M31 Technology

IP name	IP partner	IP type	Technology	IP description
M31CDCOMT312TL028D	M31 Technology	Hard/ PHY/ MIPI PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+ MIPI C-PHY/D-PHY Combo Transmitter IP. Compliant to MIPI D-PHY v1.2 (2.5Gb/s)and C-PHY v1.0 spec (2.5Gs/s). Support up to 4-lane D-PHY TX and 3TRIO C-PHY TX.
M31USB125TL055U	M31 Technology	Hard/ PHY/ USB PHY	CLN55UP	0.9V/2.5V,tsmc N55ULP, USB 1.1 PHY Host
M31USB100TL055U	M31 Technology	Hard/ PHY/ USB PHY	CLN55UP	0.9V/2.5V,tsmc N55ULP, BCK USB 1.1 PHY
M31LLSC1133TF055US_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	3.3V,tsmc 55nm EF_ULP, PMK of 11-track low leakage standard cell library
M31USBH310TL040P	M31 Technology	Hard/ PHY/ USB PHY	CLN40LP	1.1V/2.5V,tsmc CLN40LP, BCK USB 3.0 PHY, support device application
M31USBH233TF090P	M31 Technology	Hard/ PHY/ USB PHY	CEN90FT	1.2V/3.3V,tsmc CEN90FP, USB2.0 PHY with 1.0 embedded, support both host and device function
M31USBH225TL055U	M31 Technology	Hard/ PHY/ USB PHY	CLN55UP	0.9V/2.5V,tsmc N55ULP, USB 2.0 PHY, support both host and device application
M31HDSC6540TL028DI_30N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, eHVT, gate length 30nm
M31HDSC6540TL028DS_35N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, SVT, gate length 35nm
M31GPSC900TL055UU	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, general purpose eLVT standard cell library
M31HSSP010TL040P	M31 Technology	Hard/ Memory/ SRAM Compiler	CLN40LP	1.1V,tsmc N40LP, ultra high speed single port SRAM
M31LLSC8518TF040US	M31 Technology	Hard/ Standard Cell	CEN40FL	1.8V,tsmc N40EF & N40EF_ULP, 8.5-track low leakage standard cell library
		Hard/ Standard Cell	CEN40FS	
M31HDSC700TF055UU_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, PMK of high density eLVT standard cell library
M31GPSC900TF055UI	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, general purpose eHVT standard cell library
M31GPSC900TF055UI_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, PMK of general purpose eHVT standard cell library
M31HDSC700TF055UI_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, PMK of high density eHVT standard cell library
M31USBH311TL028D	M31 Technology	Hard/ PHY/ USB PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+, USB3.1 Gen1 PHY (5Gbps) with Type-C features, supports both USB host and device applications. Backward compatible to USB2.0 and USB1.1 function.
M31HDDP100TF055U	M31 Technology	Hard/ Memory/ SRAM Compiler	CEN55FL	0.9V/1.1V/1.2V,tsmc N55EF_ULP, high density dual port SRAM compiler; Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31GPSC900TF055UU_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, PMK of general purpose eLVT standard cell library
M31GPSC900TF055UU	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, general purpose eLVT standard cell library
M31GPSC900TL055UI_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, PMK of general purpose eHVT standard cell library

M31GPSC900TL055UU_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, PMK of general purpose eLVT standard cell library
M31HDSC700TL055UU	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, high density eLVT standard cell library
M31HDDP100TL055U	M31 Technology	Hard/ Memory/ SRAM Compiler	CLN55UP	0.9V/1.1V/1.2V,tsmc N55ULP, high density dual port SRAM compiler; Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31HDSC700TL055UU_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, PMK of high density eLVT standard cell library
M31GSOP100TL028D	M31 Technology	Hard/ Memory/ Register File	CRN28HT	0.9V,tsmc N28HPC+, green low power single-rail one port register file compiler; ULL bitcell; Support light-sleep, deep-sleep and power-shut-down mode; Support redundancy function; Device VT in Periphery: uHVT+SVT. (bitcell: D155 ULL)
M31HSSC1240TL028DS_40N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed SVT standard cell library, channel length 40nm
M31GSVR100TL028D	M31 Technology	Hard/ Memory/ ROM	CLN28HT	0.9V,tsmc N28HPC+, green low power single-rail ROM compiler; ROM cell: eHVT; Device VT in Periphery: eHVT+SVT.
