

2021 PRICELIST FOR MINI@SIC 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

GLOBALFOUNDRIES: 25 samples
IHP: 40 samples SG25 & SG13,
 25 samples using TSV module, PIC & EPIC
ON Semi: > 20 samples
TSMC: 40 samples for 0.18 μ m,
 100 samples for 65nm and 28nm
UMC: 25 samples for 0.18 μ m and 0.13 μ m
 50 samples for 65nm
X-FAB: 50 samples

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 europpractice-ic.com/schedules-prices/

GLOBALFOUNDRIES

Technology	Standard EUR / block	Discounted EUR / block
GLOBALFOUNDRIES 130 nm BCDlite	5,900 ¹	4,900 ¹
GLOBALFOUNDRIES 45RFSOI	20,900 ²	17,900 ²
GLOBALFOUNDRIES 22 nm FDSOI	29,900 ³	24,900 ³

Important notes: ¹ Price = per block of 1750 μ m x 1750 μ m needed to fit the design in.
Adding two blocks together to one block is possible only with prior consultation.

² Price = per block of 1500 μ m x 1500 μ m needed to fit the design in.
Adding two blocks together to one block is possible only with prior consultation.

³ Price = per block of 1250 μ m x 1250 μ m needed to fit the design in.
Adding two blocks together to one block is possible only with prior consultation.

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	2,125 ^{1,2}	2,000 ^{1,3}
IHP SG25H3 0.25μ SiGe:C Bipolar/Analog, Ft/Fmax= 110/180GHz, 5M/MIM, breakdown voltages up to 7V	3,230 ^{1,2}	3,040 ^{1,3}
SG25H5_EPIC Bipolar/Analog, Ft/Fmax= 250/300GHz, 7M/MIM + Photonics	6,800 ^{1,2}	4,800 ^{1,3,5}
IHP SG25 PIC (Photonics, Ge Photo-diode, BEOL)	3,230 ^{1,2}	2,660 ^{1,3}
IHP SG13S SiGe:C Bipolar/Analog, Ft/Fmax= 250/300GHz, 7M/MIM + optional TSV	5,355 ^{1,2}	4,410 ^{1,3}
IHP SG13C SiGe:C CMOS 7M/MIM	3,825 ^{1,2}	3,600 ^{1,3}
IHP SG13G2 SiGe:C Bipolar/Analog, Ft/Fmax= 300/500GHz, 7M/MIM + optional TSV	6,205 ^{1,2}	5,110 ^{1,3}
IHP SG13G2Cu FEOL process SG13G2 together with Cu BEOL option	5,950 ^{1,2}	5,000 ^{1,3}
IHP SG13SCu FEOL process SG13S together with Cu BEOL option	5,185 ^{1,2}	4,360 ^{1,3}
IHP BEOL SG13 (M1 and Metal Layers Above) + optional LBE or TSV	850 ^{1,2}	800 ^{1,3}
IHP Special Services		
Bumping (available for all IHP technologies)	6,500 ^{2,4}	4,700 ^{3,4}
Localized Back side Etching (available for all IHP technologies) not offered for EPIC/PIC runs	4,250 ^{2,4}	2,500 ^{3,4}
TSV to ground (SG13)	6,375	4,500
Cu Pillar	13,500 ^{2,4}	10,000 ^{3,4}

- 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 Price for designs created for educational purposes or publicly funded research for **non-EU countries**.
³ Price for designs created for educational purposes or publicly funded research for the **EU countries**.
⁴ One-off fee.
⁵ Special introductory price.

ON Semiconductor

Technology	Standard EUR / mm ²	Discounted EUR / mm ²
ON Semi 0.7μ C07M-D 2M/IP	300	270
ON Semi 0.7μ C07M-A 2M/IP/PdiffC/HR	350	315
ON Semi 0.7μ C07M-I2T100 100V - 2M	525	485
ON Semi 0.7μ C07M-I2T100 100V - 3M	560	525
ON Semi 0.35μ C035U 4M (default) including analog options	720	670
ON Semi 0.35μ C035U 3M (optional) including analog options	700	650
ON Semi 0.35μ C035U 5M (optional) including analog options	800	750
ON Semi 0.35μ C035 - I3T80U 80V 3M	850	800
ON Semi 0.35μ C035 - I3T80U 80V 4M	925	875
ON Semi 0.35μ C035 - I3T80U 80V 5M	1,050	995
ON Semi 0.35μ C035 - I3T50U (or E) 50V 3M	850	800
ON Semi 0.35μ C035 - I3T50U (or E) 50V 4M	925	875
ON Semi 0.35μ C035 - I3T50U (or E) 50V 5M	1,050	995
ON Semi 0.35μ C035 - I3T25U 3.3/25V 3M (optional)	750	700
ON Semi 0.35μ C035 - I3T25U 3.3/25V 4M (default)	770	720
ON Semi 0.35μ C035 - I3T25U 3.3/25V 5M (optional)	800	750

