

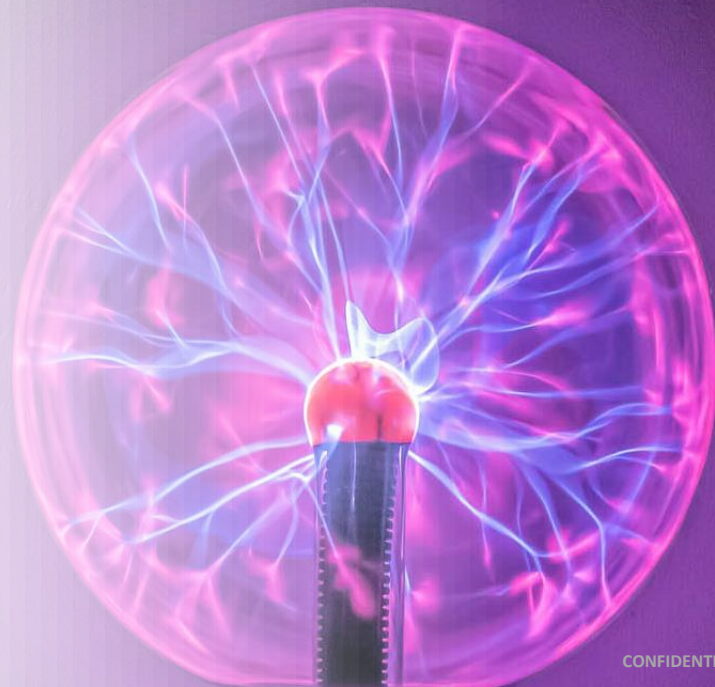
晶焱科技股份有限公司

AMAZING Microelectronic Corp.

Transceivers: RS-232/RS-485/CAN



MAJESTIC12
ELECTRONICS

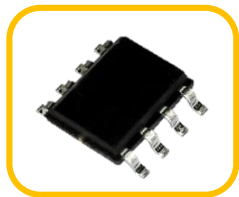


CONFIDENTIAL

Amazing's Transceivers With ESD Protection

ESD
Leading Provider

Transceiver

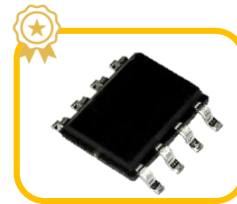


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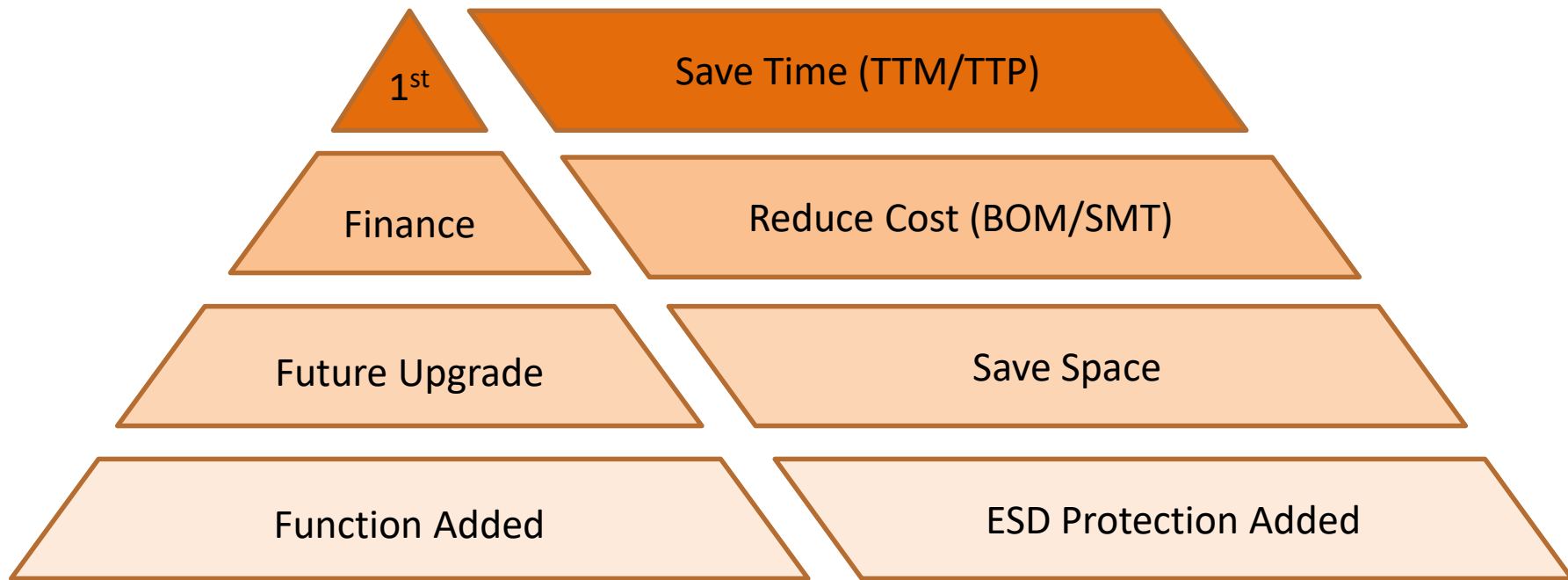
System ESD
Protection