M31GSSP200TL028D	M31 Technology	Hard/ Memory/ SRAM Compiler	CRN28HT	0.95V,tsmc N28HPC+, green low power single-rail single port RAM compiler, Support deep-sleep, light-sleep, and power-shut-down mode. (bit cell: D127 GL)
M31USBH218TL012D	M31 Technology	Hard/ PHY/ USB PHY	CLN12FCLL001	0.8V/1.8V,TSMC N12FFC, USB2.0 PHY. Support both host and device application. Backward compatible to USB1.1 function.
M31HSSC1240TL028DL_30N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed LVT standard cell library, channel length 30nm
M31HSSC1240TL028DH_40N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed HVT standard cell library, channel length 40nm
M31USB125TF055U	M31 Technology	Hard/ PHY/ USB PHY	CEN55FL	0.9V/2.5V,tsmc N55EF_ULP, USB 1.1 PHY Host
M31USBH225TF055U	M31 Technology	Hard/ PHY/ USB PHY	CEN55FL	0.9V/2.5V,0.9V/2.5V,tsmc N55EF_ULP, USB 2.0 PHY, support both host and device application
M31USB100TF055U	M31 Technology	Hard/ PHY/ USB PHY	CEN55FL	0.9V/2.5V,tsmc N55EF_ULP, BCK USB 1.1 PHY
M31PCIEX2318TL040P	M31 Technology	Hard/ PHY/ PCI Express	CLN40LP	1.1V/2.5V,tsmc N40LP, PCIe 3.0 2 lane PHY
M31USBC3118TL028D	M31 Technology	Hard/ PHY/ USB PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+, USB3.1 Gen2 PHY (10Gbps) with Type-C features, supports both USB host and device applications. Backward compatible to USB2.0 and USB1.1 function.

M31GSOP200TL028D	M31 Technology	Hard/ Memory/ Register File	CRN28HT	0.95V,tsmc N28HPC+, green low power single-rail one port register file compiler; Support deep-sleep, light-sleep, and power-shut-down mode. (bit cell: D127 GL)
M31HSSC1240TL028DH_30N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed HVT standard cell library, channel length 30nm
M31HSSC1240TL028DS_35N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed SVT standard cell library, channel length 35nm
M31PCIE318TL028D	M31 Technology	Hard/ PHY/ PCI Express	CLN28HT	0.9V/1.8V,tsmc N28HPC+, PCIe 3.0 PHY. Compliant to PCIe3.0 spec and maximum data rate is up to 8Gbps.
M31HSSC1240TL028DH_35N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed HVT standard cell library, channel length 35nm
M31HSSC1240TL028DL_40N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed LVT standard cell library, channel length 40nm
M31HSSC1240TL028DS_30N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed SVT standard cell library, channel length 30nm
M31HSSC1240TL028DL_35N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,12-Track, tsmc N28HPC+, high speed LVT standard cell library, channel length 35nm
M31GDSP100TL028D	M31 Technology	Hard/ Memory/ SRAM Compiler	CLN28HT	0.9V,tsmc N28HPC+, green dual-rail single port SRAM compiler. (bitcell: D127 GL)
M31LLSC8525TF040US	M31 Technology	Hard/ Standard Cell	CEN40FS	2.5V,tsmc N40EF & N40EF_ULP, 8.5-track low leakage standard cell library
		Hard/ Standard Cell	CEN40FL	
M31DPHYTX311TF040U	M31 Technology	Hard/ PHY/ MIPI PHY	CEN40FL	1.1V,TSMC N40EF_ULP MIPI D-PHY Transmitter IP. Compliant to MIPI D-PHY v1.0 (1.5Gb/s) spec. Support up to 2-lane D-PHY TX
