

2021 PRICELIST FOR GENERAL EUROPRACTICE MPW RUNS

Prices are valid for General EUROPRACTICE MPW runs from 1 January 2021.
Prices and conditions are subject to modification at any time without prior notice.

Discounted price

Three conditions for discounted prices:

- ▶ A customer represents an academic institution or a research facility from one of the 28 EU countries together with Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Georgia, Iceland, Israel, Liechtenstein, North Macedonia, Moldova, Montenegro, Norway, Russia, Switzerland, Turkey, Serbia and Ukraine.
- ▶ A customer is a registered EUROPRACTICE member who has paid the Full-IC annual membership fee.
- ▶ The intended design will be done for educational purposes or for publicly funded research.

Standard price

Standard prices apply to all other customers.

Number of prototypes

ams: 40 samples
GLOBALFOUNDRIES: 50
IHP: 40 for SG25 & SG13;
 25 using TSV module, PIC & EPIC
ON Semi: 30
TSMC: 8-inch: 40; 12-inch: 100
UMC: 50
X-FAB: 50

CORNERSTONE: 10
imec Si-Photonics Passives+ and iSiPP50G: 20 for 1 block or larger
 10 for half block or smaller
imec SiN-Photonics: 20
imec GaN-IC on SOI: 40 (from June 2021)
LNX TriPleX VIS and I550: 4
LNX TriPleX 850: 20
MEMSCAP: 15

If you need more prototype samples, please contact us for a quotation.

Packaging

Prices are given for the delivery of unpackaged, untested prototypes. Encapsulation and testing will be charged separately.

See separate prices and available packages on europractice-ic.com/schedules-prices/

ams

Technology	Standard EUR / mm ²	Discounted EUR / mm ²
ams 0.35μ CMOS C35B4C3 4M/2P/HR/5V IO	640 ¹	580 ¹
ams 0.35μ CMOS C35OPTO 4M/2P/5V IO	800 ²	700 ²
ams 0.35μ HV CMOS H35B4D3 120V 4M	880 ¹	800 ¹
ams 0.35μ SiGe-BiCMOS S35D4M5 / CMOS-RF C35B4M3 4M/4PThick MET4 - MIM	880 ¹	800 ¹

Important notes: ¹ Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 7mm²

² Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 20mm²

EM Microelectronic

Technology	Standard EUR / mm ²	Discount EUR / project
0.18μm CMOS EMALPC18 logic (Area ≤ 5 mm ² with min charge of 2.25 mm ²)	1,950	600
0.18μm CMOS EMALPC18 logic (Area > 5mm ²)	9,750+[(Area-5) x 1,250]	600

Important notes: Area = X*Y including seal ring.

Technology	Standard EUR / mm ²	Discounted EUR / mm ²
GLOBALFOUNDRIES SiGe 8XP	4,200	4,000
GLOBALFOUNDRIES 130 nm BCDlite	1,500	1,400
GLOBALFOUNDRIES 130 nm LP	1,500	1,400
GLOBALFOUNDRIES 55 nm LPe-RF/LPx-NVM	4000	3,800
GLOBALFOUNDRIES 45RF SOI	7,350	7,000
GLOBALFOUNDRIES 40 nm LP/LP-RF/RF-mmVWave	5,000	4,700
GLOBALFOUNDRIES 28 nm SLPe	10,200	9,700
GLOBALFOUNDRIES 22 nm FDSOI	14,000	13,200
GLOBALFOUNDRIES 12 nm LP+	26,000	25,000

Important notes: Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 9mm². Any edge length between 1.0mm to 11mm is possible. The mentioned die size is referred to the Pre-Shrink die size.