Important notes: Price = area (mm²) * price/mm² with min. fabrication cost equivalent to 4 mm².

Technology	Standard prices		Discounted prices	
	EUR/ min area	EUR / extra area	EUR/ min area	EUR / extra area
TSMC 0.18 MS RF (min area = 3 mm ²)	2,900	839 / 1 mm ²	2,510	798 / 1 mm ²
TSMC 0.18 BCD Gen II (min area = 4 mm ²)	4,370	947 / 1 mm ²	3,770	900 / 1 mm ²
TSMC 65 LP MS RF (min area = 1 mm ²)	3,720	310 / 0.1 mm ²	3,120	295 / 0.1 mm ²
TSMC 40 LP MS RF (min area = 3 mm ²) *	15,395	490 / 0.1 mm ²	14,626	466 / 0.1 mm ²
TSMC 28 HPC RF (min area = 1 mm ²) *	9,010	662 / 0.1 mm ²	7,240	629 / 0.1 mm ²
TSMC 28 HPC+ RF (min area = 1 mm ²) *	9,010	662 / 0.1 mm ²	7,240	629 / 0.1 mm ²

Important notes: This is a new flexible pricing with reduced minimal area.

The prices are area based, and the aspect ratio is free to choose but it is strongly recommended not to have sides less than 1mm.

Subdicing is not supported on mini@sic.

Design registration must be done at least **3 months** in advance, preferably at the moment of reservation.

*The areas in the table for 28nm and 40nm are on-silicon dimensions. This means the designed area can be (area/0.81).

Technology	Standard EUR / block	Discounted EUR / block
UMC LI80 Mixed-Mode/RF - IP6M - 1.8V/3.3V ¹	2,900 ¹	2,430 ¹
UMC LI30 Mixed-Mode/RF - IP8M2T - 1.2V/3.3V ¹	4,730 ¹	4,200 ¹
UMC L65N Logic/Mixed-Mode LL ²	9,190 ²	8,630 ²

Important notes: ¹ Price = per block of 1525µm x 1525µm needed to fit the design in. Adding two blocks together to one block is possible.

² Price = per block of 1875µm x 1875µm needed to fit the design in. Adding two blocks together to one block is possible.

¹ UMC 0.18 and 0.13µ mini@sic rules

When the standard block of 5mm x 5mm is divided into 9 regular square sub-blocks, customers participating in the mini@sic program can submit one sub-block or multiple sub-blocks, depending on the size of their design:

- ▶ single sub-block: design may not be larger than 1525µm x 1525µm
- ▶ 2 sub-blocks: design may not be larger than 3240µm x 1525µm
- ▶ 3 sub-blocks: design may not be larger than 4960µm x 1525µm
- ▶ 4 sub-blocks: design may not be larger than 3240µm x 3240µm
- ▶ 6 sub-blocks: design may not be larger than 4960µm x 3240µm

Final price = number of sub-blocks needed to fit in the design * sub-block price.

² UMC 65nm mini@sic rules

For the mini@sic program, customers can submit one sub-block or multiple sub-blocks, depending on the size of their design:

- ▶ single sub-block: design may not be larger than 1875µm x 1875µm
- ▶ 2 sub-blocks: design may not be larger than 3950µm x 1875µm

Technology	Standard EUR / block	Discounted EUR / block
X-FAB XH018 0.18µ HV NVM CMOS E-FLASH (MET3, MET4, METMID, MET-THK)	4065	3750
X-FAB XT018 0.18µ HV SOI CMOS (MET3, MET4, METMID, METTHK)	4145	3825

Important notes: Price = per block of 1520µm x 1520µm needed to fit the design in. Adding two blocks together to one block is possible.

Backgrounding is not always possible and an additional cost might apply.