		Hard/ PHY/ MIPI PHY	CEN40FP	
M31HDSC6540TL028DI_35N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, eHVT, gate length 35nm
M31HDSC6540TL028DL_35N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, LVT, gate length 35nm
M31HDSC6540TL028DH_30N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, HVT, gate length 30nm
M31HDSC6540TL028DS_40N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, SVT, gate length 40nm
M31HDSC6540TL028DL_40N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, LVT, gate length 40nm

M31HDSC6540TL028DL_30N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, LVT, gate length 30nm
M31HDSC6540TL028DH_40N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, HVT, gate length 40nm
M31HDSC6540TL028DH_35N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, HVT, gate length 35nm
M31HDSC6540TL028DS_30N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, SVT, gate length 30nm
M31HDSC6540TL028DI_40N	M31 Technology	Hard/ Standard Cell	CLN28HT	0.9V,6.5-track, tsmc 28nm HPC+, high density standard cell library, eHVT, gate length 40nm
M31LPDR31225TL055P	M31 Technology	Hard/ Specialty I/O/ DDR I/O	CLN55LP	1.2V/2.5V,tsmc N55LP, LPDDR3 IO Library
M31MPHYX1234TL012D	M31 Technology	Hard/ PHY/ MIPI PHY	CLN12FCLL001	0.8V/1.8V,TSMC N12FFC MIPI M-PHY, HS Gear 3, LS Gear 4. Compliant to MIPI M-PHY v3.2 spec. Support up to 1T2R configuration.
M31LPDR30918TL028D	M31 Technology	Hard/ Specialty I/O/ DDR I/O	CLN28HT	0.9V/1.8V,tsmc N28HPC+, LPDDR3 IO Library
M31EMMCIO0925TL028D	M31 Technology	Hard/ Specialty I/O/ Memory I/O	CLN28HT	0.9V/2.5V,tsmc 28nm HPC+ Embedded Multi Media Card I/O Library
M31HDSC710TF040UL	M31 Technology	Hard/ Standard Cell	CEN40FL	0.9V,tsmc N40EF_ULP, 7-track high density standard cell library, LVT
M31LLSC1033TL028DS	M31 Technology	Hard/ Standard Cell	CLN28HT	3.3V,10-track, tsmc 28nm HPC+, low leakage standard cell library.
M31LLSC1025TL028DS	M31 Technology	Hard/ Standard Cell	CLN28HT	2.5V,10-track, tsmc 28nm HPC+, low leakage standard cell library.
M31GPIO0925TF040U	M31 Technology	Hard/ Standard I/O/ESD/ Standard I/O	CEN40FL	0.9V/2.5V,tsmc N40EF_ULP, General Purpose I/O Library, with fail safe function
M31USBT200TL055P	M31 Technology	Hard/ PHY/ USB PHY	CLN55LP	1.2V/3.3V,TSMC N55LP, BCK USB 2.0 Tiny PHY, Backward compatible to USB1.1 function.
M31USBC3118TL012D	M31 Technology	Hard/ PHY/ USB PHY	CLN12FCLL001	0.8V/1.8V,tsmc N12FFC, USB3.1 Gen2 PHY (10Gbps) with Type-C features, supports both USB host and device applications. Backward compatible to USB2.0 and USB1.1 function.

M31CDCOMR412TL012D	M31 Technology	Hard/ PHY/ MIPI PHY	CLN12FCLL001	0.8V/1.8V,tsmc N12FFC, MIPI C-PHY/D-PHY Combo Receiver IP. Compliant to MIPI D-PHY v1.2 (2.5Gb/s)and C-PHY v1.0 spec (2.5Gs/s). Support up to 4-lane D-PHY RX and 3TRIO C-PHY RX.
M31CDCOMT312TL012D	M31 Technology	Hard/ PHY/ MIPI PHY	CLN12FCLL001	0.8V/1.8V,tsmc N12FFC MIPI C-PHY/D-PHY Combo Transmitter IP. Compliant to MIPI D-PHY v1.2 (2.5Gb/s)and C-PHY v1.0 spec (2.5Gs/s). Support up to 4-lane D-PHY TX and 3TRIO C-PHY TX.
