

Linecard

Semiconductors

Power, Timing and Passive
Components

Displays, Accessories
and Optoelectronics

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LATEST VERSION OF OUR LINE CARD ONLINE**



Semiconductors



Analog
 Amplifier (OPA, INA, μ OPA, nOPA, zero drift OPA)
 Audio & Video
 ADC, AFE & DAC
 Interface & Isolator ICs
 CAN, RS485/422/232 TRX
 Power Management
 LDO, PMIC, DC/DC, V-Ref & Supervision
 Motor Driver



DDR1 RAM
 Low Power SRAM
 Parallel NOR Flash
 SPI Flash
 SDRAM



EXCEED YOUR VISION
 ASICs
 Connectivity Solutions
 Graphic Controller
 Microcontroller
 Cortex M0+
 proprietary 4-bit - 32-bit Cores
 Sensing Solutions (IMU & Gyro)
 Voice Synthesis ICs



Wi-Fi + Bluetooth Solutions
 ESP Modules
 integrated Flash 4-32MB
 optional PSRAM
 ESP System On Chip (SoC)
 RISC-V Core
 X-tensa® Dual/Mono Core



Buck & Boost Converter
 Battery Management Solutions
 LDOs
 LED Driver ICs
 Over Voltage Protection Solutions
 Power Banks
 USB Switches



LVDS/DVI/HDMI/MHL/DP
 Transmitter
 Receiver
 Splitter
 Switch
 Repeater
 Bridge
 CEC



EEPROM Memory
 LED Drivers
 Power Management ICs



Analog
 Battery Management
 Li Battery Charger & Protection
 Wireless Charger
 Communication Interface ICs
 CAN & USB
 Digital Sensors / Sensor Modules
 Display Driver Solutions
 LCD Controller & Driver
 LED Driver (AC/DC)
 EEPROM Memory
 Microcontroller
 proprietary 8-bit
 Cortex M0+ / M3
 General Purpose
 Application Specific
 Motor Driver
 Power Management ICs
 AC/DC Converter
 DC/DC Converter
 LDO & Voltage Detector
 Wireless
 IR Encoder / Decoder
 sub 1 GHz RF
 2.4 GHz RF
 Bluetooth LE



Microcontroller
 Application Specific SoC
 Cortex M0+
 Cortex M3 with FPU
 Cortex M4F
 Bluetooth Solutions
 Secure Elements



Digital Hall Sensors
 Electric Compass
 Environmental Sensors
 Humidity
 Temperature
 Hall Switch



Automotive SerDes Devices
 APIX1
 APIX2
 APIX3
 Digital LED Drivers for
 Automotive Applications

Semiconductors



Isolation
 Isolated Interface IC
 TRX for CAN, LIN, RS-485, I2C
 Signal Isolators w/ iso. Power
 Isolated ADC & Amplifiers
 Isolated Gate/H-Bridge Drivers

Sensor Products
 Pressure Sensors
 Environmental Sensors
 Sensor Elements
 Signal Conditioning ICs
 Automotive Products (TRX, LED)



Audio/Video Solutions
 Battery Management Solutions
 Cloud Computing Solutions
 Image Sensors
 ISD Voice ICs
 Laser Diodes
 LED Driver ICs
 Microcontroller
 8051
 Cortex M0/M23
 Cortex M4F
 Cortex M7
 proprietary 8-bit & 32-bit Cores
 Microprocessor (32-bit & 64-bit)
 MOSFETs
 Motor Control MCUs
 Motor Driver ICs
 NFC TAG & Security ICs
 RF Solutions



DRAM Components
 DDR1, DDR2, DDR3, (LP)DDR4
 ECC DRAM
 Mobile DDR
 SDRAM

DRAM Modules
 different DIMM Sizes
 up to 32 Gbyte

NAND Flash Products
 Variety of form factors like
 eMMC, SD, USB 3.0, PATA, PCIe



Automotive Cellular Modules
 LTE
 5G

Wireless Devices (Ind. & Autom.)
 M2M Modules (w/ GNSS)
 LPWA (NB-IoT / Cat.M)
 4G
 5G

GNSS Modules
 Antennas
 Cloud Services



Analog ASICs
 Audio ICs
 Crystal Oscillator ICs
 DC/DC Converter
 Sensor Signal Interfaces
 Time Code Receivers



Amplifiers
 Discrete Transistors & Switches
 RF Filters, Duplexers & Passives
 Frequency Converters & Sources
 IoT Controllers
 Optical

Power Application Controller PAC
 Intelligent Motor Controller
 Intelligent Battery Monitoring

Power Management
 Modular PMIC (ActiveCiPS)
 Power Management for RF
 Power Loss Protection
 DC/DC Converters



