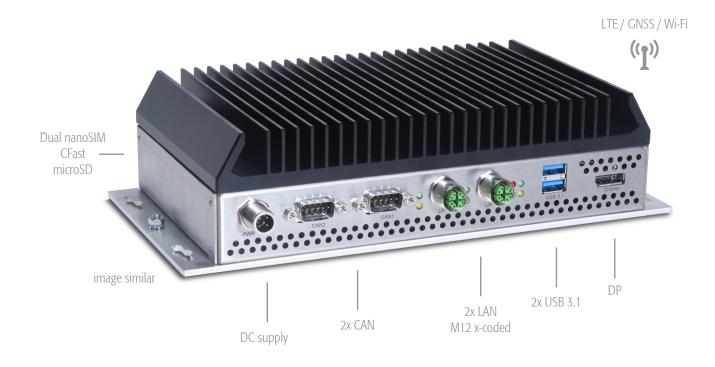
Al Railway Computer COMPACT Al Railway Series

Computer Vision Edge Unit with NVIDIA Jetson AGX Xavier



IPC/COMPACT A3 - RSL

This fanless RSL COMPACT-A3 generation is based on the Jetson AGX Xavier processor module and offers a wide range of interface options.

The robust and uncompromising industrial design allows the implementation in the most demanding AI railway and rolling stock applications and guarantees long term availability.

- 24/7 continuous operation
- · Extended AI Computing
- Railway approved EN50155
- · Passively cooled, no moving parts
- · Long term availability with fixed BOM

NVIDIA. Linux for Tegra (L4T)

Product Highlights

No moving parts / passively cooled Shock and vibration resistant Galvanically isolated railway power supply Long term availability (fixed BOM) Maintenance free Inertial measurement unit (IMU) Goldcap instead of battery backup for RTC

Product Features

512-Core NVIDIA Volta™ GPU with 64 Tensor Cores 8-Core ARM v8.2 64-bit NVIDIA Carmel CPU 32GB 256-Bit LPDDR4x RAM soldered on board Storage options: NVMe M.2 2280 & CFast Ethernet, USB, Passive or Active CAN LTE, GNSS and WiFi options Aluminum & Stainless steel housing