M31SOCPLL3008TL012D	M31 Technology	Hard/ Mixed-Signal IP/ PLL	CLN12FCLL001	0.8V/1.8V,tsmc 12FFC, Phase Locked Loop for System on Chip (digital PLL)
M31PCIEX2518TL012D	M31 Technology	Hard/ PHY/ PCI Express	CLN12FCLL001	0.8V/1.8V,TSMC N12FFC, PCIe 5.0 PHY. Compliant to PCIe5.0 spec and maximum data rate is up to 32Gbps.
M31GSDP100TL028D	M31 Technology	Hard/ Memory/ SRAM Compiler	CRN28HT	0.9V,tsmc N28HPC+, green low power single-rail dual port SRAM compiler; ULL bitcell; Support light-sleep, deep-sleep and power-shut-down mode; Support redundancy function; Device VT in Periphery: uHVT+SVT. (bitcell: D315 ULL)
M31HDVR100TF055U	M31 Technology	Hard/ Memory/ ROM	CEN55FL	0.9V/1.1V/1.2V,tsmc N55EF_ULP, high density via-1 ROM compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Power Shut Down Mode
M31GPSC900TL055US_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, PMK of general purpose SVT standard cell library
M31GPSC900TL055UL	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, general purpose LVT standard cell library
M31USB310TL055P	M31 Technology	Hard/ PHY/ USB PHY	CLN55LP	1.2V/2.5V, tsmc 55LP, BCK USB 3.0 PHY, support device application, 1.2V/2.5 OD 3.3V
M31GPSC900TL055UL_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, PMK of general purpose LVT standard cell library
M31HDSC700TF055UI	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, high density eHVT standard cell library

M31HDTP100TL055U	M31 Technology	Hard/ Memory/ Register File	CLN55UP	0.9V/1.1V/1.2V,tsmc N55ULP, high density two port register file compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31HDSP100TF055U	M31 Technology	Hard/ Memory/ SRAM Compiler	CEN55FL	0.9V/1.1V/1.2V,tsmc N55EF_ULP, high density single port SRAM compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31HDSC700TF055UH	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, high density HVT standard cell library
M31HDSC700TF055UL	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, high density LVT standard cell library
M31HDSC700TF055UU	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, high density eLVT standard cell library
M31HDSC700TF055UL_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, PMK of high density LVT standard cell library
M31HDSC700TF055UH_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, PMK of high density HVT standard cell library
M31HDSC700TF055US_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, PMK of high density SVT standard cell library
M31HDSC700TF055US	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,7-Track, tsmc N55EF_ULP, high density SVT standard cell library
M31USB200TF040U	M31 Technology	Hard/ PHY/ USB PHY	CEN40FP	0.9V/3.3V,TSMC N40EF_ULP, USB 2.0 PHY, support both host and device application. Backward compatible to USB1.1 function.
		Hard/ PHY/ USB PHY	CEN40FL	
M31LLSC1133TF055US	M31 Technology	Hard/ Standard Cell	CEN55FL	3.3V,tsmc 55nm EF_ULP, low leakage standard cell library
M31ONFI1125TL040P	M31 Technology	Hard/ Specialty I/O/ Memory I/O	CLN40LP	0.9V/2.5V,tsmc 40nm ONFI 4.0 IO Library
		Hard/ Specialty I/O/ Memory I/O	CEN40FL	
M31USBH325TL065B	M31 Technology	Hard/ PHY/ USB PHY	CLN65GP	1.0V/2.5V,TSMC 65nm GP process USB3.0 PHY

M31GSTP100TL028D	M31 Technology	Hard/ Memory/ Register File	CRN28HT	0.9V,tsmc N28HPC+, green low power single-rail two port register file compiler; ULL bitcell; Support light-sleep, deep-sleep and power-shut-down mode; Support redundancy function; Device VT in Periphery: uHVT+SVT. (bitcell D240 ULL)