IHP

Technology	Standard EUR / mm ²	Discounted EUR / mm ²
IHP SGB25V 0.25μ SiGe:C Bipolar/Analog, Ft/Fmax= 75/95GHz, 5M/MIM, breakdown voltages up to 7V	2,500 ¹	2,125 ¹
IHP SG25H3 0.25μ SiGe:C Bipolar/Analog, Ft/Fmax= 110/180GHz, 5M/MIM, breakdown voltages up to 7V	3,800 ¹	3,230 ¹
SG25H5_EPIC Bipolar/Analog, Ft/Fmax= 250/300GHz, 7M/MIM + Photonics	8,000 ¹	6,800 ¹
IHP SG25 PIC (Photonics, Ge Photo-diode, BEOL)	3,800 ¹	3,230 ¹
IHP SG13S SiGe:C Bipolar/Analog, Ft/Fmax= 250/300GHz, 7M/MIM + optional TSV	6,300 ¹	5,355 ¹
IHP SG13C SiGe:C CMOS 7M/MIM	4,500 ¹	3,825 ¹
IHP SG13G2 SiGe:C Bipolar/Analog, Ft/Fmax= 300/500GHz, 7M/MIM + optional TSV	7,300 ¹	6,205 ¹
IHP SG13G2Cu FEOL process SG13G2 together with Cu BEOL option	7,000 ¹	5,950 ¹
IHP SG13SCu FEOL process SG13S together with Cu BEOL option	6,100 ¹	5,185 ¹
IHP BEOL SG13 (M1 and Metal Layers Above) + optional LBE or TSV	1,000 ¹	850 ¹

IHP Special Services

Bumping (available for all IHP technologies)	6,500 ²	6,500 ²
Localized Back side Etching (available for all IHP technologies) not offered for EPIC/PIC runs	5,000 ²	4,250 ²
TSV to ground (SG13)	7,500	7,500
Cu Pillar	18,500 ²	18,500 ²

Important notes: ¹ Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 0.8mm². The chip area is inclusive of the filler cells outside the seal ring.
² One-off fee

Technology	Standard EUR / mm ²	Discounted EUR / mm ²
ON Semi 0.7μ C07M-D 2M/IP	300 ¹	270 ¹
ON Semi 0.7μ C07M-A 2M/IP/PdiffC/HR	350 ¹	315 ¹
ON Semi 0.7μ C07M-I2T100 100V - 2M	525 ²	485 ²
ON Semi 0.7μ C07M-I2T100 100V - 3M	560 ²	525 ²
ON Semi 0.5μ CMOS EEPROM C5F & C5N – 200 mm	1,150 ¹	1,100 ¹
ON Semi 0.35μ C035U 4M (default) including analog options	720 ²	670 ²
ON Semi 0.35μ C035U 3M (optional) including analog options	700 ²	650 ²
ON Semi 0.35μ C035U 5M (optional) including analog options	800 ²	750 ²
ON Semi 0.35μ C035 - I3T80U 80V 3M	850 ²	800 ²
ON Semi 0.35μ C035 - I3T80U 80V 4M	925 ²	875 ²
ON Semi 0.35μ C035 - I3T80U 80V 5M	1,050 ²	995 ²
ON Semi 0.35μ C035 - I3T50U (or E) 50V 3M	850 ²	800 ²
ON Semi 0.35μ C035 - I3T50U (or E) 50V 4M	925 ²	875 ²
ON Semi 0.35μ C035 - I3T50U (or E) 50V 5M	1,050 ²	995 ²
ON Semi 0.35μ C035 – I3T25U 3.3/25V 3M (optional)	750 ²	700 ²
ON Semi 0.35μ C035 – I3T25U 3.3/25V 4M (default)	770 ²	720 ²
ON Semi 0.35μ C035 – I3T25U 3.3/25V 5M (optional)	800 ²	750 ²
ONC18MS 0.18 μm - 1.8/3.3V - 15V DMOS - 5LM - MiMC - ESD - HiR - EPI	1,100 ²	1,050 ²
ONC18MS-LL (=ONC18MS + High Vt)	1,225 ²	1,195 ²
ONC18HPA (= ONC18MS + DNW + Zener + Stacked MiMC + Native Dev + Schottky)	1,350 ²	1,290 ²
ON 0.18 μm I4T 40/75V - 5LM – DTI (=ONC18MS + 30V + 45V + 70V DMOS)	1,540 ²	1,480 ²

Important notes: ¹ Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 5mm².
² Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 10mm².