Transceiver with
System ESD Protection



Benefits for using Amazing's Transceivers



Amazing's Transceivers: RS-232/RS-485/CAN


ESD
 Leading Provider

	RS-232	RS-485	CAN
Topology	Point-to-Point	Multi-point	Multi-point
Signaling Type	Single-ended	Differential (Only 1 Master)	Differential (Multi-Master)
Distance	Short	Long	Long
Data Rate	Low	High	Medium to High
Noise Immunity	Low	High	Medium to High
Applications	<ul style="list-style-type: none"> • Computer Serial Ports • HMI • Instrumentation • Medical Devices • POS Terminals 	<ul style="list-style-type: none"> • Building System • SCADA (Industrial) • Metering • Access Control • Robotics • Transportation 	<ul style="list-style-type: none"> • Building System • Automotive • Industrial Automation • Telecommunication

⚡ Applications for RS-232 Transceivers - CHIMP

ESD
Leading Provider



**Computer
Serial Ports**



HMI



Instrumentation



Medical Device



POS Terminals

Why Amazing's RS-232 Transceivers?

- **Faster Data Rate**

The common Data rate for RS-232 is less than 1 Mbps (115 Kbps), our RS-232 uses a **2 Mbps data rate**, tremendously increasing the performance.

- **Tx-Out Enhanced**

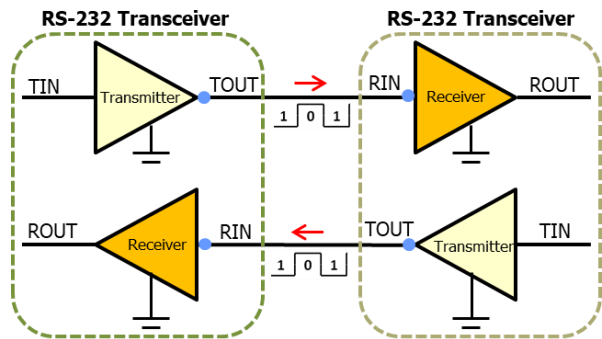
8V for Tx-out signal, extending stability and the distance for data transmission.

- **ESD Expertise Integration:**

Benefits from the 4Fs: more protection, saving space, reducing cost, and saving time-to-market & time-to-profit.

⚡ Amazing RS-232 Transceiver

P/N	Package	Supply voltage Vcc(V)	Data rate	System ESD Immunity	Tx/Rx per package
AZRS1496K	SSOP-28L	3V ~ 5.5V	2Mbps	±8 kV	4T/5R
AZRS1396K	SSOP-28L	3V ~ 5.5V	2Mbps	±8 kV	3T/5R
AZRS1396T	TSSOP-28L	3V ~ 5.5V	2Mbps	±8 kV	3T/5R
AZRS1296P	SOP-16	3V ~ 5.5V	2Mbps	±8 kV	2T/2R
AZRS1296T	TSSOP-16L	3V ~ 5.5V	2Mbps	±8 kV	2T/2R
AZRS1296K	SSOP-16L	3V ~ 5.5V	2Mbps	±8 kV	2T/2R
AZRS1196T	TSSOP-16L	3V ~ 5.5V	2Mbps	±8 kV	1T/1R



Part Number		Supply Voltage	Data Rate	IEC61000-4-2 ESD Contact	Package
Amazing	AZRS1296P	3V ~ 5.5V	2Mbps	★ 8kV	SOP-16
Competitor 1	XXX3232CDW	3V ~ 5.5V	250kbps	N/A	SOIC-16
Competitor 2	SX65C3232D	3V ~ 5.5V	1Mbps	N/A	SOIC-16

Applications for RS-485 Transceivers - BSMART ^{Esp}Leading Provider



Building System

SCADA (Industrial)



Metering

Access Control



Robotics

Transportation



Why Amazing's RS-485 Transceivers?

- **Unmatched Data Rate**

AZRS6023 data rate goes up to 60 Mbps, providing unmatched performance in the market. (~50 Mbps)

- **Polarity Free**



AZRS5485E provides an **easy & worry-free** solution when plugging in the connector.

