

Arora V Features

Ultra-Efficient Low Power

- * Advanced 22nm LP process
- * Low Core Voltage - 1.0V & 0.9V
- * Dynamic Clock Gating

Multichannel High Speed SERDES

- * 8x Transceivers 270Mbps to 12.5Gbps. SERDES custom protocols including 10Gb Ethernet

Hardcore PCIe2.1

- * Supports x1, x2, x4, x8 Endpoints and Root Port
- * Including Root Complex and End Point Dual-Mode

Hardcore MIPI D-PHY

- * MIPI DSI-2 and CSI-2 device interfaces
- * MIPI Data-Rate 2.5Gbps/lane
- * MIPI bandwidth 20Gbps with up to 8 Data-Lanes and Clock-Lanes



- ▶ **DDR Rate 1333Mbps**
- ▶ **Integrated ADC supports On-Chip Temperature Measurement**
- ▶ **Single Event Upset (SEU) Mitigation**
- ▶ **Programming Support**
 - * JTAG, SSPI, MSPI, CPU & Serial Modes inc remote update

Device	GW5A-25	GW5AT-60 (SERDES)	GW5A-138	GW5AT-138 (SERDES)
LUT4	23040	57600	138240	138240
REG	23040	57600	138240	138240
SSRAM (bits)	180K	450K	1105.92K	1105.92K
BSRAM (bits)	1008K	2322K	6120K	6120K
BSRAM Quantity	56	129	340	340
pSP	#28 27bit x 18bit OR #28 27bit x 36bit OR #56 12bit x 12 bit	#120 27bit x 18bit	#298 27bit x 18bit OR #298 27bit x 36bit OR #596 12bit x 12 bit	#298 27bit x 18bit OR #298 27bit x 36bit OR #596 12bit x 12 bit
PLLs	6	10	12	12
Global Clock	32	32	32	32
High Speed Clock	16	20	24	24
Transceivers	0	4	0	8
Transceiver Speed	N/A	270Mbps-12.5Gbps	N/A	270Mbps-12.5Gbps
PCIe 2.1 Lanes	0	1, x1, x2, x4	0	1, x1, x2, x4, x8
LVDS Gbps	1.25	1.25	1.25	1.25
DDR3 Mbps	1066	1333	1333	1333
MIPI D PHY Hardcore	2.5G	2.5G	2.5G	2.5G
	4 data lanes, 1 clock lane	8 data lanes, 2 clock lane	8 data lanes, 2 clock lanes	8 data lanes, 2 clock lanes
ADC	1	1	2	2
I/O Banks	9	5	6	6
Max User I/O	236	250	376	376
Core Voltage	0.9V/1.0V	0.9V/1.0V	0.9V/1.0V	0.9V/1.0V



SERDES Eye Diagram



2.5 Gbps



5Gbps

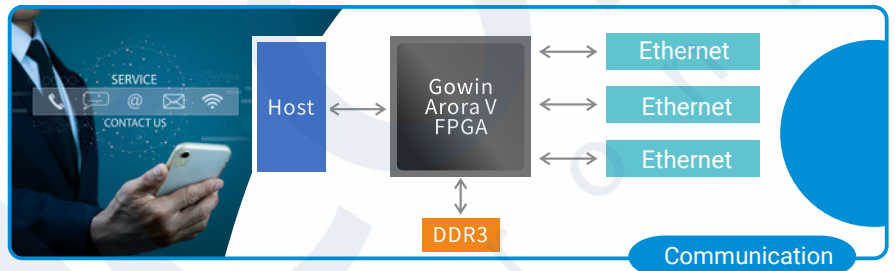


10Gbps

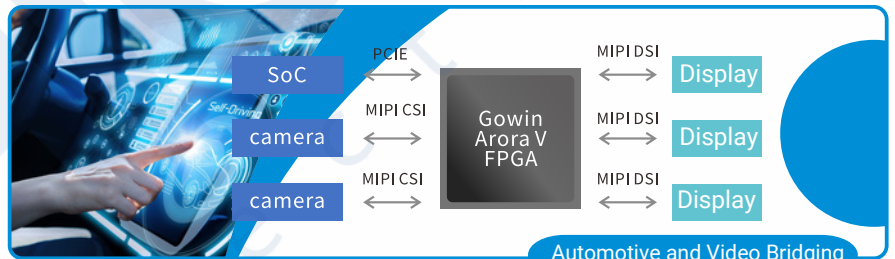
Free IP Licensing

PCIE 2.0	RapidIO
SGMII	SDI-Tx/Rx
1000 Base-X	eDP-Tx/Rx
10G Base-R	DP-Tx/Rx
XGMAC	SLVS-EC-Rx
XAUI	HDMI
CPRI	USB3.1
JESD204B	ISP

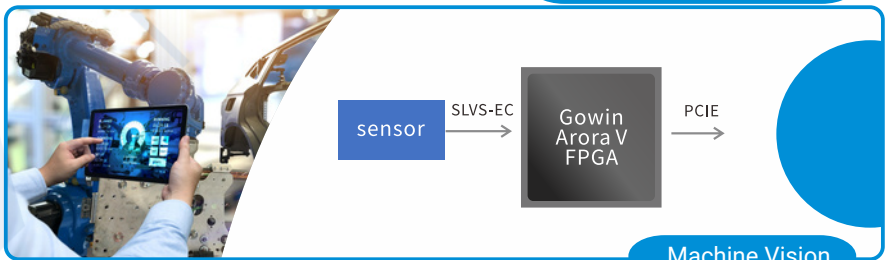
Solutions



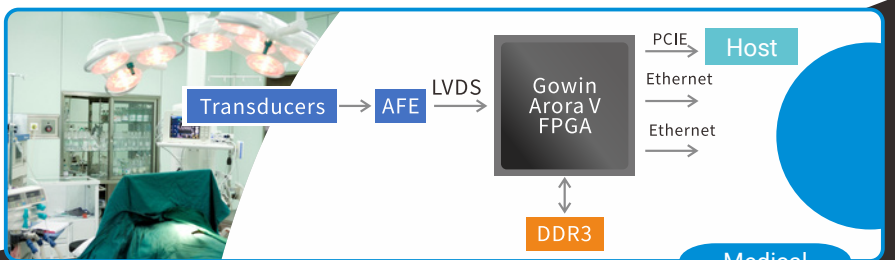
Communication



Automotive and Video Bridging



Machine Vision



Medical

Applications

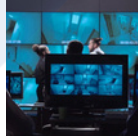
Medical



Communication



Automotive



Security Monitoring



Power Systems



Artificial Intelligence

Industrial

