN625_040_CoreM304_101	selectable	✓	✓	June 2023
EOS M 300-4	IN718_040_CoreM304_103	selectable	✓	✓	June 2023
EOS M 300-4	MS1_050_CoreM304_103	selectable	✓	✓	June 2023
EOS M 300-4	Ti64_060_CoreM304_103	selectable	✓	✓	June 2023
EOS M 400	AlF357_060_FlexM400_102	selectable	✓	✓	June 2023
EOS M 400	AlSi10Mg_090_FlexM400_103	selectable	✓	✓	June 2023
EOS M 400	CuCrZr_080_CoreM400_102	selectable	✓	✓	June 2023
EOS M 400	IN718_040_FlexM400_113	selectable	✓	✓	June 2023
EOS M 400	MS1_050_FlexM400_101	selectable	✓	✓	June 2023
EOS M 400	Ti64ELI_030_FlexM400_101	selectable	✓	✓	June 2023
EOS M 400	Ti64_030_FlexM400_101	selectable	✓	✓	June 2023
EOS M 400	316L 040 080 CoreM400 1.00	selectable	✓	✓	June 2023
EOS M 400-4	20MnCr5_040_CoreM404_102	selectable	✓	✓	June 2023
EOS M 400-4	316L_040_080_CoreM404_122	selectable	✓	✓	June 2023
EOS M 400-4	316L_040_FlexM404_102	selectable	✓	✓	June 2023
EOS M 400-4	Al2139AM_050_CoreM404_101	selectable	✓	✓	June 2023
EOS M 400-4	AlSi10MgAr_040_CoreM404_103	selectable	✓	✓	June 2023
EOS M 400-4	AlSi10Mg_030_FlexM404_102	selectable	✓	✓	June 2023
EOS M 400-4	AlSi10Mg_080_HiProM404_102	selectable	✓	✓	June 2023
EOS M 400-4	HX_040_FlexM404_112	selectable	✓	✓	June 2023
EOS M 400-4	IN718_040_FlexM404_112	selectable	✓	✓	June 2023
EOS M 400-4	IN939_040_CoreM404_102	selectable	✓	✓	June 2023
EOS M 400-4	MS1_040_FlexM404_102	selectable	✓	✓	June 2023
EOS M 400-4	Ti64Grade23_040_080_CoreM404_103	selectable	✓	✓	June 2023
EOS M 400-4	Ti64Grade5_040_080_CoreM404_103	selectable	✓	✓	June 2023
EOS M 400-4	Ti64_060_FlexM404_102	selectable	✓	✓	June 2023
EOS M 400-4	TiCP_030_FlexM404_102	selectable	✓	✓	June 2023

EOS M 290	CM55_Ar_040_080_CoreM291_101	x	40µm only	✓	June 2023
EOS M 290	CM55_N2_040_080_CoreM291_101	x	40µm only	✓	June 2023
EOS M 290	Haynes282_040_080_CoreM291_102	x	40µm only	✓	June 2023
EOS M 290	IN718 040 080 HiProM291 1.00	x	x	✓	June 2023
EOS M 290	SuperDuplex_040_080_CoreM291_110	x	40µm only	✓	June 2023
EOS M 300-4	IN718 80 µm HiPro M300-4	x	x	✓	June 2023
EOS M 400-4	Haynes282_040_080_CoreM404_101	x	40µm only	✓	June 2023
EOS M 400-4	IN718_040_080_HiProM404_101	x	x	✓	June 2023

15 EXHIBIT B – Feature Comparison of Inactive EOS Smart Monitoring and EOS Smart Monitoring

EOS Smart Monitoring Plan

	EOS Smart Monitoring inactive	EOS Smart Monitoring
Hardware		
High-resolution camera for the near-infrared range, incl. optics	✓	✓
EOS M 300-4, EOS M 400-4 Integrated system computer (Monitoring IPC) for data processing	✓	✓
EOS M 290 Monitoring-IPC is placed in a separate control terminal besides the machine	✓	✓
EOSTATE Exposure OT Software		
Software Use Cases		
Online Use Case EOSTATE Exposure OT Software, Database and System Service on the Monitoring-IPC for image acquisition, data collection, storage and analytics calculations	✓	✓
Offline Use Case EOSTATE Exposure OT Software and Database are installed on a local PC for data storage and analytics calculations (No connection to a Machine/Monitoring System needed)	✓	✓
Remote Use Case EOSTATE Exposure OT Software, Database and System Service on the Monitoring-IPC for image acquisition, data collection, storage and analytics calculations. EOSTATE Exposure OT Software is also installed on a local PC to connect with a Machine/Monitoring System	✓	✓
Parallel installation of several software versions	✓	✓
Base functionality and Job Handling		
Live View of progress during acquisition and display of completely acquired monitoring images as well as irregularities in the current or the last building task (Remote Use Case and Online Use Case)	✓	✓