Markets

Railway (rolling stock) Transportation

CE

Processor module / Performance			
NVIDIA Jetson AGX Xavier (JAX) 512-Core NVIDIA Volta™ GPU with 64 Tensor Cores		•	•
8-Core ARM v8.2 64-bit NVIDIA Carmel CPU			
Al Performance		32 TOPs	32 TOPs
Memory / Storage			
Data L3 Cache Size		4MB	4MB
256-Bit LPDDR4x RAM soldered on board		32GB	32GB
eMMC 5.1 Flash Storage on board		32GB	32GB
microSD Card socket		1	1
M.2 2280 Key M socket (for NVMe SSD) ²		1	1
CFast socket with retention frame ²		1	1
Features		1	I
Inertial measurement unit (IMU) STMicroelectronics ISM330DHCXTR		on request	op roquest
Real time clock (RTC) with goldcap backup (charge holds typ. 48h)		on request	on request
		·	•
Communication Interfaces			
Graphic interface		DisplayPort 1.2	DisplayPort 1.2
USB version 3.1 (10 Gbit/s)	(Type A)	2	2
Internal USB version 2.0 OTG behind the cover	(micro USB Type AB)	1	1
Ethernet 10/100/1000 BASE-T	(M12 female x-coded)	2	2
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated	(DSUB9)	2	2
Power over Ethernet - IEEE802.3at 10/100/1000Mbit requires taller housing. h95mm	(RJ45 / M12 female x-coded)	on request	on request
Serial RS232 / RS422/RS485 requires taller housing: h103mm	(DSUB9)	on request	on request
Digital I/O's, 24VDC requires taller housing: h103mm	(up to 4 inputs & 4 outputs)	on request	on request
Analog input ¹ , 0-20mA or -10+10V / 0 30V (16bit resolution Accuracy: +/-0.1%), requires taller housing: h95mm	(up to 4 inputs)	on request	on request
Mini PCle socket 2 - used for extensions depending on configuration		1 full-size / 1 half-size	1 full-size / 1 half-size
MIPI CSI-2 / GMSL2 / FPDLinkIII Camera interface ^{1, requires taller housing: h95mm}		on request	on request
Wireless Connectivity			
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup		3x SMA	none
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6218	36	3x SMA 2x RP-SMA	none none
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6211 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P ^{may require taller housing dep}	36		
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6218 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require tailer housing dep Cellular 5G Module (4G/3G fallback) with GNSS	36	2x RP-SMA on request on request	none
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6213 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing depu Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R	36	2x RP-SMA on request	none none
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6218 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require tailer housing dep Cellular 5G Module (4G/3G fallback) with GNSS	36	2x RP-SMA on request on request	none none on request
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6213 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing depu Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R	36	2x RP-SMA on request on request	none none on request
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data	36	2x RP-SMA on request on request on request	none none on request on request
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram]	36	2x RP-SMA on request on request on request w256 x h67.5 x d127	none none on request on request w256 x h67.5 x d127
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram]	5 6	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6213 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³	5 6	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6213 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³	5 6	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions	5 6	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms vde (15W, 30W, MAXN)
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³	5 6	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mo	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN)
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6213 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mo	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power model -25°C +65°C -25°C +80°C	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN)