Technology ¹	Standard EUR / mm ²	Discount EUR / project
ST 28nm CMOS28FDSOI	9,000 ^{2,7} 18,000+[(Area-2) x 6,750] ⁵	1,500
ST 55nm BiCMOS055	5,500 ² 11,000+[(Area-2) x 4,250] ⁵	1,200
ST 65nm CMOS065	4,500 ³ 22,500+[(Area-5) x 3,750] ⁶	1,200
ST 130nm BiCMOS9MW	2,600 ³ 13,000+[(Area-5) x 2,200] ⁶	1,000
ST 130nm H9SOI-FEM	2,200 ³ 11,000+[(Area-5) x 1,500] ⁶	700
ST 130nm HCMOS9GP	2,500 ³ 12,500+[(Area-5) x 2,200] ⁶	700
ST 130nm HCMOS9A	2,500 ³ 12,500+[(Area-5) x 2,200] ⁶	700
ST 0.16μm BCD8sP	2,500 ⁴ 12,500+[(Area-5) x 2,200] ⁶	1,000
ST 0.16μm BCD8s-SOI	2,500 ⁴ 12,500+[(Area-5) x 2,200] ⁶	1,000

STMicroelectronics Wafer Level Bumping

on 300mm ST 55nm BiCMOS055 process	25,000 ⁸	1,500 ⁸
on 300mm ST 65nm CMOS065	23,000 ⁸	1,500 ⁸
on 300mm ST 28nm CMOS28FDSOI	33,000 ⁸	1,500 ⁸

Important notes: ¹ Area = X*Y including seal ring.
² Price for Area ≤ 2mm² with minimum charge of 1.25mm².
³ Price for Area ≤ 5mm² with minimum charge of 1.25mm².
⁴ Price for Area ≤ 5mm² with minimum charge of 3.43mm².
⁵ Price for 2mm² ≤ Area ≤ 10mm². Contact CMP when Area is larger.
⁶ Price for 5mm² ≤ Area ≤ 15mm². Contact CMP when Area is larger.
⁷ Special additional discount for CNRS Institutions: 1500 €/project.
⁸ Prices per project.

Prices for all TSMC technologies can be calculated through the online Price Request Form <http://europractice-ic.com/requests/tsmc-price-request/>. When 4 or more independent sub-designs are registered in one MPW submission to optimise the minimum charged area, an additional verification charge of 1,000 USD is applicable. This is regardless of the request and charges for sub die sawing (5 USD per additional die obtained from the base MPW submission).

UMC

Technology	Standard EUR / block	Discounted EUR / block
UMC LI80 Logic GII, Mixed-Mode/RF	13,400 ¹	12,740 ¹
UMC LI80 EFLASH Logic GII	17,000 ¹	16,160 ¹
UMC LI30 Logic/Mixed-Mode/RF	22,300 ¹	21,200 ¹
UMC LI10AE Logic/Mixed-Mode/RF	24,600 ¹	23,380 ¹
UMC L65nm Logic, Mixed-Mode/ RF – LL/SP	35,350 ²	33,600 ²
UMC 40N Logic/Mixed-Mode – LP	68,450 ²	65,040 ²
UMC 28N Logic/ Mixed-Mode – HPC	On request. Please, contact epumc@imec.be	

Important notes: ¹ Price = per block of 5mm x 5mm needed to fit the design in.
² Price = per block of 4mm x 4mm needed to fit the design in.