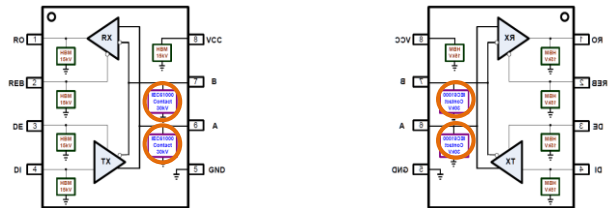
- **Digital Isolator**

AZRS6412 can **withstand up to 2500V**, optimized for UPS & energy storage systems.

- **ESD Expertise Integration:**

Benefits from the 4Fs: more protection, saving space, reducing cost, and saving time-to-market & time-to-profit.

ESD Leading Provider



⚡ Applications for CAN Transceivers - BAIT

ESD
Leading Provider



Building Systems

- HVAC
- Lighting
- Security
- Elevator



Automotive

- Engine
- Transmission
- BCM
- Infotainment



Industrial Automation

- Machine Control
- Sensor Network
- Process Control
- Robotics



Telecommunication

- Remote Telemetry
- Satellite
- Industrial Routers
- Telecom PSU

Why Amazing's CAN Transceivers? – VFM

- **V_{IO} pin Wide Range**
Supports MCUs from 1.8V to 5V, offering **more compatibility for design**, and preparing for the future.
- **Fault-Voltage Prevent**
Provides **exceptional protection** with 42V to 70V fault-voltage prevention.
- **Mode**
Optimizes energy and signal transmission with different modes of CANs.
- **ESD Expertise Integration:**
Benefits from the 4Fs: more protection, saving space, reducing cost, and saving time-to-market & time-to-profit.

⚡ Amazing CAN Transceiver Highlight

MODE

Normal
Silent
Standby
Sleep*

* Under developing

Fault Voltage

CANH/L
42V & 70V
Protection

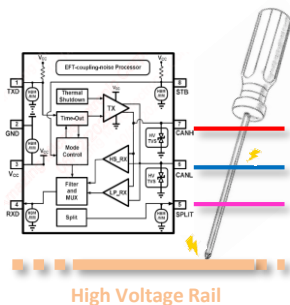
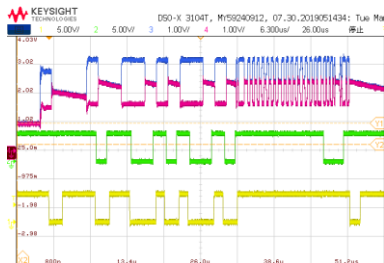
Data Rate

CAN FD 2Mbps
CAN FD 5Mbps
CAN SIC 8Mbps*

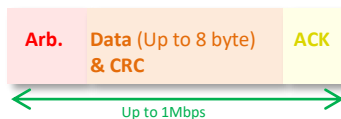
* Under developing

EMS

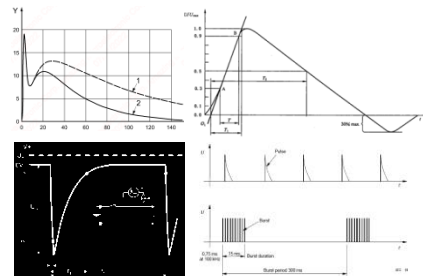
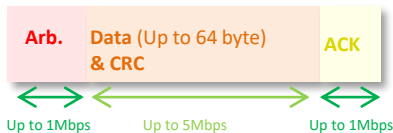
ISO 10605
ISO 7673
IEC 61000-4-4
IEC 61000-4-5