Check the acquisition state (data storage, background service and sensor	✓	✓
Record OT images during a build job	✓	✓
Build jobs with Smart Fusion	x	✓
Import/Export of acquisition data as an *.eosot file for local analysis	✓	✓
Export single or of all images as *.raw (uncalibrated) or *.TIFF	✓	✓
Setting Channels ("integral gray value", "Maximum gray value", "Smart Fusion")	✓	✓

Setting different color maps for optimal visualization

Loading and display of the acquisition data for a completed building task	✓	✓
Automatically exporting monitoring data	✓	✓
Deletion of data records acquired	✓	✓
Addition and editing of comments	✓	✓
Parallel installation of several software versions	✓	✓

Analysis

Various analysis operation are available:

- Three different Indications Detectors for detecting hotspots or coldspots
- A Part Statistic operation enables graphical representation and comparison of the gray values and anomalies of the parts built in a job.

Create and change analysis profiles	✓	✓
Changing and approval of analysis parameters	✓	✓
Apply analysis profiles to recorded jobs (offline analyses)	✓	✓
Apply analysis profile to a running job	✓	✓
Searching and categorization of irregularities and anomalies identified	✓	✓
Export part statistics & indications for subsequent processing as a *.csv file	✓	✓

Calibration

Calculation and activation/deactivation of geometric corrections	✓	✓
Verify geometric correction	✓	✓
Calculation and activation/deactivation of process intensity corrections (only EOS M 290)	✓	✓

Settings

Change credentials	✓	✓
Changing Language (English, German)	✓	✓
Changing Machine Connection/Database Connection	✓	✓
Define Storage Limits	✓	✓

Database Maintenance via Customer Tools (Scripts)

Database Management (create, remove, backup and restore)	✓	✓
Database backup (system database only)	✓	✓
Uninstall database server	✓	✓
Database update (system database only)	✓	✓

Training & Consulting		
Basic OT Operation E-Learning (1 seat M 290, 2 seats M 300-4, M 400-4)	x	✓
Advanced OT E-Learning (1 seat M 290, 2 seats M 300-4, M 400-4)	x	✓
Advanced Smart Fusion E-Learning (1 seat M 290, 2 seats M 300-4, M 400-4)	x	✓
Expert Session OT (4 hours)	x	✓
Expert Session Smart Fusion (4 hours)	x	✓

16 EXHIBIT C – Feature Comparison of Inactive EOS Data Insights and EOS Data Insights

EOS Data Insights Plan

	EOS Data Insights Inactive (on-prem)	EOS Data Insights (on-prem)	EOS Data Insights (SaaS)
EOS Hub – Platform features			
Open API	✓	✓	x
User permission management	✓	✓	✓
Machine specific permission management	✓	✓	x
Get notifications in the app or as email	x	✓	✓
Installation support	x	✓	x
Language selection, German, English	✓	✓	✓
Automatic logout after inactivity	✓	✓	✓
Web based application – only a web browser is required	✓	✓	✓
UI optimized for desktop, mobile, tablet	✓	✓	✓
EOS Hub - Machine State			
Overview of multiple systems M 290, M 300-4, M 400-4, P 396, P 500, P 770 are supported	✓	✓	✓
Display machine information (type, SI number, loaded material)	✓	✓	✓
Display current job status with remaining build time	✓	✓	✓
Remote control machines (pause, stop, resume jobs)	✓	✓	✓

Display user messages (search and filter)	✓	✓	✓
Get notified on certain user messages	✓	✓	✓
Display last jobs built on the machine (search and filter)	✓	✓	✓
Define limits for sensor values	✓	✓	✓
Display measured and calculated data in real time as a list or as graphs	✓	✓	✓
Get notified when a measured or calculated value exceeds limits	✓	✓	✓
Layer Information (including PowderBed images)	✓	✓	✓
Analytics to check if recoating was OK	✓	✓	x
EOS Hub - Machine Performance			
Overview of multiple systems	✓	✓	✓
Details on the utilization of a single machine and a machine park	x	✓	✓
Display availability of a single machine and a machine park	x	✓	✓
Change the time span to measure	x	✓	✓
Manually edit the machine states	x	✓	✓