X-FAB

Technology	Standard EUR / mm ²	Discounted EUR / mm ²
X-FAB XH018 0.18µ HV NVM CMOS E-FLASH (MET3, MET4, METMID, MET-THK)	1,605	1,525
X-FAB XT018 0.18µ HV SOI CMOS (MET3, MET4, METMID, METTHK)	1,635	1,555
X-FAB XS018 0.18µ OPTO (MET3, MET4, MET5, METMID)	1,375	1,310
X-FAB XP018 0.18µ NVM CMOS (MET3, MET4, METMID, METTHK)	1,415	1,345
X-FAB XH035 0.35µ HV CMOS (MET4)	1,035	985
X-FAB XR013 0.13µ RF SOI CMOS (METRB, METBQ)	1,830	1,745
X-FAB XR013 0.13µ RF SOI CMOS (METTHK I, METRB, METRQ)	2,280	2,165
XMB10 MEMS	10,500 ¹	9,800 ¹

Important notes: Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 10mm².
 Area will be rounded upwards to the next mm² (for instance, 12.24mm² will be charged as 13mm²).
 Backgrinding is not always possible and an additional cost might apply.
¹ The price includes delivery of 5 dies with maximum size per die of 10mm². Additional dies can be purchased for 10EUR/die (50 dies maximum).

AMF Si-Photonics

Options	Standard EUR / mm ²	Discount EUR / project
Area = 3mm x 4mm	15,600	900
Area = 3mm x 8mm	20,100	900
Area = 6mm x 8mm	37,900	900
Area = 3mm x 16mm	37,900	900

Important notes: Area = X*Y including seal ring.

CEA-LETI Si-Photonics Si310-PHMP2M

Options	Standard EUR / mm ²	Discount EUR / project
Silicon Photonics Si-220	760 ¹	680
Silicon Photonics Si-310	1,600 ¹	1,400
Silicon Photonics Si-310 + SiN	1,920 ¹	1,700
Silicon Nitride Photonics Si ₃ N ₄	960 ¹	860

Important notes: Area = X*Y including seal ring.
¹ Minimum price is the charge for 10mm²

Options	Standard EUR	Discounted EUR
Half block - Passives only, all platforms (5.5mm x 4.9mm)	5,100	4,800
Full block - Passives only, all platforms (11.47mm x 4.9mm)	8,100	7,700
Half block - Passives with heaters, all platforms (5.5 x 4.9mm)	9,600	9,100
Full block - Passives with heaters, all platforms (11.47mm x 4.9mm)	14,000	13,300
Half block - Actives, 220nm SOI platform (5.5mm x 4.9mm)	25,000	23,750
Full block - Actives, 220nm SOI platform (11.47 x 4.9mm)	44,000	41,800
Extra Options		
Extra set of blocks – Passives (10 samples)	+2,200	+2,200
Extra set of blocks – Passives with heaters (10 samples)	+3,000	+3,000
Extra set of blocks – Actives (10 samples)	+5,000	+5,000

Important notes: Standard number of samples for all platforms is 10. If more prototypes are needed, please see Extra Options in the table above.

imec Si-Photonics Passives+

Options	Standard EUR	Discounted EUR
Half block - horizontal (5.15mm x 2.5mm) or vertical (2.5mm x 5.15mm)	6,100	5,800
1 block (5.15mm x 5.15mm)	11,600	11,000
2 blocks - horizontal (10.45mm x 5.15mm) or vertical (5.15mm x 10.45mm)	20,600	19,600
Larger sizes	Please, contact epsiphot@imec.be	
Extra Options		
Extra set of half block chips (10 samples)	+2,000	+2,000
Extra set of chips (1 block or larger; 20 samples)	+2,000	+2,000

Important notes: Imec Si-Photonics Passives technology is replaced by imec Si-Photonics Passives+ technology in 2019. Imec Si-photonics passives+ allows for metal heaters and edge-couplers, but its introduction also implies a few other changes to the offer. Existing users, please be cautious. Number of prototypes in base order depends on design size: 20 for 1 block or larger, 10 for half block or smaller. Due to the nature of MPW logistics, more chips than ordered may sometimes be shipped.