GPS/GNSS Modules (w/ antenna)
 Miniature Cellular IoT Systems



Automotive Cellular Modules
 V2X, LTE
 GNSS & Wi-Fi-Modules
 M2M Modules
 LPWA (NB-IoT / Cat.M)
 4G
 LTE-A
 5G
 Smart Modules (MPU + Cellular)



Microcontroller
 Cortex M0+



EPROM/EEPROM Memory
 FCT/FCT-T Logic
 HiRel EPROM/EEPROM Memory
 HiRel SRAM Memory
 SRAM Memory



Automotive DRAM
 Industrial DRAM
 Low Power DRAM
 PSRAM & IoT RAM
 Standard DRAM



Dual-Interface NFC / RFID Tag
 NFC / RFID Tag
 NFC / RFID Reader



Ultra-Wide-Band Transceivers
 3.1 - 5.75 GHz
 6.0 - 9.25 GHz



Secure Microcontroller
 Secure Microcontroller Solutions
 Smart Card Readers

Power, Timing and Passive Components



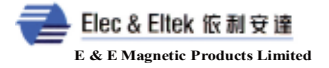
All-Silicon CMOS Oscillator
Network Products



Power Discretes
Diodes (FRD, Si/SiC Schottky, TVS, Switching, ESD/EMI)
BJT (Si NPN, PNP, digital)
MOSFETs
LV & HV Si MOSFETs
SiC MOSFETs
GaN HEMT
Automotive Solutions
KGD & Wafer



Precision Timing
STRATUM Clock Modules
OCXO, TCXO, Si XO
Clock Buffer
RTC, Crystals
Network
IEEE1588v2 Sync
Ethernet PHY
RF
Circulators, Isolators



Automotive Solutions
Broadband Magnetics
LAN Magnetics
Power Magnetics
RJ45 Connectors w/wo magnetics
USB Connectors



Crystal Units / SAW Resonators
Oscillators
Programmable XO
SPXO
TCXO
VCXO
Real Time Clock Modules



Discrete Magnetic Transformers
RJ45 Connectors w/wo magnetics
USB Connectors



Discrete IGBTs
HV MOSFETs
LV MOSFETs
MV MOSFETs (TOLL Package)
Power Modules
SJ MOSFETs



AT Crystals for special use
Clock Crystals
Real Time Clock Modules



Electromagnetic 3D-Sensor
EMC Filters
Inductive Components
Chokes
Inductors
Transformers
PLC Components
RFID Antennas
Antennas
Coils
Transponders



Battery Holders
Lithium Coin Cells
Lithium Ion Polymer Batteries
Silver Oxide Coin Cells
Rechargeable Coin Cells



Timing Devices
Crystal Units
Oscillators



Antennas (LDS, FPC, PCB, Patch, Steel, Spring, Ceramic, External)
Cellular (2G to 5G, V2X)
LPWAN (LoRa, NB-IoT, Cat-M)
GNSS
BT
WiFi
NFC
others

Displays, Accessories and Optoelectronics



Custom LCD Panels & Modules
LCD Modules
OLED Displays
TFT Displays



Custom EPD Displays
Graphic EPD Displays
Segmented EPD Displays



Custom LCD Panels & Modules
LCD Modules
OLED Displays
TFT Displays



RFID and NFC Inlays
RFID and NFC Labels



EPD Timing Controller
(Supports AM-EPDs)



Graphic EPD Displays



Custom LCD Panels
Multi-Touch TFT Displays
OLED Displays
Optical Airless Bonding
Standard TFT Displays
Sunlight Readable TFT Displays
Ultra-wide Bar Type TFT



Touch Solutions for industrial,
medical and automotive use
Controller IC Boards
Custom Solutions
Touch Sensors

Lead Times

CATEGORY	FUNCTION	MANUFACTURER	LEAD TIME
ANALOGUE IC	ADC / DAC		14-16 weeks
	INA		
	OPA		
	RS232 / RS485		
CONNECTORS	RJ-45		12-16 weeks
DISCRETE SEMICONDUCTORS	BJT (SIGNAL)		12-16 weeks
	DIODES		
	MOSFET (SIGNAL)		
	IGBT		18-20 weeks
	MOSFET (POWER)		
MAGNETICS	CHOKES / FILTERS	 E&E Magnetic Products Limited	14-18 weeks
	INDUCTORS		
	TRANSFORMERS		
MEMORY	DRAM	 INTELLIGENT MEMORY	 IM DRAM 4-6 weeks IM NAND 10-12 weeks
	NAND		
OPTO	LCD / 16 x 2		10-20 weeks
	TFT		
POWER CONVERTERS	BOOST	 SEMICONDUCTOR	14-16 weeks
	BUCK		
	LDO	 HOLTEK	
SENSORS	HALL SENSOR		18 weeks
RADIO	4G / 5G / NB-IOT	 a SUSEMI company	12-16 weeks
	BT / WI-FI		
	GPS / GNSS	 mini+mighty	
TIMING	CRYSTALS, RTC	 	2-14 weeks