Scalable T2G Onboard Gateway

AVA-1000

Features

- EN50155 compliant ARM & Atom x86 platform
- NXP i.MX8M Plus with Quad Cortex-A53
- Intel Atom® 7th Gen series Alder Lake
- Supports 3x 1GbE M12 LAN, 1x USB 3.0, 1x HDMI 2.0
- Supports multiple connectivity of 5G, WiFi 6 and GNSS
- Wide range DC 24-110V power input with ignition
- Fanless extended temperature OT4, ST1

Specifications

System	Processor	NXP i.MX8M Plus with Quad Core NXP i.MX8M-PLUS, NPU, 8GB LPDDR4, 64GB Emmc (with options) 7th Gen Intel® Core™ Alder Lake with N50 2-Core CPU, 4GB LPDDR5, 32GB eMMC (with options) Other CPU upon request
	Display	1x HDMI slot
Storage	NVME	1x PCIE Gen3 x4 M.2 M-key 2242 NVME slot
	Expansion	1x Micro SD slot
Connectivity	Ethernet	3x M12 1Gb X-coded Ethernet ports
	USB	1x type A USB 3.1 Gen1 port
	GPIO	2DI/2DO (extra I/O by options)
	Serial Ports	RS-232/RS-422/RS-485
	I2C	By options
	CAN	By options
	Wireless	2x PCIE Gen3 x1 M.2 B-key- 3042/52 slot with optional 5G module selected 1x PCIE Gen3 x1 M.2 E-key-2230 slot with optional Wifi module selected GNSS embedded

Specifications

Connectivity	Antenna	8x QMA antenna for 5G module (4 per module) 2x QMA antenna for WiFi module 1x QMA antenna for GNSS module on carrier board
	SIM	4x SIM slots (2 per 5G module)
	Maintenance port	1x DIP SW with 2 switch 1x Micro USB console port 1x Micro USB port for OS upgrade
Miscellaneous	TPM	TPM 2.0
	LED	4 x LEDs for 5G 1(G), 4 x LEDs for 5G 2(G) 4 x WiFi LED (G), 3 x 1Gb Ethernet LED (G) 1 x power on and reset LED (G), 1 x watchdog LED (Y)
	Power Connector	IEC 61076 M12 A-coded connector
	Power	+24VDC-+110VDC (16.8V to 137.5V) according to EN 50155:2021 Sec. 5.2.2 Supply voltage interruption class S2 Supply change-over class C1 Default 100W DC input
	Power reset button	1x power reset button on wall side
	Ignition	Power off delay time option: 60 sec. by default Input protected to same level as power input
	GND	1x M6 threaded stainless steel thread holes 1x M6 threaded stainless steel thread studs
	Battery	CR2032X coincell battery by default
	MTBF	40,000 hrs (TBD)
Mechanical	Dimensions	229 mm (L) x 126 mm (W) x 65 mm (H)
	Weight	Est. approx. 3 kg
	Mounting	Wall mount kit
	Coating	Conformal coating
	Cooling	Fanless design with passive cooling Suggest air convection air flow 0.6m/s
	Ingress Protection	EN60529 IP40 (TBC)
Environmental	Operating Temperature	OT4: -40°C to 70°C (EN50155:2021 OT4 Class, ST1 +15C for 10mins)
	Storage Temperature	-40°C to +85°C
	Humidity	OP: 10% to 95% relative humidity (non-condensing) Non-OP: 5% to 95% relative humidity (non-condensing)
	Vibration	EN50155:2021 13.4.10 (Ref. to EN61373:2010 category 1 class B)
	Shock	EN50155:2021 13.4.10 (Ref. to EN61373:2010 category 1 class B)
	Safety	EN50124-1:2017; Insulation coordination PD2
	EMC	EN50155:2021 Clause 13.4.9 With reference to EN50121-1:2017; EN50121-3-2:2016 EN61000-4-2:2009; EN61000-4-3:2006 + A1:2008 + A2:2010 EN61000-4-4:2012; EN61000-4-5:2014 + A1: 2017 EN61000-4-6:2014 + AC: 2015
	Fire Protection	EN45545-2:20132+A1:2015 (HL 1-3) EL9 for PCB (R24 / R25) manufactured by ADLINK Note : Adlink is not responsible for EN45545 for 5G modules and Wifi modules
	Insulation	EN50124 Compliance EN50153 Compliance
Operating System	ARM	Debian + ADLINK eGi-Flow
	X86	Ubuntu 22.04, 64-bit Windows

Ordering Information

AVA-1000	Fanless T2G gateway with NXP Quad Cortex-A53 / Intel Atom® 7th Gen series Alder Lake SMARC CPU, M.2 WiFi 6 and 5G module, supporting 1GbE 3x M12 Ethernet ports, 1x USB 3.0, 1x HDMI 2.0

Optional Accessories

AVA-1000 AC-DC power supply	300W AC-DC power adapter for AVA-1000 with M12 connector
AVA-1000 cable kit	1x M12 K-coded power cord, 3x M12 X-coded Ethernet cable, DI/DO connector
AVA-1000 A-code power connector	1x M12 A-coded connector

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