iW-Rainbow-G39RH
Rugged HMI

iWave Systems iW-G39RH Rugged HMI solution is an advanced Rugged HMI with high-performance ARM Cortex-A53 multicore processor.
The solution comes with Rugged enclosure made with Aluminum and connected with M12 IP rated connector to handle dust, rain, heat, vibration and other harsh environmental conditions.

iW-G39RH HMI solution SDK enables Advanced UX and computing features are available with 3D graphics and libraries. SDK Integrated with Network Protocol, Message-Oriented Middleware, Web Browser, web server, Programming Language Packages, Security suite, Programming language Packages, optional automotive protocol stack packages…. make it a go-to solution for all diverse application.

HIGHLIGHTS

- NXP i.MX 8M Mini application processor

- 7" & 10.1" Reliable high brightness display and multi-touch solution

- Robust Aluminium housing

- Complete IP67 Dust and waterproof enclosure with M12 Connectors

- Analog video Input.

- M.2 Expansion Slot for Connectivity, GNSS or SSD.

- CAN FD, RS485, USB, Ethernet Communication, Wi-Fi/BT

- Solution with Linux & Android SDKs for diverse application needs.

- Automotive protocol stacks on demand.

APPLICATIONS

- Agriculture
- Marine Industry

- Cargo & Terminals
- Constructions

- Marine Operations
- Locomotive

iWave
Embedding Intelligence

Processor Core:
NXP i.MX8M Mini Quad

4 x Cortex-A53 @1.6GHZ

1 x Cortex-M4F @400MHz

Memory
2GB/1GB LPDDR4 RAM

8GB eMMC Flash & Micro SD x 1 Slot

Interfaces
RS485 x 2 (M12 A-code 8P)

Rs232 x 1, CAN FD x 2 (M12 A-code 8P)

Isolated Digital In & out x 2 upto 36V (sinking) (M12 A-code 8P)

CVBS IN x 4, Audio Headphone out (M12 – 3P – A)

Analog Input 4 x 4-20mA (M12 – 3P – A)

Ethernet Up to 1Gbps x 2[#] (M12 – 8P – X)

USB 2.0 Host x 2 (M12 – 8P – A)

USB OTG x 1 (M12 A-code 8P)

Keypad*, Battery for emergency data Backup*

Buzzer or speaker, External Watchdog Timer

RTC with Coin cell battery, MIPI Camera*

Wireless Communication interfaces
WiFi IEEE 802.11 a/b/g/n/ac & BLE 5.0

M.2 Expansion
M.2 Connector Key B*(for LTE & positioning or SSD)

PCIe 2.0 x 1, USB 2.0 x 1

Micro SIM Connecter /eSIM & External Antenna

Peripheral Expansion*
UART/I2C/SPI interface for Plug and Play wireless module & Sensor

Enclosure
Housing Material: Aluminium with M12 connector

Mounting Option: VESA, RAM & Panel Mount

Ingress Protection: IP67 Dust and waterproof

Typical Environment condition
Operating Temperature: -20° C to 65° C

Humidity: 95% @ 40° C

Power Input
9V - 24V DC (Upto 36V)

POE+* and Load Dump Protection (-36V -90V)

LCD Specification

Display size:	IPS 7''	IPS10.1''
Resolution:	1024 x 600	1280 x 800
Brightness:	Typ 850 cd/m^2	
Backlite Life:	Minimum 50K Hours	
Touch:	Optical bonded PCAP Multi Touch	

Software & Protocols
Operating System: Linux 5.4.70 & Android 9.0.0

GUI Libraries: 2D & 3D graphics & open source libraries(OpenGL ES, OpenCL, OpenCV & OpenVG)

Programming: C++, C, Python & Java, JavaScript, HTML5 & PHP

Analog Video: Live streaming of videos, Record videos with NTSC & PAL

PLC: Modbus RTU(RS485) & Modbus TCP

CAN[#]: CAN Protocol Supports: ISO 15765-4 CAN, J1939, ISO 11898, CANopen, CiA 447

Web application: Webserver, Browser & Node.JS

Remote Desktop: VNC client & server

Note: # In plan/Custom, * Optional features, please contact iWave Systems for information

RELATED PRODUCTS

Industrial Panel PC- iW-G39H Series
iW-RainboW-G39Hisi.MX8MMini(Q/QL/D/DL/S/SLCortex-A53 cores upto 1.8GHz) Application Processor-based HMI solution. Its heterogeneous multicore processing with Cortex-M4 running upto 400+MHz; offload tasks, optimize power, and increase security.

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