M31HDTP100TF055U	M31 Technology	Hard/ Memory/ Register File	CEN55FL	0.9V/1.1V/1.2V,tsmc N55EF_ULP, high density two port register file compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31HDSP100TF040P	M31 Technology	Hard/ Memory/ SRAM Compiler	CLN40LP	1.1V,tsmc N40LP, 1P3M high density single port SRAM compiler, Device VT in Periphery: HVT; Configuration ranges from 32 to 256K bits
		Hard/ Memory/ SRAM Compiler	CLN40LC	
M31ONFI1225TL055P	M31 Technology	Hard/ Specialty I/O/ Memory I/O	CLN55LP	1.2V/2.5V,tsmc 55nm ONFI 4.0 IO Library
		Hard/ Specialty I/O/ Memory I/O	CLN55UP	
M31HDOP100TF055U	M31 Technology	Hard/ Memory/ Register File	CEN55FL	0.9V/1.1V/1.2V,tsmc N55EF_ULP, high density one port register file compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31GSSP110TL028D	M31 Technology	Hard/ Memory/ SRAM Compiler	CRN28HT	0.9V,tsmc N28HPC+, green low power single-rail single port SRAM compiler, Support deep-sleep, light-sleep, and power-shut-down mode. (bit cell: D155 ULL)
M31GSOP110TL028D	M31 Technology	Hard/ Memory/ Register File	CRN28HT	0.9V,tsmc N28HPC+, green low power single-rail one port register file compiler; Support deep-sleep, light-sleep, and power-shut-down mode. (bit cell: D155 ULL)
M31GPSC900TL055US	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, general purpose SVT standard cell library
M31GPSC900TL055UI	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, general purpose eHVT standard cell library

M31HDOP100TL055U	M31 Technology	Hard/ Memory/ Register File	CLN55UP	0.9V/1.1V/1.2V,tsmc N55ULP, high density one port register file compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31MPHYX1135TL055P	M31 Technology	Hard/ PHY/ MIPI PHY	CLN55LP	1.2V/2.5V,MIPI M-PHY of TSMC 55nm Logic Low Power Process, HS Gear3, LS Gear5, Support 1T1R configuration.
M31HDSC700TL055UI	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, high density eHVT standard cell library
M31GPSC900TL055UH	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, general purpose HVT standard cell library
M31HDSC700TL055UI_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, PMK of high density eHVT standard cell library
M31GPSC900TL055UH_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,9-Track, tsmc N55ULP, PMK of general purpose HVT standard cell library
M31HDSP100TH110P	M31 Technology	Hard/ Memory/ SRAM Compiler	CV011NG	1.5V,tsmc 0.11um HV, high density single port SRAM compiler, 1P3M, configuration ranges from 32bits to 500K bits
M31HDSP100TM180B	M31 Technology	Hard/ Memory/ SRAM Compiler	CM018MG	1.8V,tsmc 0.18um MS, 1P3M high density single port SRAM
M31EMMCIO1125TL040P	M31 Technology	Hard/ Specialty I/O/ Memory I/O	CLN40LC	1.1V/2.5V,tsmc 40nm, Embedded Multi Media Card I/O Library
		Hard/ Specialty I/O/ Memory I/O	CLN40UP	
M31ONFIL1125TL040P	M31 Technology	Hard/ Specialty I/O/ Memory I/O	CLN40LC	1.1V/2.5V,tsmc 40nm Open NAND Flash Interface 4.0 IO Library; Operation Voltage :Core 1.1V, IO 1.2V/1.8V.
		Hard/ Specialty I/O/ Memory I/O	CLN40UP	
M31USB200TL040U	M31 Technology	Hard/ PHY/ USB PHY	CLN40UP	0.9V/3.3V,TSMC N40ULP, USB 2.0 PHY, support both host and device application. Backward compatible to USB1.1 function.
M31DPHYTX411TL040U	M31 Technology	Hard/ PHY/ MIPI PHY	CLN40UP	1.1V,TSMC N40ULP, MIPI D-PHY Transmitter IP. Compliant to MIPI D-PHY v1.1 (1.5Gb/s) spec. Support up to 4-lane D-PHY TX.