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6213 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature Ingress protection standard according to EN60529	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mod -25°C +65°C -25°C +80°C IP20	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C IP20
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature Ingress protection standard according to EN60529 Conformal coating ⁴	5 6 nding on final SKU	2x RP-SMA on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mod -25°C +65°C -25°C +80°C IP20 PCX on request	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C IP20 PCX
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature Ingress protection standard according to EN60529 Conformal coating ⁴ UN/ECE R10 (E-mark) certification ⁵	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mod -25°C +65°C -25°C +80°C IP20 PCX	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C IP20 PCX on request
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature ³ Storage temperature Ingress protection standard according to EN60529 Conformal coating ⁴ UN/ECE R10 (E-mark) certification ⁵ Shock	5 6 nding on final SKU	2x RP-SMA on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mo -25°C +65°C -25°C +80°C IP20 PCX on request IEC/EN 61373	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C IP20 PCX on request IEC/EN 61373
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature ³ Storage temperature ³ Storage temperature ³ UN/ECE R10 (E-mark) certification ⁵ Shock Vibration	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mod comparing depends on power mod comparing depends on power mod person solution person solution person request lEC/EN 61373 lEC/EN 61373	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C IP20 PCX on request IEC/EN 61373 IEC/EN 61373
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature Ingress protection standard according to EN60529 Conformal coating ⁴ UN/ECE R10 (E-mark) certification ⁵ Shock Vibration EMC-Conformity	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mo control control control >10ms depends on power mo control control control PCX on request IEC/EN 61373 IEC/EN 61373 EN 50121-3-2	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C IP20 PCX on request IEC/EN 61373 IEC/EN 61373 EN 50121-3-2
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature Ingress protection standard according to EN60529 Conformal coating ⁴ UN/ECE R10 (E-mark) certification ⁵ Shock Vibration EMC-Conformity Safety (designed to meet) Fire protection Radio and Telecommunication (designed to meet)	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mod >10ms depends on power mod PCX 0 request IP20 PCX 0 n request IEC/EN 61373 IEC/EN 61373 EN 50121-3-2(EC 62236-3-2)	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +80°C IP20 PCX on request IEC/EN 61373 IEC/EN 61373 EN 50121-3-2(EC 62236-3-2)
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6214 High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P ^{may} require taller housing dep Cellular 5G Module (4G/3G fallback) with GNSS Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Technical Data Dimensions [mm] (housing, incl. mounting plate) Net weight [gram] Isolated input voltage with ignition controller and reverse polarity protection (M12 5P Interruption of voltage supply time: EN50155 Class S2 Power consumption ³ Environmental Conditions Operating temperature ³ Storage temperature Ingress protection standard according to EN60529 Conformal coating ⁴ UN/ECE R10 (E-mark) certification ⁵ Shock Vibration EMC-Conformity Safety (designed to meet) Fire protection	5 6 nding on final SKU	2x RP-SMA on request on request on request w256 x h67.5 x d127 ~2300 16.8 45VDC >10ms depends on power mo 25°C +65°C -25°C +65°C -25°C +80°C IP20 PCX on request IEC/EN 61373 IEC/EN 61373 EN 50121-3-2 EN 50121-3-2 EN 45545-2 HL3	none none on request on request w256 x h67.5 x d127 ~2250 16.8 45VDC >10ms de (15W, 30W, MAXN) -25°C +65°C -25°C +65°C -25°C +80°C IP20 PCX on request IEC/EN 61373 IEC/EN 61373 EN 50121-3-2 EN 50121-3-2(EC 6226-3-2) EN 45545-2 HL3