Classical
CAN



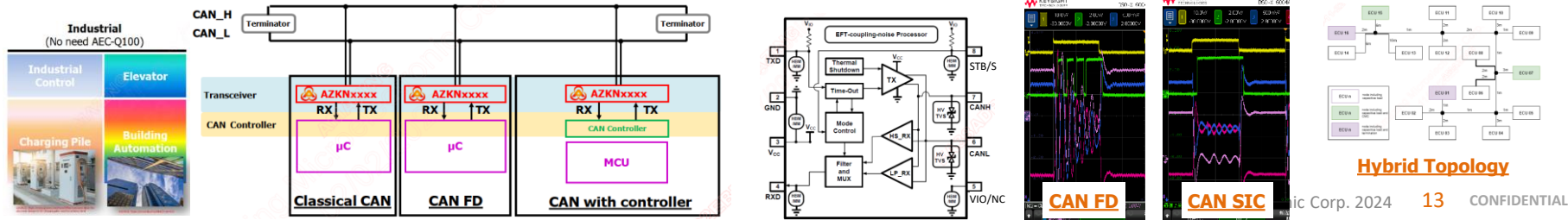
CAN
FD



⚡ Amazing CAN Transceiver

MPN	Package	Mode	V _{CC}	V _{IO}	Data rate	System ESD	Fault Voltage
AZKN1044T	SOP-8	Standby(Basic Wake Up)	5V		5 Mbps (CAN-FD)	15kV	±70V
AZKN9125P	SOP-8	Standby(Wake Up Pattern)	5V	1.8V/3.3V/5V	5 Mbps (CAN-FD)	8kV	±42V
AZKN9125N	DFN-8	Standby(Wake Up Pattern)	5V	1.8V/3.3V/5V	5 Mbps (CAN-FD)	8kV	±42V
AZKN9145P	SOP-8	Silent	5V	1.8V/3.3V/5V	5 Mbps (CAN-FD)	8kV	±42V
AZKN9135P	SOP-8	Silent	5V		5 Mbps (CAN-FD)	8kV	±42V
AZKN9215P	SOP-8	Standby(Wake Up Pattern)	5V		5 Mbps (CAN-FD)	8kV	±42V
AZKN9215N	DFN-8	Standby(Wake Up Pattern)	5V		5 Mbps (CAN-FD)	8kV	±42V
AZKN6129P	SOP-8	Standby(Wake Up Pattern)	5V	1.8V/3.3V/5V	5 Mbps (CAN-FD)	8kV	±70V
AZKN9325P*	SOP-8	Standby(Wake Up Pattern)	5V	1.8V/3.3V/5V	8 Mbps (CAN-SIC)	8kV	±42V
AZKN9155N*	DFN-14	Sleep(Remote/Local Wake Up)	5V	1.8V/3.3V/5V	5Mbps (CAN-FD)	8kV	±42V

* Under developing



Amazing CAN Cross List

TI	Amazing	NXP	Amazing	Microchip	Amazing	Infineon	Amazing
TCAN1042G-Q1	AZKN1044T	TJA1040T	AZKN1044T	MCP2561	AZKN1044T	TLE6251DS	AZKN1044T
TCAN1042H-Q1	AZKN1044T	TJA1042T	AZKN1044T	MCP2544FD	AZKN1044T	TLE9251SJ	AZKN1044T
TCAN1044-Q1	AZKN1044T	TJA1044T	AZKN1044T	ATA6560-GAQW-N	AZKN1044T	TLE9351SJ	AZKN1044T
TCAN1044A-Q1	AZKN1044T	TJA1044GT	AZKN1044T	MCP2561FD	AZKN1044T	TLE6251D	AZKN9125P
TCAN1042G	AZKN1044T	TJA1042T/3	AZKN9125P	ATA6561-GAQW	AZKN9125P	TLE9251VSJ	AZKN9125P
TCAN1042H	AZKN1044T	TJA1044GT/3	AZKN9125P	ATA6563-GAQW1	AZKN9125P	TLE9351VSJ	AZKN9125P
TCAN1042GV-Q1	AZKN9125P	TJA1051T/3	AZKN9145P	ATA6563-GAQW0	AZKN9125P	TLE7251VSJ	AZKN9125P
TCAN1042HV-Q1	AZKN9125P	TJA1044GT	AZKN9215P	MCP2542(W)FD	AZKN9125P		
TCAN1042HGV-Q1	AZKN9125P	TJA1044GTK	AZKN9215N	ATA6561-GAQW-N	AZKN9125P		
TCAN1044V-Q1	AZKN9125P	TJA1044GTK/3	AZKN9125N	MCP2562FD	AZKN9125P		
TCAN1044AV-Q1	AZKN9125P	TJA1462AT	AZKN9325P	ATA6561-GBQW	AZKN9125N		
TCAN1051V-Q1	AZKN9145P	TJA1043TK/1Y	AZKN9155N	ATA6564	AZKN9145P		
TCAN1044DRQ1	AZKN9215P						
TCAN1044DRBRQ1	AZKN9215N						
TCAN1044VDRBRQ1	AZKN9125N						
TCAN1462DRQ1	AZKN9325P						
TCAN1043ADMTRQ1	AZKN9155N						

Why Amazing's Transceivers?

- **ESD Expertise Integration:**

Benefits from the 4Fs: more protection, saving space, reducing cost, and saving time-to-market & time-to-profit.

- **Enhanced Signal Transmission:**

Better data rate & signal output for RS-232

- **Exceptional Protection:**

Anti-surge & digital isolator for RS-485
70V fault-voltage prevention for CAN

Thank you !

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