EOS SOFTWARE PLANS

Software and Processes for EOS Systems

EOS Plans

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EOS offers a complete solution for additive manufacturing: industrial 3D printers 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 processes for first-time-right exposure, 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.

Per Site _____   Per System _____

EOS Build

Assigning and optimization of process parameters including ready to use EOS Materials Sets

3x EOSPRINT with Parameter Editor

EOS Standard material sets

EOSPRINT Training

EOS Smart Monitoring

Quality assurance and automatic process control to push the limits of AM

Exposure OT*

Smart Fusion

E-Learning & Expert Sessions

EOS Data Insights

Apps to manage and optimize a machine park

Platform and Apps, on-prem & cloud

EOS Build +

10x EOSPRINT

Advance Algorithms

EOS Advanced materials sets

EOSPRINT Parameter Editor Training

Why an annual plan or subscription?

Flat rate of EOS material sets with predictable costs

EOS Plans provide customers with flexible access to all available EOS material sets, without the need to commit and stick to a single material. This material sets flat rate empowers customers to quickly adapt to changing market requirements, without incurring additional investments.

Flexibility is the key

The EOS Plans' pay-per-usage model offers exceptional flexibility in tailoring software usage to match your production requirements on a yearly base. This results in a cost-efficient, adaptable, and predictable method of accessing precisely what you need.

Pay per usage

EOS Build/Build+ and EOS Data Insights require only a one-year commitment to enjoy their various advantages, while EOS Smart Monitoring has a two-year minimum. After the initial period passes, customers can renew or switch to "inactive" mode if they need to scale down. Some core functions of each plan will still be available to inactive customers, who can resume whenever they wish.

Shift costs from CAPEX to OPEX

The subscription model of EOS Plans frees customers from the rigidity of a "perpetual," prepaid-license purchase structure requiring a high upfront investment. Users pay a fixed subscription fee, which allows easier budgeting due to its predictability. It also shifts this cost from a capital expense (CAPEX) to an operating expense (OPEX), which make the budget planning much easier.

Latest innovations and training included

Meanwhile, regular updates to the software keep its functionality at the leading edge and facilitate AM innovation. Additionally, the included training resources ensure that your engineers can always build — or expand — their AM knowledge.

EOS Build and EOS Build+

EOS Build delivers the key features of the data preparation and job optimization software EOSPRINT. Multiple users can optimize process parameters and manage material usage across the organization. The Plans provide customers with flexible flat rate access to all available validated and proven EOS material sets. Build+, in addition to more licenses, includes advanced EOS material sets and exposure algorithms. EOS Build and Build+ are licensed per site, which means you purchase it once for the entire machine park.

Key features of EOS Build

3 licenses of EOSPRINT (per site)

Regular software updates with innovative features

Parameter editing capabilities allow customers to optimize parameters to create high-quality parts and increase productivity (e.g., laser power, scan speed, hatch distance, laser assignment, minimum exposure time, layer thickness, load balancing for the EOS M 300)

Validated, high-quality EOS material sets for the M 290, M 300-4, M 400 and M 400-4

material set Management to track and manage material sets across your organization

AM and EOSPRINT training access (for up to 5 users)

Additional features of EOS Build+

Altogether 10 licenses of EOSPRINT (per site)

EOS advanced material sets, including- the newest 80μm high-productivity processes and material sets with low-angle buildability options; all designed for optimized performance in the first run

Advanced exposure algorithms including Pulsed Wave Emission and Laser Centered Dependent Exposure Strategy (LCDS), to achieve precise and consistent results

Advanced previewing and visualization capabilities

EOSPRINT Parameter Editor training (for up to 5 users),

EOSPRINT Software Development Kit (SDK) for automation purposes

EOS Smart Monitoring*

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.

- 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

- 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: A Game-Changer in Additive Manufacturing. 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.

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*requires an active Build/Build+ Plan

EOS Data Insights

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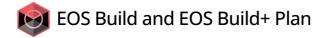
- EOS Hub- the Big-Picture View platform: Through its open API, other software types (MES, CAQ, ERP, IIoT) can easily integrate with EOS machine data via a single interface.

- 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 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.

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*requires EOS Systems Suite or EOSCONNECT Core and EOSTATE PowderBed

EOS Software Plans

Comparison sheets

EOS Build and EOS Build+ Plan

	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, Hatch offset, ..	x	✓	✓

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 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 system	EOS Material Set				
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 system	EOS Material Set	EOS Build inactive	EOS Build	EOS Build+	date
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

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	✓

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	✓	✓

EOS System Suite

	EOS M 290	**EOS M 300-4** **EOS M 400** EOS M 400-4 EOS P 500	**EOS P 396** EOS P 770
Print Domain Machine License			
Ability to share process parameters within the machine park	✓	✓	x
EOSTATE PowderBed Imaging			
Record images of the powder bed before and after recoating	✓	✓	x
Live view	✓	✓	x
Save images as RAW, TIFF, JPEG	✓	✓	x
Save images as video (MPEG4)	✓	✓	x
Manage job images (import, export, delete)	✓	✓	x
User & role Management	✓	✓	x
Changing Language (English, German)	✓	✓	x
Remote connection to a machine	✓	✓	x
EOSTATE Quality Reports			
Job quality & part quality report as PDF	✓	✓	✓
Automated export of reports (via EOSCONNECT Core)	✓	✓	✓
User & role Management	✓	✓	✓
Language Selection (English, German)	✓	✓	✓
EOSCONNECT Core			
Access to machine data via OPC UA	✓	✓	✓
Access to machine data via MQTT	✓	✓	✓
Access to machine data via Web API	✓	✓	✓
EOSCONNECT Core Control			
Control a job via OPC UA (Start/Stop/Pause)	✓ (stop & pause)	✓ (start needs docking station)	x
Load and unload an exchange frame	x	✓ (needs docking station)	x
EOS Hub			
Data Insights Plan (on-prem)*	✓	✓	✓
1 year trial Data Insights Plan (SaaS) - Free of charge	✓	✓	✓

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*functionality according to an inactive EOS Data Insights Plan (on-prem)