¹ Please contact factory for minimum order quantities

² Internal connector

³ Depending on installation situation, interface connection and power mode. Please see user documentation.

⁴ On all possible components (excl. NVIDIA Xavier Module, connectors and wireless devices) ⁵ UN/ECE-R10 is the type-approval test for European automotive electronics. It includes a variety of testing including RF immunity and emissions, transient immunity and emissions. ⁶ These LTE and Wi-Fi modules have replaced the previously used Sierra Wireless MC7455 and SparkLAN WPEB-263ACNI(BT) due to these modules going EOL (previous products: IPC/RSLA3K22-A101S)

Product specifications subject to change without notice. | All data is for information purposes only and not guaranteed for legal purposes. Information in this data sheet has been carefully checked and is believed to be accurate. However, no responsibility is assumed for inaccuracies. Please refer to the user documentation for additional product specification.

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Syslogic Datentechnik AG Täfernstrasse 28 CH-5405 Baden Dättwil

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For further information and support: info@syslogic.com support@syslogic.com www.syslogic.com

+41 56 200 90 40 +49 7741 9671-420

Switzerland (Headquarters) Germany and Austria



	Order Code	IPC/RSLA3K21-A105E	IPC/RSLA3K21-C101E
Processor module / Performance			
NVIDIA Jetson AGX Xavier Industrial 512-Core NVIDIA Volta™ GPU (ECC) with 64 Tensor	Cores	•	•
8-Core ARM v8.2 64-bit NVIDIA Carmel CPU			
Dual Arm® Cortex®-R5 in lockstep (Safety Cluster Engine)		•	•
Al Performance (INT8)		30 TOPs	30 TOPs
Nemory / Storage		301013	501015
Data L3 Cache Size		4140	4MB
		4MB	
256-Bit LPDDR4x ECC RAM soldered on board		32GB	32GB
MMC 5.1 Flash Storage on board		64GB	64GB
nicroSD Card socket		1	I
A.2 2280 Key M socket (for NVMe SSD) ²		1	I
Fast socket with retention frame ²			
Features			
nertial measurement unit (IMU) STMicroelectronics ISM330DHCXTR		on request	on request
Real time clock (RTC) with goldcap backup (charge holds typ. 48h)		not possible	not posible
Communication Interfaces			
Graphic interface		DisplayPort 1.2	DisplayPort 1.2
JSB version 3.1 (10 Gbit/s)	(Type A)	2	2
nternal USB version 2.0 OTG behind the cover	(micro USB Type AB)	1	1
thernet 10/100/1000 BASE-T	(M12 female x-coded)	2	2
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated	(DSUB9)	2	2
Power over Ethernet - IEEE802.3at 10/100/1000Mbit requires taller housing. h95mm	(RJ45 / M12 female x-coded)	on request	on request
Serial RS232 / RS422/RS485 requires taller housing: h103mm	(DSUB9)	on request	on request
Digital I/O's, 24VDC requires taller housing: h103mm	(up to 4 inputs & 4 outputs)	on request	on request
Analog input ¹ , 0-20mA or -10+10V / 0 30V (16bit resolution Accuracy: +/- 0.1%), requires taller housing: h95mm	(up to 4 inputs)	on request	on request
Aini PCle socket ² - used for extensions depending on configuration		1 full-size / 1 half-size	1 full-size / 1 half-siz
MIPI CSI-2 / GMSL2 / FPDLinkIII Camera interface ^{1, requires taller housing: h95mm}		on request	on request
Wireless Connectivity		onrequest	onrequest
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS Telit LE910C4-WWX ⁶ (Dual nano SIM sup	0	7. 6144	
		3x SMA	none
Vireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 5.0 Emwicon WMX6218		2x RP-SMA	none
High Accuracy GNSS Positioning Module w/ RTK support ¹ u-blox ZED F9R / F9P may require taller housing dep	ending on final soci	on request	none
Cellular 5G Module (4G/3G fallback) with GNSS		on request	on request
Nireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R		on request	on request
Technical Data			
Dimensions [mm] (housing, incl. mounting plate)		w256 x h67.5 x d127	w256 x h67.5 x d127
Net weight [gram]		~2300	~2250
	male a-coded)	16.8 45VDC	16.8 45VDC
nterruption of voltage supply time: EN50155 Class S2		>10ms	>10ms
Power consumption ³		depends on power mo	de (15W, 30W, MAXN
Environmental Conditions			
Dperating temperature, complies with EN50155 class OT4 ³		-40°C +70°C	-40°C +70°C
Storage temperature		-40°C +85°C	-40°C +85°C
ngress protection standard according to EN60529		IP20	IP20
Conformal coating 4		PCX	PCX
JN/ECE R10 (E-mark) certification ⁵		on request	on request
Shock		IEC/EN 61373	IEC/EN 61373
/ibration		IEC/EN 61373	IEC/EN 61373
EMC-Conformity		EN 50121-3-2	EN 50121-3-2
Safety (designed to meet)		EN 50121-3-2(IEC 62236-3-2)	EN 50121-3-2(IEC 62236-3-2)
Fire protection		EN 45545-2 HL3	EN 45545-2 HL3
Radio and Telecommunication (designed to meet)		RED	none
MTBF @ 25°C ambient according to Telcordia SR-332, Environment GB, excluding battery		~313 000h	~415 000h
		~313 00011	~413 00011

¹ Please contact factory for minimum order quantities

² Internal connector

³ Depending on installation situation, interface connection and power mode. Please see user documentation.

⁴ On all possible components (excl. NVIDIA Xavier Module, connectors and wireless devices)
⁵ UN/ECE-R10 is the type-approval test for European automotive electronics. It includes a variety of testing including RF immunity and emissions, transient immunity and emissions.
⁶ These LTE and Wi-Fi modules have replaced the previously used Sierra Wireless MC7455 and SparkLAN WPEB-263ACNI(BT) due to these modules going EOL (previous products: IPC/RSLA3K21-A101E)

Product specifications subject to change without notice. | All data is for information purposes only and not guaranteed for legal purposes. Information in this data sheet has been carefully checked and is believed to be accurate. However, no responsibility is assumed for inaccuracies. Please refer to the user documentation for additional product specification.

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Syslogic Datentechnik AG Täfernstrasse 28 CH-5405 Baden Dättwil

For further information and support: info@syslogic.com support@syslogic.com www.syslogic.com

+41 56 200 90 40 +49 7741 9671-420

Switzerland (Headquarters) Germany and Austria