M31DPHYRX411TL040U	M31 Technology	Hard/ PHY/ MIPI PHY	CLN40UP	0.9V/2.5V,TSMC 40nm ULP, MIPI D-PHY Receiver IP

M31ONFI0918TL028D	M31 Technology	Hard/ Specialty I/O/ Memory I/O	CLN28HT	0.9V/1.8V,ONFI 4.0 IO Library
M31HDSC600TH180S	M31 Technology	Hard/ Standard Cell	CV018MG	1.8V,7-Track, tsmc 0.18um BCD, high density standard cell library
M31HDSP100TH180S	M31 Technology	Hard/ Memory/ SRAM Compiler	CV018MG	1.8V,tsmc 0.18um BCD, 1P3M high density single port SRAM
M31GSSP100TL028D	M31 Technology	Hard/ Memory/ SRAM Compiler	CRN28HT	0.9V,tsmc N28HPC+, green low power single-rail single port SRAM compiler; ULL bitcell; Optional device VT in Periphery: (i) eHVT+SVT; (ii) uHVT+SVT; Support light-sleep, deep-sleep and power-shut-down mode; Support redundancy function. (bitcell: D127 ULL)
M31USBH318TL028D	M31 Technology	Hard/ PHY/ USB PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+, USB 3.0 PHY, support both host and device application. Backward compatible to USB2.0 and USB1.1 function.
M31USBH218TL028D	M31 Technology	Hard/ PHY/ USB PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+, USB 2.0 PHY, support both host and device application
M31USB200TL055P	M31 Technology	Hard/ PHY/ USB PHY	CMN55MH	1.2V/3.3V,TSMC N55LP, BCK USB 2.0 PHY, Backward compatible to USB1.1 function.
		Hard/ PHY/ USB PHY	CLN55LP	
M31HDVR100TL055U	M31 Technology	Hard/ Memory/ ROM	CLN55UP	0.9V/1.1V/1.2V,tsmc N55ULP, high density via-1 ROM compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Power Shut Down Mode
M31HDSC700TL055US_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, PMK of high density SVT standard cell library
M31LLSC8533TF040US	M31 Technology	Hard/ Standard Cell	CEN40FL	3.3V,tsmc N40EF & N40EF_ULP, 8.5-track low leakage standard cell library
		Hard/ Standard Cell	CEN40FS	
M31HDSC700TL055UL	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, high density LVT standard cell library
M31HDSC700TL055UH	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, high density HVT standard cell library
M31GPSC900TF055US	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, general purpose SVT standard cell library
M31HDSC700TL055UH_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, PMK of high density HVT standard cell library
M31GPIO1850TH180G	M31 Technology	Hard/ Standard I/O/ESD/ Standard I/O	CV018M2	1.8V/5V,tsmc 0.18um BCD GEN3, linear I/O library

M31LLSC1050TH180GS	M31 Technology	Hard/ Standard Cell	CV018M2	5V,10-Track, tsmc 0.18um BCD GEN3, low leakage standard cell library
		Hard/ Standard Cell	CV018M1	
M31GPSC900TF055US_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, PMK of general purpose SVT standard cell library
M31HDSC701TL040PH	M31 Technology	Hard/ Standard Cell	CLN40LP	1.1V,7-Track, tsmc 40LP, ultra high desity and low power HVT standard cell library
		Hard/ Standard Cell	CEN40FS	
		Hard/ Standard Cell	CEN40FT	
		Hard/ Standard Cell	CEN40EP	
M31HDSC701TL040PL	M31 Technology	Hard/ Standard Cell	CLN40LP	1.1V,7-Track, tsmc 40LP, ultra high desity and low power LVT standard cell library
		Hard/ Standard Cell	CEN40FS	
		Hard/ Standard Cell	CEN40EP	
		Hard/ Standard Cell	CEN40FT	
M31HDSC701TL040PS	M31 Technology	Hard/ Standard Cell	CLN40LP	1.1V,7-Track, tsmc 40LP, ultra high desity and low power SVT standard cell library
		Hard/ Standard Cell	CEN40FS	
		Hard/ Standard Cell	CEN40EP	