imec Si-Photonics iSiPP50G

Options	Standard EUR	Discounted EUR
Quarter block (2.5mm x 2.5mm)	10,000	9,500
Half block - horizontal (5.15mm x 2.5mm) or vertical (2.5mm x 5.15mm)	20,000	19,000
1 block (5.15mm x 5.15mm)	40,000	38,000
2 blocks - horizontal (10.45mm x 5.15mm) or vertical (5.15mm x 10.45mm)	80,000	76,000
4 blocks (10.45mm x 10.45mm)	150,000	142,500
Other sizes	Please, contact epsiphot@imec.be	
Extra Options		
Extra set of quarter block chips (10 samples)	+2,000	+2,000
Extra set of half block chips (10 samples)	+2,000	+2,000
Extra set of chips (1 block or larger; 20 samples)	+2,000	+2,000

Important notes: Number of prototypes in standard order depends on design size: 20 for 1 block or larger, 10 for half block or smaller. Due to the nature of MPW logistics, more chips than ordered may sometimes be shipped.

imec SiN-Photonics BioPIX 300 and 150

Options	Standard EUR	Discounted EUR
1 block (5.30mm x 4.75mm)	23,000	21,850
2 blocks - horizontal (10.75mm x 4.75mm)	46,000	43,700
2 blocks - vertical (5.30mm x 9.65mm)	46,000	43,700
4 blocks (10.75mm x 9.65mm)	92,000	87,400
Other sizes	Please, contact sinmpw@imec-int.com	

Extra Options

Extra set of chips (20 samples)	+1,000	+1,000
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Important notes: Number of prototypes in base order: 20 samples, for each design block registration irrespective of the block size.
Due to the nature of MPW logistics, more chips than ordered may sometimes be shipped.

imec GaN-IC on SOI 200V and 650V

Options	Standard EUR / block	Discounted EUR / block
Area = 2.5mm x 5.18mm*	15,000	14,200
Area = 5.18mm x 5.18mm	30,000	28,500
Area = 10.54mm x 5.18mm	60,000	57,000

Extra Options

Extra set of chips (40 samples)	+5,000	+5,000
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Important notes: Regular number of samples is 40 (Starting June 2021).
Due to the nature of MPW logistics, more chips than ordered may sometimes be shipped.
*This option is only available to academic institutions.

LioniX SiN-Photonics TriPleX

Options	Standard EUR	Discounted EUR
LNx TriPleX VIS (4 samples of 8mm x 24mm or 2 samples of 16mm x 24mm)	16,000	8,500 ¹
LNx TriPleX 1550 (4 samples of 16mm x 16mm or 8mm x 32mm)	16,000	8,500 ¹
LNx TriPleX 850 (20 samples of 5mm x 10 mm)	16,000	8,500 ¹

Important notes: For academic customers, the discount on the device manufacturing is offered on the condition that LioniX International will be co-author or acknowledged in the publications related to these devices.

MEMSCAP

Technology	Standard EUR / block	Discounted EUR / block
PolyMUMPs (10mm x 10mm), SOIMUMPs (11 mm x 11mm), PiezoMUMPs (11mm x 11mm)	3,700	3,500

Teem Photonics

Options	Standard EUR	Discount EUR
TP Glass-photonics IC ioNext-NIR (wafer)	9,100	950
TP Glass-photonics IC ioNext-NIR (half-wafer)	4,800	400
TP Glass-photonics IC ioNext-VIS (wafer)	9,100	950
TP Glass-photonics IC ioNext-VIS (half-wafer)	4,800	400
TP Glass-photonics IC WAFT	Please, contact CMP	

Options	Standard EUR	Discounted EUR / wafer
Single electrode layer stack (one 8-inch wafer)	On request ¹	1,100
Dual electrode layer stack (one 8-inch wafer)	On request ¹	1,250

Important notes: ¹ For Standard prices, please contact europpractice.gateway@tyndall.ie