		Hard/ Standard Cell	CEN40FT	
M31GPSC900TF055UL_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, PMK of general purpose LVT standard cell library
M31GPIO5050TH180G	M31 Technology	Hard/ Standard I/O/ESD/ Standard I/O	CV018M2	5V,tsmc 0.18um BCD GEN3, linear I/O library
		Hard/ Standard I/O/ESD/ Standard I/O	CV018M1	
M31HDVR100TF040P	M31 Technology	Hard/ Memory/ ROM	CLN40LP	1.1V,tsmc N40LP, 1P3M high density via rom compiler, Device VT in Periphery: HVT; Configuration ranges from 128 to 2816K bits
		Hard/ Memory/ ROM	CLN40LC	
M31HDSC600TH180GS	M31 Technology	Hard/ Standard Cell	CV018M2	1.8V,6-Track, tsmc 0.18um BCD GEN3, high density standard cell library
M31GPSC900TF055UH_PMK	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, PMK of general purpose HVT standard cell library
M31GPSC900TF055UH	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, general purpose HVT standard cell library

M31HDSP100TL055U	M31 Technology	Hard/ Memory/ SRAM Compiler	CLN55UP	0.9V/1.1V/1.2V,tsmc N55ULP, high density single port SRAM compiler;Optional device VT in Periphery: (i) Mixed VT (SVT + HVT), (ii) Pure HVT; Support Retention Mode and Power Shut Down Mode
M31HDSC700TL055UL_PMK	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, PMK of high density LVT standard cell library
M31HDSC700TL055US	M31 Technology	Hard/ Standard Cell	CLN55UP	0.9V/1.1V/1.2V,7-Track, tsmc N55ULP, high density SVT standard cell library
M31GPSC900TF055UL	M31 Technology	Hard/ Standard Cell	CEN55FL	0.9V/1.1V/1.2V,9-Track, tsmc N55EF_ULP, general purpose LVT standard cell library
M31USBC3218TL028D	M31 Technology	Hard/ PHY/ USB PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+, USB3.2 Gen2X2 PHY (20Gbps) with Type-C features, supports both USB host and device applications. Backward compatible to USB2.0 and USB1.1 function.
M31GPIO1818TH180G	M31 Technology	Hard/ Standard I/O/ESD/ Standard I/O	CV018M2	1.8V,tsmc 0.18um BCD GEN3, linear I/O library
M31GDSP010TL040P	M31 Technology	Hard/ Memory/ SRAM Compiler	CLN40LP	1.1V,tsmc N40LP, green dual-rail single port SRAM compiler
		Hard/ Memory/ SRAM Compiler	CEN40FT	
M31HDSC710TF040UI	M31 Technology	Hard/ Standard Cell	CEN40FL	0.9V,tsmc N40EF_ULP, 7-track high density standard cell library, eHVT
M31HDSC710TF040US	M31 Technology	Hard/ Standard Cell	CEN40FL	0.9V,tsmc N40EF_ULP, 7-track high density standard cell library, SVT
M31USBC3218TL028D	M31 Technology	Hard/ PHY/ USB PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+, USB3.2 Gen2X2 PHY (20Gbps) with Type-C features, supports both USB host and device applications. Backward compatible to USB2.0 and USB1.1 function.
M31PCIEX2318TL028D	M31 Technology	Hard/ PHY/ PCI Express	CLN28HT	0.9V/1.8V,tsmc N28HPC+, PCIe 3.0 PHY, 2 lane. Compliant to PCIe3.0 spec and maximum data rate is up to 8Gbps.
M31MPHYX2234TL028D	M31 Technology	Hard/ PHY/ MIPI PHY	CLN28HT	0.9V/1.8V,tsmc N28HPC+ MIPI M-PHY v3.1 IP. Compliant to MIPI M-PHY v3.1 spec and support HS G1-G3 and LS G1-G4. Maximum data rate is up to 5.8 Gbps.

M31USB2418TL012D	M31 Technology	Hard/ PHY/ USB PHY	CLN12FCLL001	0.8V/1.8V,tsmc N12FFC, USB4.0 PHY (20Gbps*2Lanes), supports both USB host and device applications. Backward compatible to USB3 function.
M31ONFIE0818TL012D	M31 Technology	Hard/ Specialty I/O/ Memory I/O	CLN12FCLL001	0.8V/1.8V,tsmc N12FFC, Open NAND Flash Interface 5.0 I/O Library